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OMNIA HEALTH

Personalized Lifestyle & Functional Medicine

Functional Medicine and Lifestyle Introduction

What is Functional Medicine?

Functional medicine is an evolution in the practice of medicine that better addresses the healthcare needs of the 21st century. By shifting the traditional disease-centered focus of medical practice to a more patient-centered approach, functional medicine addresses the whole person, not just an isolated set of symptoms. Functional medicine practitioners spend time with their patients, listening to their histories and looking at the interaction among genetic, environmental, and lifestyle factors that can influence long-term health and complex, chronic disease.

Why Do We Need Functional Medicine?

- Our society is experiencing a sharp increase in the number of people who suffer from complex, chronic diseases, such as diabetes, heart disease, cancer, mental illness, and autoimmune disorders like rheumatoid arthritis.
- The system of medicine practiced by most physicians is oriented toward acute care, the diagnosis and treatment of trauma or illness that is of short duration and in need of urgent care, such as appendicitis or a broken leg. Physicians apply specific, prescribed treatments such as drugs or surgery that aim to treat the immediate problem or symptom.
- Unfortunately, the acute-care approach to medicine lacks the proper methodology and tools for preventing and treating complex, chronic disease. In most cases it does not take into account the unique genetic makeup of each individual or factors such as environmental exposures to toxins and the aspects of today's lifestyle that have a direct influence on the rise in chronic disease in modern Western society.
- There's a huge gap between research and the way doctors practice. The gap between emerging research in basic sciences and integration into medical practice is enormous—as long as 50 years— particularly in the area of complex, chronic illness.
- Most physicians are not adequately trained to assess the underlying causes of complex, chronic disease and to apply strategies such as nutrition, diet, and exercise to both treat and prevent these illnesses in their patients.

How is Functional Medicine Different?

- Functional medicine involves understanding the origins, prevention, and treatment of complex, chronic disease. Hallmarks of a functional medicine approach include:
- Patient-centered care. The focus of functional medicine is on patient-centered care, promoting health as a positive vitality, beyond just the absence of disease. By listening to the patient and learning his or her story, the practitioner brings the patient into the discovery process and tailors treatments that address the individual's unique needs.
- An integrative, science-based healthcare approach. Functional medicine practitioners look “upstream” to consider the complex web of interactions in the patient's history, physiology, and lifestyle that can lead to illness. The unique genetic makeup of each patient is considered, along with both internal (mind, body and spirit) and external (physical and social environment) factors that affect total functioning.
- Integrating best medical practices. Functional medicine integrates traditional Western medical practices with what are sometimes considered “alternative” or “integrative” medicine, creating a focus on prevention through nutrition, diet, and exercise; use of the latest laboratory testing and other diagnostic techniques; and prescribed combinations of drugs and/or botanical medicines, supplements, therapeutic diets, detoxification programs, or stress-management techniques.

Working with a Functional Medicine Practitioner

Functional medicine practitioners promote wellness by focusing on the fundamental underlying factors that influence every patient's experience of health and disease.

The Functional Medicine Approach to Assessment

The Institute for Functional Medicine teaches practitioners how to assess the patient's fundamental clinical imbalances through careful history taking, physical examination, and laboratory testing. The functional medicine practitioner will consider multiple factors, including:

Environmental inputs

The air you breathe and the water you drink, the particular diet you eat, the quality of the food available to you, your level of physical exercise, and toxic exposures or traumas you have experienced all affect your health.

Mind-body elements

Psychological, spiritual, and social factors all can have a profound influence on your health. Considering these areas helps the functional medicine practitioner see your health in the context of you as a whole person, not just your physical symptoms.

Genetic makeup

Although individual genes may make you more susceptible to some diseases, your DNA is not an unchanging blueprint for your life. Emerging research shows that your genes may be influenced by everything in your environment, as well as your experiences, attitudes, and beliefs. That means it is possible to change the way genes are activated and expressed.

Through assessment of these underlying causes and triggers of dysfunction, the functional medicine practitioner is able to understand how key processes are affected. These are the body's processes that keep you alive. Some occur at the cellular level and involve how cells function, repair, and maintain themselves. These processes are related to larger biological functions, such as:

- Structural integrity
- Inflammatory responses
- Immune system function
- How you produce energy
- How your body rids itself of toxins
- Psychological and spiritual equilibrium
- Regulation of hormones and neurotransmitters
- Digestion and absorption of nutrients and the health of the digestive tract

All of these processes are influenced by both environmental factors and your genetic make-up; when they are disturbed or imbalanced, they lead to symptoms, which can lead to disease if effective interventions are not applied.

A Comprehensive Approach to Treatment

Most imbalances in functionality can be addressed; some can be completely restored to optimum function, and others can be substantially improved.

Prevention is paramount.

Virtually every complex, chronic disease is preceded by long-term disturbances in functionality.

Changing how the systems function can have a major impact on the patient's health.

The functional medicine practitioner examines a wide array of available interventions and customizes a treatment plan including those with the most impact on underlying functionality.

Functional medicine expands the clinician's tool kit.

Treatments may include combinations of drugs, botanical medicines, nutritional supplements, therapeutic diets, or detoxification programs. They may also include counseling on lifestyle, exercise, or stress-management techniques.

The patient becomes a partner.

As a patient, you become an active partner with your functional medicine practitioner. This allows you to really be in charge of improving your own health and changing the outcome of disease.

The Institute for Functional Medicine is a nonprofit educational organization
Visit us at www.functionalmedicine.org or call us at 1-800-228-0622
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Your Omnia Health Success Timeline

Welcome aboard! We thank you for your trust in Omnia Health. We are grateful to be a part of your health journey. The following steps will let you know your estimated timeline and allow you to stay on track with your program.

-  **1** Welcome to Omnia Health! Now that you have completed your initial consultation, your next step is to schedule your first Health Coaching session.
-  **2** Our staff will call you and ask you if you have any questions about your program.
-  **3** Complete the test kits and lab work that was given to you. The sooner you finish them, the sooner we can guide you on the path to wellness! Let us know if you have any delay in completing your test kits.
-  **4** The test results do take about 3-4 weeks to come in depending on the test kit. In the meantime work on implementing dietary and lifestyle strategies discussed in binder.
-  **5** Case Review: the overview of your lab results and the creation of your health plan. This is a 60min visit.
-  **6** Start your supplement schedule as recommended.
-  **7** Follow-up in 7 days via email to update us on your progress..
-  **8** 30min phone call to follow up on your progress.
-  **9** Health Coaching session #2 to work on your lifestyle changes.
-  **10** Practitioner follow up at 6 weeks, and every 8-10 weeks after. Please feel free to reach out to us in between appointments. Keep us updated with how you are feeling and your progress, so we can make recommendations if we need to prior to your next appointment. Please fill out the MSQ prior to each appointment. A link to this form is in each appointment reminder email that is sent to you.



OMNIA HEALTH

Personalized Lifestyle & Functional Medicine

General Nutrition Guidelines

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Your Nutrition Plan

“You ARE NOT just what you eat, you ARE what you eat, break down, absorb and don’t eliminate”

Eating healthy is the number one challenge for most people but is often easy to address. Much like a plant cannot grow in unhealthy soil due to a lack of nutrition, the human body requires the same attention to detail. You can thank us later because we have done much of the work for you!

The types of foods that we choose and the timing of our meals is very important. Since this is a basic guide I won’t go into too much detail but I will spend a moment to talk about the hormone, Insulin. Insulin is one of the only hormones that we can control, and we do so by diet and to an equally important degree via stress management.

Insulin is released in the body in response to increased blood sugars. It then drives the sugar into the cells. What is left over is sent to the liver to convert into fat. Insulin is also known as a “mitogenic” hormone. This means that it causes cell division. This accelerates the aging process and can also feed the process of rapid cell division seen in cancer patients.

Since insulin resistance and dependance is seen in diabetics we can demonstrate the catastrophic effects of poor blood sugar metabolism by using them as an example. Diabetics have several co-morbidity such as, stroke, cancer, heart disease, liver disease, blindness, amputations, nerve damage, kidney failure, weight gain, joint damage and mood disorders to name a few. Understanding and managing blood sugar and insulin is the key to your dietary success.

Zig Ziglar said it best when he stated:

“I have never accidentally eaten anything”

What you eat is a choice that you make. Once armed with information to make better choices I hope you lean towards healthier foods.

What is Gluten?

Living Gluten Free

Gluten is a type of protein found in cereals, grains, and breads. It is composed of two primary sub fractions: prolamines and glutelins. Gluten helps bread to rise, giving it a chewy texture.

Gluten Free Diet

A gluten free diet is a diet completely free of all foods derived from these gluten grains. Unfortunately, gluten shows up unexpectedly in many processed foods that contain food additives, flavorings, stabilizers, or thickening agents.

Celiac disease is a condition that causes many digestive symptoms due to difficulty in digestion of gluten. Those with celiac disease must avoid gluten-containing foods 100% of the time.

Wheat or gluten sensitivity

Certain individuals who do not have celiac disease have been found to be sensitive to wheat or to all gluten-containing foods. Often this is the result of eating wheat or gluten foods many times daily, every day, for many years. Sensitivities develop that will only improve with the removal of wheat or all gluten for a period of time. Most individuals who are sensitive to wheat find that their symptoms return anytime they eat wheat and therefore avoid it permanently.

What starches are acceptable on a gluten-free diet?

Acceptable starches for you may be sweet potato, white/red potatoes (may not be suitable for you based on your circumstance), carrots, beets, parsnips, rutabaga. Coconut flour and nut flours may be used for gluten free baking. Some examples are coconut flour, almond meal, chia seeds, flax meal, etc... The next page lists foods that do not contain gluten and foods that contain gluten.

Gluten Free Food List

FOOD TYPES	FOODS ALLOWED	FOODS TO AVOID
Beverages	Almond milk Coconut milk Vegetable juice Carbonated or mineral water Coffee or Tea	Postum; coffee substitutes Malted milk (e.g., Ovaltine) Ale, beer Instant coffee if wheat flour added
Breads	Baked goods made from nut flours and coconut flour	All grains based breads
Cereals	Grain free cereals	Omit all cereals made from grains
Desserts	Desserts made with nut flours or coconut flours. Flourless cakes Coconut Ice Cream Dark Chocolate	Ice cream cones Prepared puddings, Homemade puddings thickened with flour Mixes Pies, pastries, cakes, cookies, doughnuts Ice Cream, Fruit fillings and puddings Chia Seed Pudding
Fruits	All	
Meats, Fish, Eggs	All meats, poultry and fish prepared without breading Eggs	Breaded meat, poultry, fish, patties, croquettes and loaves with bread crumbs Canned meats, cold cuts and frankfurters (unless guaranteed pure meat) Creamed sauces, gravies, cheese spreads, spreads with wheat flour Imitation crab meat, lunch meats (unless it says gluten free (GF)) Processed Cheese, Egg Substitute,
Potatoes, Pasta, Grains	White and sweet potatoes	Spaghetti, noodles, macaroni, dumplings Barley soup or pilaf Frozen french fries (dusted with flour)
Vegetables	All	Any prepared with bread crumbs or cream sauces

Additional Gluten Free Information

Gluten is found in all grains, but here are the main ones you need to avoid. Anything derived from these foods, or anything with these foods in the name, contain gluten:

- Wheat (durum, kamut, semolina, spelt, farina, bulgur, cake flour, graham flour, matzo, matzah, couscous)
- Rye
- Barley
- Triticale

Ingredients to Question

Some of the following products, may contain gluten or wheat ingredients, so you may need to research them further or find gluten free options.

- Malt, Malt flavoring, Malt Vinegar, Hydrolyzed malt extract (usually contains gluten, okay if derived from corn rather than barley)
- Soy Sauce (gluten free soy sauce available)
- Modified Food Starch (in medications)
- Dextrin (usually contains gluten as does maltodextrin)
- Beer, non-dairy creamer, commercially prepared chocolate milk, root beer, instant hot drinks, flavored coffees, vodka, wine coolers
- Flavorings, seasonings, commercial bouillon, salad dressings
- Seasonings
- Oats (may be contaminated during harvesting or processing - gluten free oats available)
- Energy bars, trail mix, roasted nuts, wheatgrass
- Brown rice syrup, syrup
- Enzymes (sometimes made from barley)
- Ketchup, salad dressings, marinades, gravy
- Commercial ice - many commercial ice machines contain a slime (mold and bacteria) that when exposed to it, can mimic the symptoms of a gluten sensitivity.

Ingredients that are often code for gluten:

- Hordeum distichon
- Hordeum vulgare
- Fermented grain extract
- Hydrolysate
- Natural flavoring
- Hydrolyzed soy protein
- Hydrolyzed vegetable protein
- Phytosphingosine extract
- Samino peptide complex
- Secale cereale
- Brown rice syrup
- Caramel color (frequently made from barley)
- Triticum aestivum
- Triticum vulgare
- Tocopherol/vitamin e
- Yeast extract
- Modified food starch

Healthy Gluten Free Snacks

- Fruit and veggies (with dip)
- Nut or Seed Crackers
- Hummus
- Dried fruit and nuts

Naturally Gluten Free Foods

- Meat
- Poultry
- Fish
- Vegetables
- Nuts
- Seeds
- Tofu
- Eggs
- Fruits
- Dairy
- Seafood
- Berries

Starches You Can Eat Instead of Wheat

- Beans
- Legumes
- Potatoes

Paleo Diet Section

A Paleo Diet is a diet that is based upon the concept that the optimal diet is the one to which we are genetically adapted. It is one that is based upon how our ancestors ate.

Paleo Principles

1. Eat Real Food. Processed foods are not consistent with a Paleo diet.
2. Avoid toxins. This includes those that are found in processed foods and those that are found in some whole foods that humans are traditionally not meant to digest well and thrive on.
3. Use evolutionary principles. It is not practical to live like a caveman.
4. Rely on evidence.
5. Individualize. What works for one person, may not work for someone else. You may have to tweak or modify your diet to what suits you best.

Paleo Nutrition

A Paleo Diet is a diet that is based upon the concept that the optimal diet is the one to which we are genetically adapted.

I. Protein

High quality protein is a very important aspect of the Paleo diet. Your body needs protein for almost every function in your body, including - cell structure, muscle contraction, repairing the gut lining, digestion, growth, repair, etc...Protein is broken down into amino acids in your body. Some of these amino acids are non-essential, meaning your body can make them by itself and some of them are essential, which means that you must obtain them through the diet. Paleo protein sources emphasize complete proteins that contain all the essential amino acids.

Paleo Protein Sources



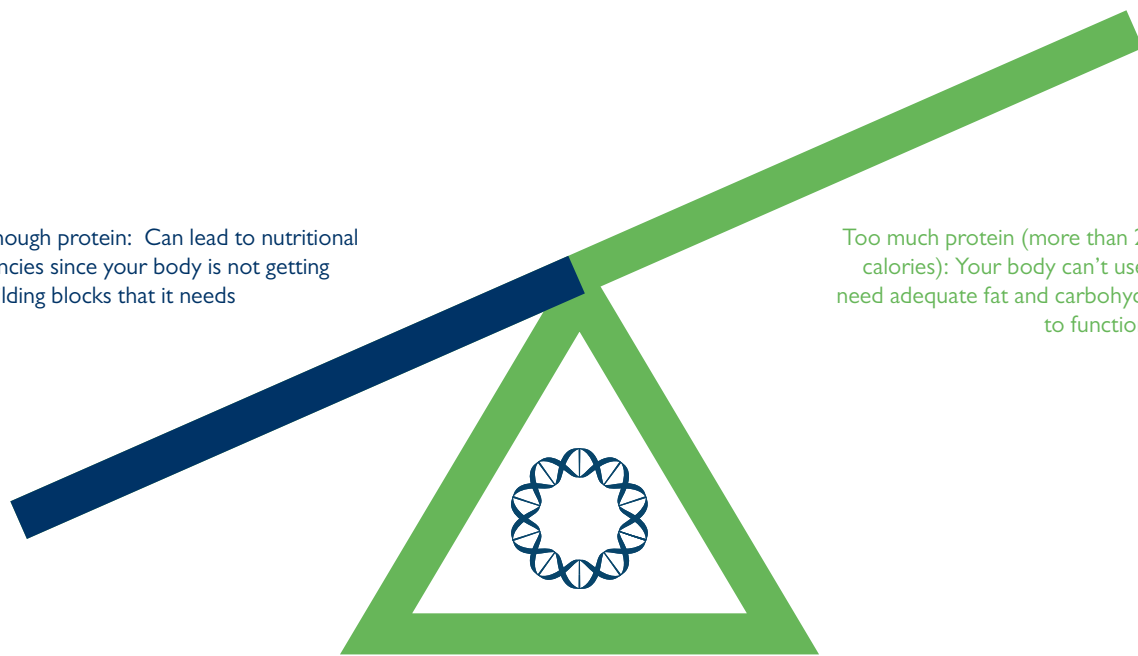
- Grass-fed beef
- Free range chicken
- Wild caught fish
- Free range eggs
- Nuts/seeds
- Collagen protein
- Animal proteins are complete proteins and contain all the essential amino acids
- The proteins in meat aren't irritating to the gut (unlike many plant proteins)

How much protein do we need?

It is important to get the right amount of protein since it is so important for our bodily functions, although too much isn't always better. You want to balance your diet with fats and carbohydrates along with protein.

Not enough protein: Can lead to nutritional deficiencies since your body is not getting the building blocks that it needs

Too much protein (more than 25 - 30% of calories): Your body can't use it all. You need adequate fat and carbohydrate intake to function optimally.



The right amount of protein: Is around 15% of your caloric intake. This is enough to maintain your body structure and function and therefore will allow the right amount of fats and carbohydrates.

2. Fat

Fat is one of the most important parts of the Paleo diet. Eating fat does not make you fat. Since the start of the “low fat diet” in the 80’s, obesity rates have been rising. Many of the healthy fats in “low fat foods” have been substituted with sugar. Sugar, modern processed foods and a sedentary lifestyle are what cause obesity. The key is to eat the right type of fat - naturally occurring fats.

3 Major types of fats.

1. Saturated Fat (SFA)

- Found in meat, animal products and coconut oil.
- It has been given a negative reputation in the media. (See below for more information)
- Also found in pizza, desserts and other processed foods

2. Monounsaturated Fat (MUFA)

- Found in olive oil
- Less stable than saturated fat, but still healthy
- Most people agree that this a good fat

3. Polyunsaturated Fat (PUFA)

- Found in industrial vegetable oils - very common in processed foods
- Chemically unstable and easily goes rancid
- 2 main types: Omega-3 and Omega-6 (see below for more information)

More on Saturated Fat

“There is no significant evidence for concluding that dietary saturated fat is associated with an increase risk of CHD (Coronary Heart Disease) or CVD (Cardiovascular Disease).”

Siri-Tarino, Patti, et. al., Meta-analysis of prospective cohort studies evaluating the association of saturated fat with cardiovascular disease . American Journal of Clinical Nutrition, January 2010.

The USDA nutritional guidelines state that eating saturated fat will kill us. This is because they are looking at studies that were based in countries with a higher intake of saturated fats (more developed countries). These countries have higher rates of heart disease but that is because the saturated fat that they are consuming is correlated with how much junk food they are eating.

According to the USDA Dietary Guidelines, the biggest source of saturated fat in the American Diet in 2005-2006 is full fat cheese (9%), grain based dessert (6%), dairy dessert (6%).

Kitavans, are a group of people who live on the islands in Papua New Guinea. They do not eat processed foods and they get 17% of their calories from saturated fats (mostly coconut). The average American gets about 11% of calories from saturated fat. A study demonstrated the following about Kitavans:

“Stroke and ischemic heart disease appear to be absent in this population.”

This is not conclusive evidence but it is definitely worth considering this data and research.

-Lindeberg, S., and Lundh, B., Absence of stroke and ischaemic heart disease in a traditional Melanesian island: a clinical study in Kitava . Journal of International Medicine, vol. 233, issue 3, pp.269-75, March 1993.

Cholesterol FAQ

“Cholesterol is one of the most unfairly demonized food of modern nutritional science. It is crucial for maintaining healthy cells, neurological function, synthesizing Vitamin D, and balancing hormone levels.”



1. Do cholesterol rich foods give you high cholesterol?

Not for most people. Unless you have a genetic disorder called familial hyper-cholesteremia. These individuals react differently to cholesterol and need to talk to their doctors before switching to a Paleo diet.

2. What is the Paleo point of view on cholesterol?

Conventional medicine usually views cholesterol as an isolated problem and typically treats it with a statin medication. The Paleo and functional medicine approach is to consider other physiological processes such as thyroid health, hormonal imbalance, and genetics to determine why cholesterol is high. It is important to maximize overall health and make sure all body systems are working.

3. Does high cholesterol cause atherosclerotic plaque?

High cholesterol levels in the blood do not cause plaque. But they aren't totally unrelated either. Although, oxidized LDL cholesterol may be associated with the development of plaque but this relationship is not quite clear.

4. Is it true that LDL is “BAD” and HDL is “GOOD” cholesterol?

Both LDL and HDL have important roles in the body. One specific type of LDL cholesterol (particles that are small and dense) is easily damaged by inflammation in the body and this damaged (or “oxidized”) LDL cholesterol may contribute to heart disease.

Polyunsaturated Fatty Acids (PUFA's)

Most PUFA's in the modern diet come from industrially processed vegetable oils like peanut oil, soybean oil and canola oil. These are completely artificial fats that could never exist without modern processing techniques.

PUFA's are very chemically fragile. Therefore they easily break down and become rancid especially when exposed to light, heat and oxygen - they become oxidized. These oxidized fats are like an injury to the body. They cause chronic, long term inflammation. Long term chronic inflammation is a major contributor to modern diseases such as heart disease and diabetes.

The two main types of PUFA's are Omega-6 and Omega-3. It is important to consider the ratios of the two different types of PUFA's and not just the total amount. There must be a balance between the two different kinds.

Major Sources of Omega-6: industrially processed oils, factory farmed meats, nuts

Major Sources of Omega-3: Fish, fish oil, pastured eggs

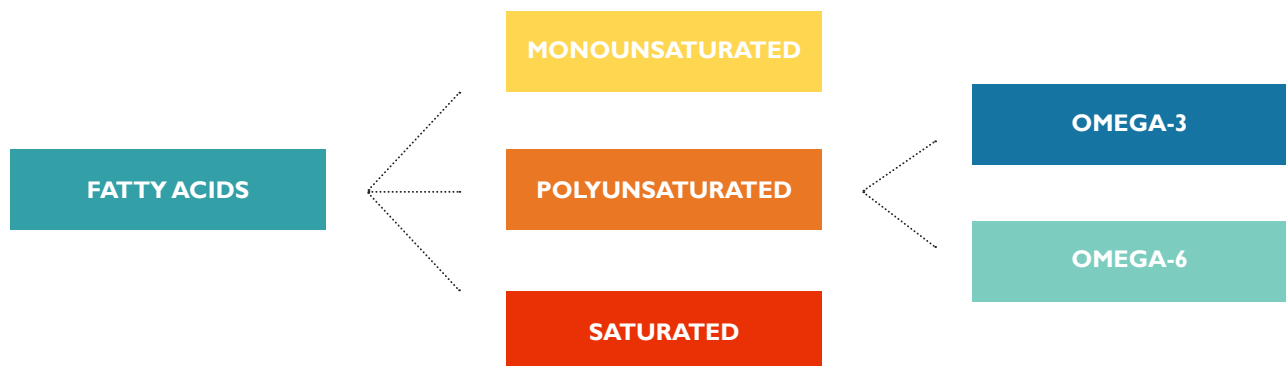
Your diet should have a Omega-6 to Omega-3 ratio between 1:1 and 4:1, while the modern diet has a ratio closer to 10:1. Omega-3 fats tend to balance out the inflammation, therefore the skewed ratio in the modern diet is very inflammatory.

Omega-3 Fats

Most people don't get enough in their diet. A high ratio of omega-6 to omega-3 promotes cardiovascular disease, cancers, osteoporosis, inflammatory and autoimmune disease. Animal sources of Omega-3 fats are immediately available to your body (in the form of EPA and DHA), whole plant sources have to be converted first. Animal sources of high levels of EPA and DHA include:

- Fish (especially wild caught, fatty fish like salmon, sardines and herring)
- Fish oil
- Eggs from pastured chickens

The Big Fat Chart:



3. Carbohydrates

The Paleo diet is generally lower in carbohydrates. Carbohydrates by themselves are generally not the problem. The problems is that most modern carbohydrates are processed with toxins and the excessive intake in the modern diet.

An average person should consume about 15-20% of their calories from carbs, 15-20% from protein, and 65% from fat.

4. Other Information

Micronutrients

For healthy people, eating a variety of whole, nutrient dense foods is the best multivitamin. This is the goal for everyone. Those who have a chronic illness or nutritional deficiencies will most likely require supplementation. For some, this may be temporary and for others there may be some foundational products that need to be taken life long.

Calcium

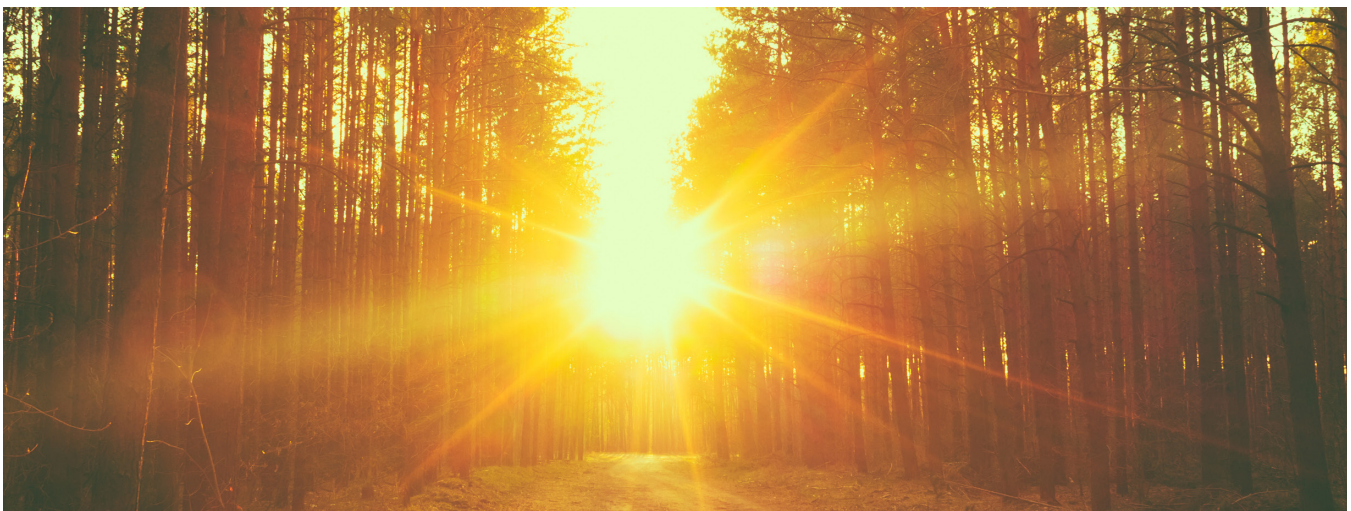
If you don't get calcium in dairy, where do you get it from? Bone-in fish like sardines, nuts, and dark green leafy vegetables are all great sources of calcium. Homemade bone broth is another. In the Paleo diet you will get lots of Vitamin C, K and magnesium that you help with absorption of calcium

Fiber

Whole grains are not the only sources of fibre. Fruits and vegetables can give you all the fibre you need.

Vitamin D

You will most likely need to supplement with Vitamin D since the best source is sunlight. Most individuals are indoors during the daytime and we live in a part of the world where sunlight exposure is decreased for half the year in the winter months. Darker skinned individuals are also more likely to be deficient in Vitamin D. Forty-two percent of Americans are vitamin D deficient, 82% of African Americans and 69% of Hispanics. Vitamin D is crucial for bone health, mineral balance in the body, reducing inflammation and regulating cell growth. Food sources include fatty, cold-water fish and egg yolks. But you can't usually get enough. Try to go out in the sun during the day and take a supplement if your blood work shows that you are low.



Paleo Food Chart

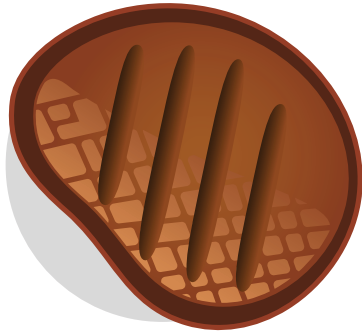
Food Chart

	BEST	OK	AVOID
Animal Foods	All unprocessed, organic, free range, wild caught meats (beef, chicken, pork, fish, lamb, bison, etc.), eggs, animal fats	Organic Free Range bacon, ham, sausage	Processed meats
Vegetables	All non-starchy vegetables	Starchy tubers like potatoes and yams (eat in moderation according to exercise levels)	Corn (actually a grain)
Fruits	All fresh fruits	Dried fruits, preserves and jams	Fruit Juice
Grains			All grains, including corn, whole grains, sprouted grains, and pseudo-grains like quinoa
Legumes	Green beans, sugar snap peas		All other legumes including soy, other types of beans, lentils and peanuts
Nuts	Macadamia nuts, chestnuts	Other kinds of nuts (almonds, cashews, walnuts, & hazelnuts)	Peanuts (actually a legume) and pistachios
Dairy	Grass fed butter and grass fed ghee	Fermented dairy (yogurt and kefir), goat dairy, cheese, raw milk (talk to your practitioner if dairy is okay to include in your diet)	Pasteurized milk, processed dairy, whey protein
Oils	Coconut oil, olive oil, avocado oil		Seed oils (canola oil, vegetable oil, soy oil, peanut oil, etc..)
Other Foods	Coconut milk, tea, all herbs, spices and vinegars	Dark chocolate, coffee	

***Some of these foods may not be suitable for you based on your condition and based on your food sensitivities. Consult with your healthcare provider if you have any questions.

Meat

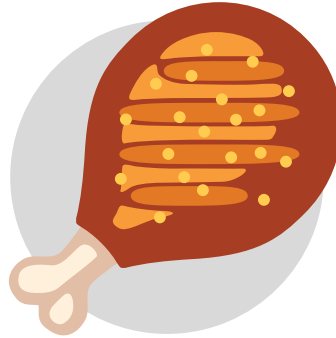
Meat is a key component in the Paleo diet. We usually say that 30% of your plate should be meat and 70% should be vegetables.



1. Ruminant Meat

(beef, goat, lamb, bison, venison)

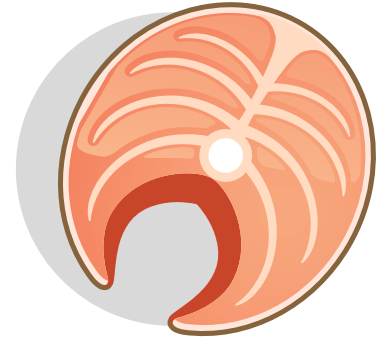
- Rich in vital nutrients like iron and B vitamins
- Excellent fat profile - good saturated fats with very few unstable PUFA's
- Must be grass fed



2. Poultry

(chicken, turkey, pheasant, goose, duck)

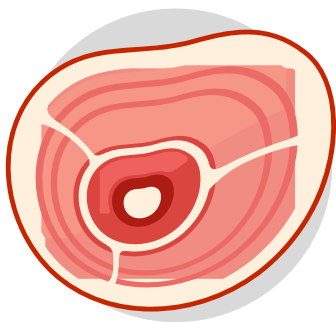
- More affordable than ruminant meat
- Higher in PUFA than ruminant meat



3. Seafood

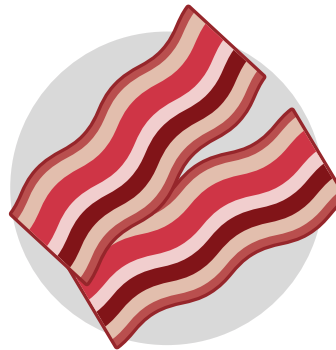
(salmon, tuna, grouper, shrimp, mussels, etc)

- High in iodine and selenium
- Excellent source of anti-inflammatory Omega-3's
- Choose wild caught seafood vs. farmed and sustainably harvested fish if possible



4. Pork

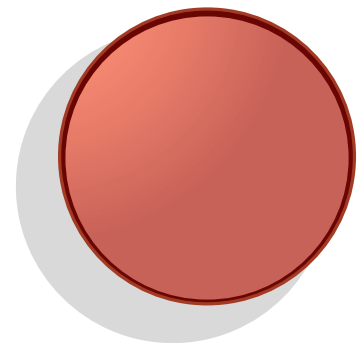
- More affordable than ruminant meat
- Higher in PUFA than ruminant meat



5. Processed Meat

(ham, bacon, salami)

- Often contains sugar or harmful preservatives such as nitrates
- Choose high quality preserved meats
- Use occasionally



6. Organ Meats

- Organ meats such as liver are very nutrient dense
- More affordable than ruminant meat

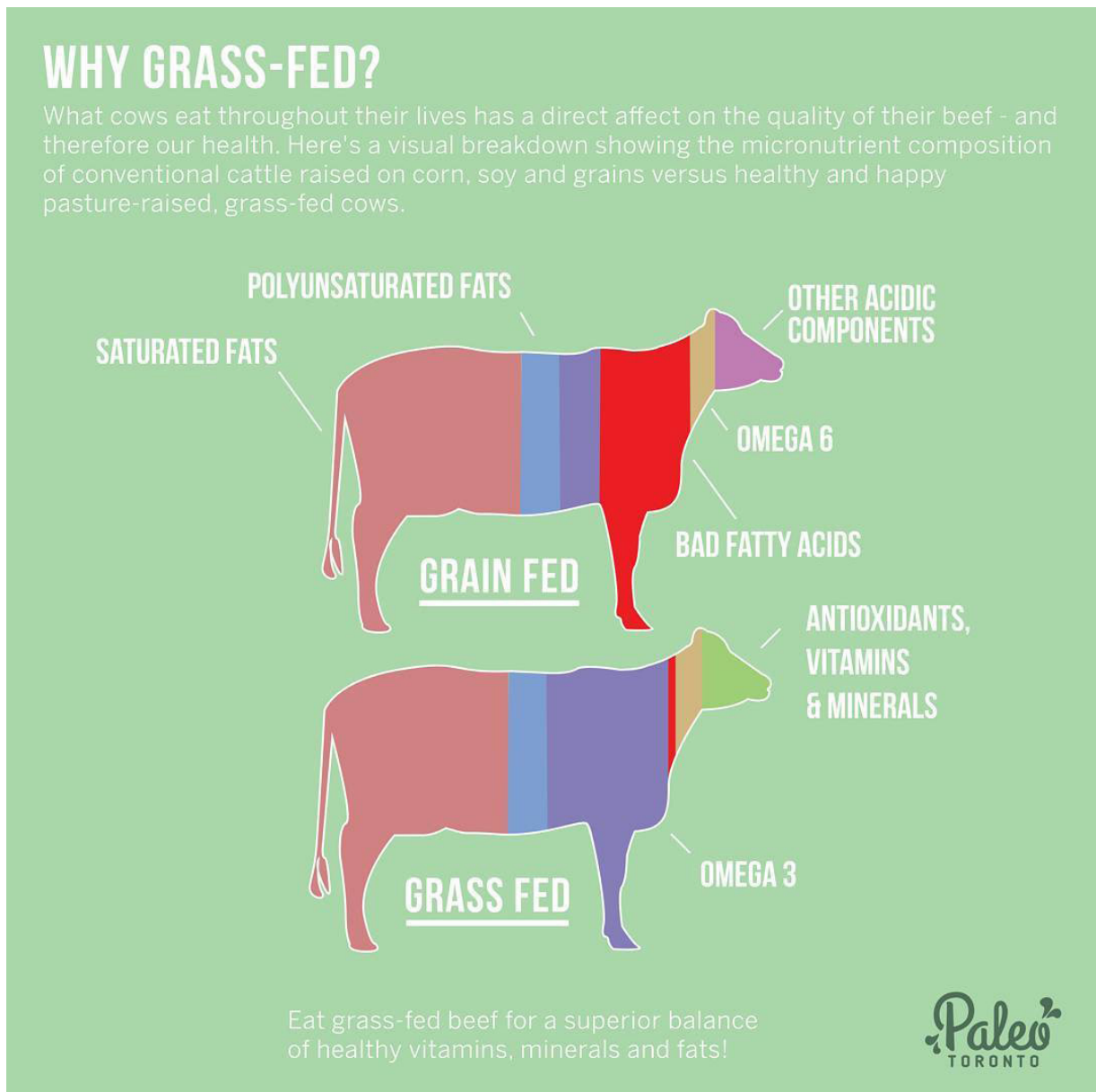
Grass-fed vs. Grain-fed

Factory farmed meat is inhumanely raised and is unhealthy. Meat from animals raised naturally (whether that means grass-fed beef, wild-caught fish or pastured chickens) is healthier, tastier and more sustainable.

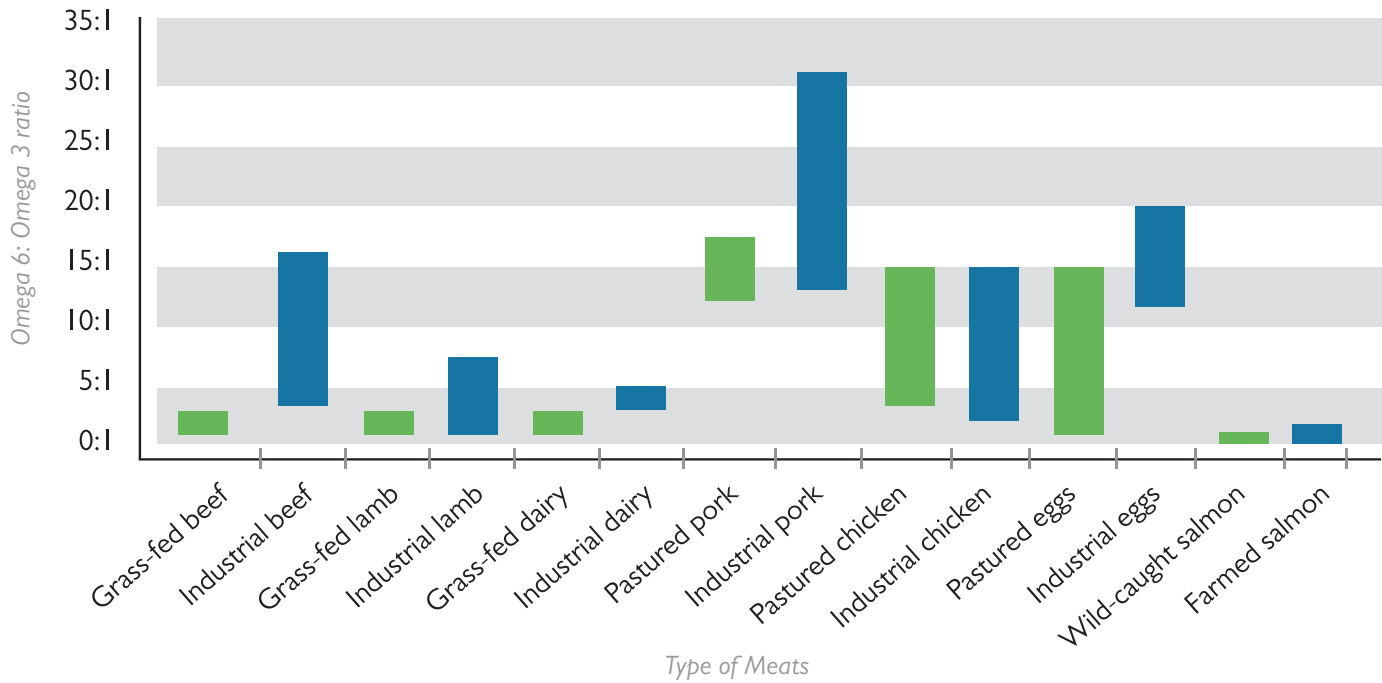
One of the biggest advantages of naturally raised meat is a better Omega-6 to Omega-3 ratio of fats. Grass fed meat also has more vitamins and minerals, especially Vitamin A, E and iron since the animals are eating their natural food instead of an industrial grain slurry.

Grass fed meat is more expensive so here are some tips to save money.

- Look at your local farmers market or use Eat Wild (www.eatwild.com) to find a local supplier - the prices are often cheaper than a supermarket.
- Buy in bulk! Many butchers sell a quarter of a cow for a significant discount per pound; share with your friends, or stock up for a while.



Grass-fed vs. Grain-fed: Fat Quality



Legend:

Green - Grass fed
Blue - Industrial/Factory Farmed

Benefits of Organ Meats

- They are cheap.
- They're nutritious - Liver is high in micronutrients and very nutrient dense.

Fish And Seafood



One serving of fish provides:

- More omega-3 than omega-6 fat. Fish is the only naturally occurring meat with more omega-3 fat than omega-6 so it helps to balance out omega-6 rich foods.
- Selenium - is an important nutrient for your thyroid function and mental health. It is hard to obtain from most foods except brazil nuts.
- Iodine - another nutrient essential for the thyroid. It also helps support fertility and immune function.
- Calcium - bone-in fish like salmon and sardines are an excellent source of calcium.

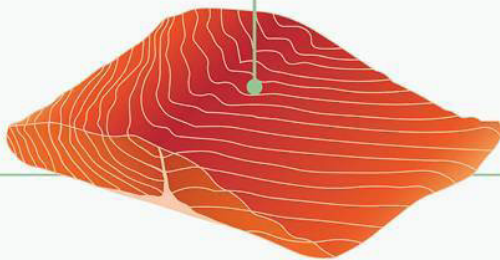
Farmed vs. Wild Caught

Farmed fish is less nutritious and often has antibiotics and other harmful additives.

WHY WILD CAUGHT?

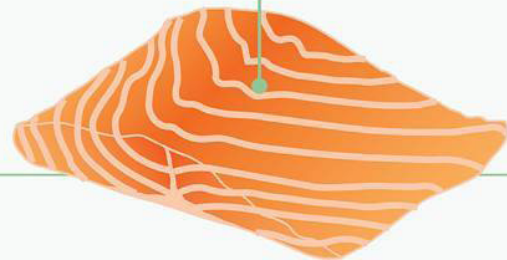


WILD CAUGHT ALASKAN SOCKEYE



- Deep, vibrant red in colour. lean musculature
- Omega-3 and astaxanthin rich diets - algae, plankton and krill
- Lives a natural lifestyle with plenty of migrant and upstream swimming

FARMED SALMON



- Pale, sickly orange flesh. thick white fat lines
- Fed synthetic, nutrient poor pellets and antibiotics
- Live in close quarters, low exercise environments void of natural pressures

EAT WILD CAUGHT SALMON

a superfood rich in potent antioxidants, anti-inflammatory promoting nutrients, and cellular energy boosting goodness!



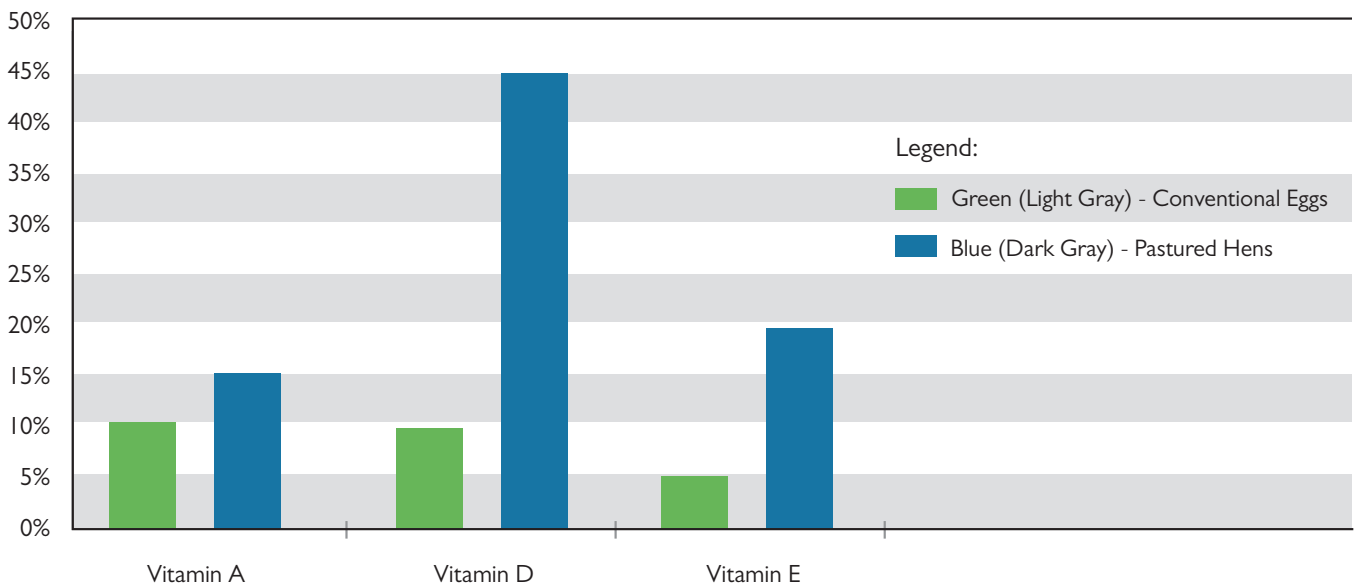
Eggs



Eggs have high levels of Vitamins A, D, E and B12. They're also excellent sources of two rare but essential nutrients: choline (which is very important for pregnant women, since choline deficiency is linked to neurological birth defects), and selenium.

Eggs from pastured hens have more of the above vitamins and have more beneficial omega-3 fats.

Nutritional Content (% RDA) Per 100 grams (about 2 eggs)



Yolks!

Egg whites are a good source of protein but all the vitamins and minerals are in the yolk. 90% of the calcium, 93% of the folate, 97% of the Vitamin B6, 92% of the Vitamin B12 and all the Vitamins A, E, D and K, as well as all of the Omega-3 fats are all found in the yolk.

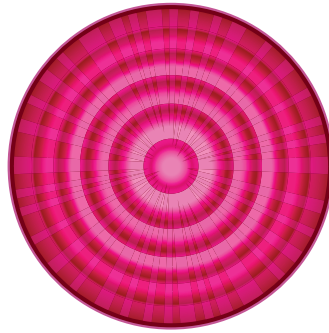
Vegetables

A Paleo diet is very rich in vegetables and most people who eat Paleo eat more vegetables than vegetarians. Your plate should consist of 70-80% vegetables.



Bright Red & Orange Vegetables

These include red peppers, tomatoes, sweet potatoes, carrots and many kinds of squash. Their bright colors come from carotenoids which are a precursor of Vitamin A and also contain several powerful antioxidants. Many red vegetables also contain high levels of Vitamin C.



Deep Red and Purple Vegetables

These include eggplant, beets, purple kale, red leaf lettuce and purple carrots. They are also full of antioxidants and also feature several different micronutrients. For example eggplant is high in manganese which is a mineral important for bone health.



Green Leafy Vegetables

See below.



Other Green Vegetables

Broccoli, cucumber, asparagus, Brussels sprouts, and green peppers. These vegetables contain micronutrients such as calcium, Vitamin K and Vitamin C to name a few.



White Vegetables

Mushrooms, cauliflower, parsnips, onions and potatoes. These vegetables are full of vitamin C (like cauliflower) and contain significant levels of Vitamin K.

Leafy Greens

Leafy green vegetables are some of the most nutritious plant foods on the planet. Here is a snapshot of the some of the vitamins found in leafy greens.

VITAMIN

A

VITAMIN

C

VITAMIN

K

Vitamin A

Kale: 206%
Spinach: 56%
Swiss chard: 44%
Collard greens: 48%
Turnip greens: 127%
Broccoli: 11%
Bok choy: 63%

Vitamin C

Kale: 134%
Spinach: 14%
Swiss chard: 18%
Collard greens: 21%
Turnip greens: 55%
Broccoli: 125%
Bok choy: 52%

Vitamin K

Kale: 684%
Spinach: 181%
Swiss chard: 374%
Collard greens: 230%
Turnip greens: 173%
Broccoli: 11%
Bok choy: 63%

MINERALS

Kale: Copper 10%/ Manganese: 26%
Spinach: Manganese 13%/ Folate 15%
Collard greens: Folate 15%
Turnip greens: Manganese 13%/ Folate 27%
Broccoli: Manganese 10%/ Folate 14%
Bok choy: Folate 12%

These are just some of the vitamins and minerals in leafy greens.

They also contain other micronutrients and are loaded with many different antioxidants.

Incorporating Leafy Greens Into Your Diet

These vegetables are delicious when sautéed with coconut oil and some sea salt. This is a great side dish. You can also add them to soups, stews, curries for more flavor and nutrients. Kale can also be dehydrated into kale chips for a crunchy snack. You can also add them to smoothies as another option - throw a handful of spinach to your favorite smoothie for a vitamin boost. You can throw a handful of spinach to your favorite smoothie for a vitamin boost. It will change the color but barely affects the taste.



Nightshades

The nightshade family of vegetables includes eggplant, peppers, white potatoes and tomatoes. Nightshades can be problematic for those with autoimmune disease. Like grains and legumes, nightshades contain proteins called lectins that can irritate the intestine and cause intestinal permeability (leaky gut), a central feature of autoimmunity. All foods contain some lectins, but different people react to different kinds of lectins. The lectins in nightshades are more irritating. Nightshades are also high in a class of chemicals called alkaloids. In high amounts, these alkaloids are inflammatory and dangerous to the nervous system. The above nightshades contain small amounts of alkaloids but they can still be a problem for some people.

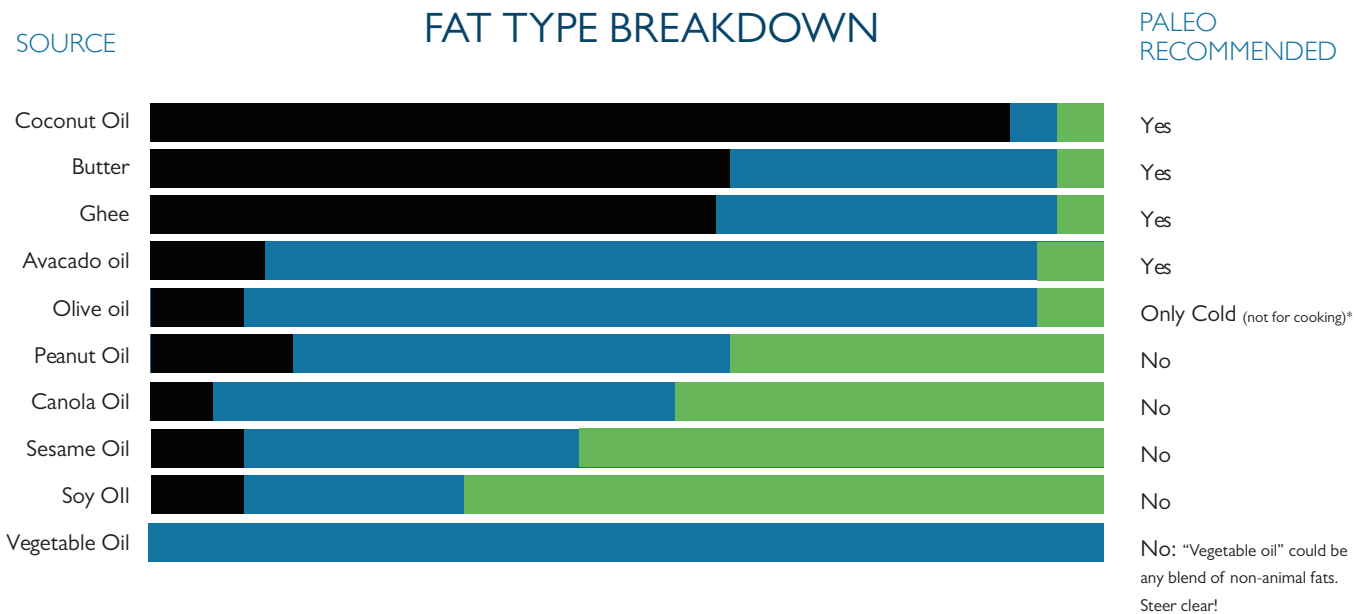
Nightshades and Joint Pain

Of all the problems that nightshades are connected to, joint pain, especially arthritis has the most evidence. Some of the evidence is anecdotal. But if you eliminate these foods for 30 days and see some improvement then there is no harm in eliminating them from your diet.

Sources Of Fat

This chart is handy to guide you to choose the best fat choices and how to use them.

The black represents saturated fat (very stable and healthy). Blue represents monounsaturated fat (fairly stable and also healthy) and the green represents polyunsaturated fat (unstable and best limited). Vegetable Oil could be any blend of non-animal fats. STEER CLEAR!



* The reason why olive oil is only recommended for cold uses is that it's very high in mono-unsaturated fat, which is unstable at high temperatures. So drizzling olive oil on your salad or steamed vegetables is perfectly fine, but choose a different kind of oil for cooking."

Butter

Butter has an excellent fatty acid profile: 63% saturated fat, 26% monounsaturated fat and 11% polyunsaturated fat. Therefore it is very stable and unlikely to oxidize or go rancid even when used for cooking.

Grass fed butter is a good source of conjugated linoleic acid (CLA), which is a naturally occurring trans saturated fat (it is not like the kind of trans fats used for cooking fast food french fries). CLA shows promise for its cancer-fighting properties, and its ability to support the immune system, cardiac health and even weight loss.

Butter also contains one especially beneficial saturated fat: butyric acid. Butyric acid is a short chain saturated fat that shows metabolic benefits like improving insulin sensitivity.

Grass-fed butter also contains Vitamin K2, an under appreciated nutrient that is not the same thing as Vitamin K1 found in many vegetables. K2 helps your body use calcium so that it ends up where you need it (in your bones and teeth) and not in your arteries as plaque. Note that only grass fed butter contains any amount of K2. Grass fed butter also has significant amounts of Vitamin A (which gives it its lush yellow color).

Butter Vs. Ghee

Ghee is clarified butter with the milk solids removed from it (milk solids comprise 20% of butter, 80% is fat). Therefore ghee is a better choice for those with dairy sensitivities and those who react to any dairy proteins (ie: casein).

Coconut Oil

Paleo diets are rich in coconut and coconut products - such as coconut milk, coconut flour, coconut flakes, and coconut oil.

Benefits of coconut oil

Medium-Chain Fatty Acids or Medium-Chain Triglycerides - give you a quick energy boost because they are very easy to digest, even for people who usually have trouble digesting fat. These fats are also very ketogenic - they encourage your body to use fat instead of carbs for energy.

Lauric Acid - This is one of the major medium-chain fatty acids in coconut oil. It is a potent antimicrobial and it fights bacteria, viruses and fungi.

Stable Cooking Fat - coconut oil is approximately 90% saturated fat, which makes it very stable at high temperatures.

“It appears that dietetic supplementation with coconut oil does not cause dyslipidemia and seems to promote a reduction in abdominal obesity”

Assuncao ML et. al., Effects of dietary coconut oil on the biochemical and anthropometric profiles of women presenting abdominal obesity. *Lipids*, vol. 44 issue 7, July 2009.

Despite all the benefits of coconut oil, it is important to note that coconut oil isn't for everyone. Coconut can provoke the same reaction as any other nut if you're allergic.

Olive Oil

Beware of olive oil fraud - even olive oil labeled “extra virgin” is often contaminated with cheaper oils like canola oil. Olive oils should be in a dark container to protect it from light damage. Check the packaging date - it should be less than a year old. You can also do a “fridge test”. Stick the oil in the fridge, and if it doesn't solidify, it's contaminated with PUFA-rich seed oils, if it does solidify, that doesn't necessarily mean it's pure, but there is a better chance of it being pure.

Health Benefits of Olive Oil

Olive oil doesn't get its “healthy fat” attributes for nothing. It's mostly monounsaturated fat, which is much more stable than the polyunsaturated fat in other plant oils. Olive oil is also rich in natural antioxidants called polyphenols, which have been linked to lower rates of everything from heart disease to cancer.

Cooking with Olive Oil

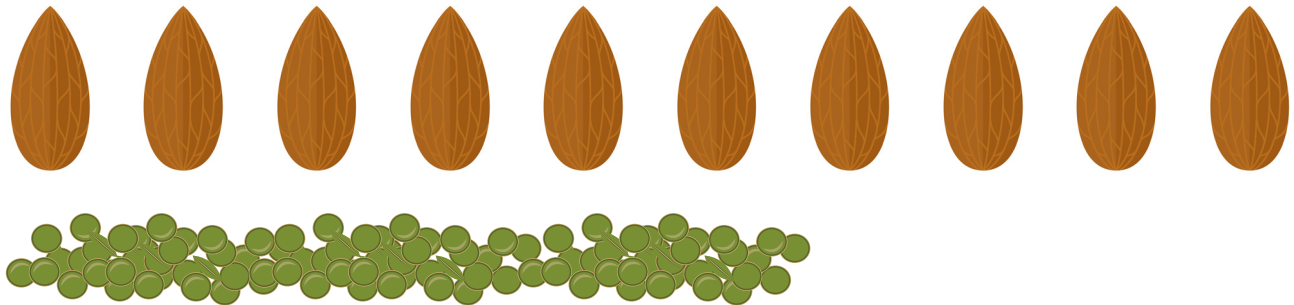
Olive oil is a monounsaturated fat, so it's more stable than PUFA, but still not ideal for high temperatures. Drizzle it over salads or steamed vegetables.

Extra Virgin is from the first pressing. It is the most flavorful and has highest levels of the beneficial antioxidants.

Nuts And Seeds

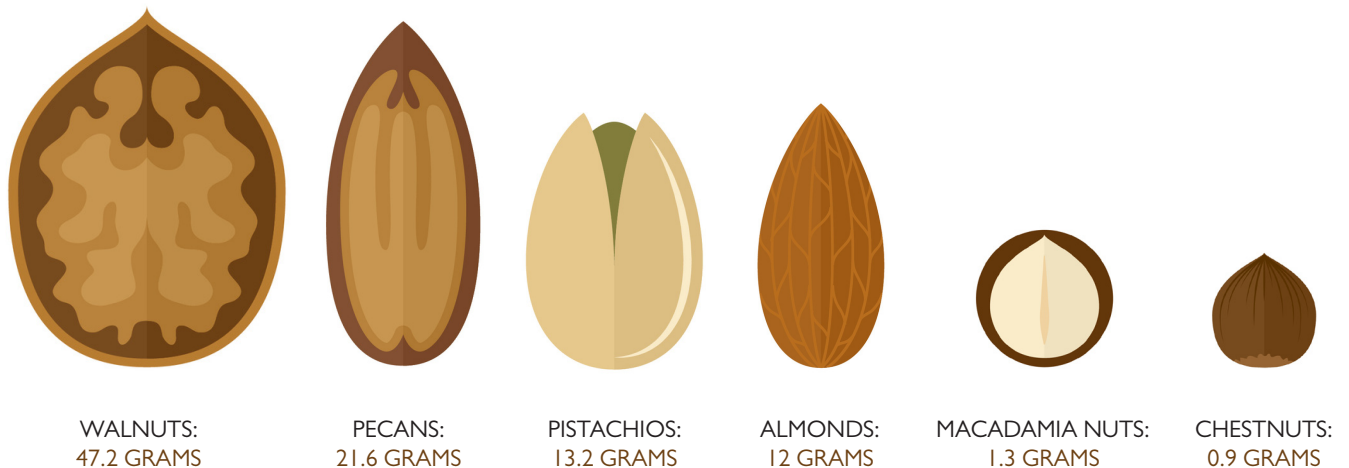
Nuts are technically “Paleo” (they were around in the Paleolithic era), but that doesn’t automatically make them healthy. In small amounts they can deliver nutrition and variety in the diet.

NUT IN PHYTIC ACID



Nuts are high in Phytic acid, a chemical that binds to minerals in the food and prevents them from being absorbed. Phytic acid is one of the reasons why legumes aren’t very good for you, but there is actually even more of it in some nuts than there is in legumes. *For example - almonds have 1.6 times as much phytic acid as lentils.*

GRAMS OF TOTAL PUFA (per 100 grams of nuts)



Most nuts are high in Omega-6 PUFA which are unstable and inflammatory and we get far too much in our modern world diets. Some nuts like chestnuts and macadamia nuts are relatively low in total PUFA, these nuts are much better for regular snacking.

Peanuts are not nuts - they are legumes and one of the worst legumes you can eat.

Nut butters and flours

Some problems with these foods are that they are much easier to overeat and they are more processed which leaves the fragile PUFA in the nuts more vulnerable to oxidation and damage.



Dairy

The Good

- Milk is complete nourishment for baby cows so dairy is loaded with nutrients, healthy fats, protein and carbohydrates. Grass-fed dairy in particular is a great source of Vitamin K2.
- Fermented dairy products (yogurt and kefir) are full of beneficial bacteria that support healthy gut flora.
- Dairy is delicious and very versatile.
- Good choices - fermented dairy eliminates the lactose and butter is almost entirely fat with very little protein (casein) or carbohydrate (lactose). Ghee (clarified butter) is an even purer source of fat.
- Pasture-Raised Dairy - has more nutrients and is the only kind that contains Vitamin K2, there is a better balance of omega-3 and omega-6 fats, and a good source of CLA (good fat).

The Bad

- Many individuals have a sensitivity to dairy. It contains many proteins, one of them being casein which many people react poorly to.
- Many people can't fully digest the milk sugar lactose.
- Dairy causes a large spike in insulin, so it's not for people with weight problems or metabolic disorders.
- Factory Farm Dairy - less nutritious because cows were fed on corn/grains and not grass fed, it contains growth hormones and antibiotics to keep cows alive in unnatural conditions.

Grains

- In the Pre-agricultural Era (150 000 years) - there were minimal to no grains in the human diet.
- In the Post- Agricultural Era (10 000 years ago) - grains became a major source of calories.
- This doesn't necessarily prove that we are poorly adapted to eating grains, but it suggests that we might be. Modern nutritional science also supports this concept.

Grains contain Lectins

Lectins are proteins found in all kinds of foods but not all lectins are harmful. The lectins in grains and legumes are dangerous because they damage the lining of the gut. The cells lining the gut have to let nutrients through the bloodstream, but keep everything else out. Lectins in grains damage these barrier cells, so the gut becomes abnormally permeable or "leaky." This "leaky gut syndrome" is known to cause autoimmune problems and is increasingly associated with all kinds of chronic disease.

"In the past two decades we have realised that many lectins are (a) toxic, inflammatory or both; (b) resistant to cooking and digestive enzymes; and (c) present in much of our food."

(Freed, David; Do dietary lectins cause disease? British Medical Journal, vol 318, April 1999)

Grains contain Phytic Acid

A lot of people claim that there are valuable nutrients in whole grains that you can't get anywhere else. This isn't true (there's nothing in grains that isn't also in vegetable and animal products) and in fact, grains are actually a very poor source of nutrients because they contain a compound called phytic acid. Phytic acid binds to the minerals in the food and prevents your body from absorbing them. Birds and other animals designed to eat grains have an enzyme called phytase, which digests phytic acid. Humans have no phytase, so phytic acid can be dangerous for us.

"PA has the strong ability to chelate multivalent metals ions, especially zinc, calcium, and iron. The binding can result in very insoluble salts that are poorly absorbed from the gastrointestinal tract, which results in poor availability of minerals"

Zhou, IR, and Bedman, JW, Phytic Acid in Health and Disease. Critical Reviews in Food Science and Nutrition, vol 35, issue 6. November 1995.



Wheat

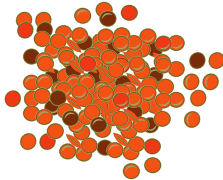
- Wheat not only contains phytic acid and lectins, but it also contains Wheat Germ Agglutinin.
- Lectins are anti-nutrients found in grains and legumes - they're the seed's natural insecticide. Wheat contains a particularly nasty lectin called Wheat Germ Agglutinin (WGA), not to be confused with Gluten, which is an entirely different problem.
- WGA is particularly good at permeating the gut lining with serious autoimmune consequences.
- WGA is highly inflammatory.
- WGA imitates the action of insulin, with serious metabolic consequences.
- Other problems with wheat is that in the 1960's scientists developed a new breed called "dwarf wheat". This wheat has fewer vitamins and minerals and has a different form of gluten that is more likely to trigger reactions.
- People also do not prepare wheat using traditional methods, like soaking and sprouting it, which reduces the anti-nutrient content.
- It is also no longer ground fresh and it is bleached.

Legumes

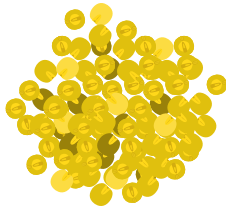
- Legumes include peanuts, soy, beans, peas and lentils



Legumes also contain lectins which as discussed above are anti-nutrients. They irritate the gut and contribute to the development of autoimmune disorders. Some, but not all can be destroyed by cooking.



Phytic Acid - The phytic acid in legumes binds to the nutrients in them and prevents those nutrients from being available to your body. Unless you soak or sprout your lentils before you cook with them, you're losing out on the nutrient content.



Saponins - these are another kind of anti-nutrient that can be especially damaging to people with autoimmune disorders. Saponins can't be destroyed by cooking or by soaking.

- To some extent proper cooking methods (sprouting, soaking and fermenting) legumes can make big difference with respect to anti-nutrients.
- Legumes should stay off your plate as much as possible when following a paleo diet.

Soy

Modern Soy

- Eaten in processed foods or as isolated protein or oil.
- Undergoes very harsh chemical and mechanical treatment.
- It is rarely fermented.
- It is sprayed with pesticides and herbicides.
- It is often genetically modified.

Traditional Soy

- Eaten as a whole food and is not deconstructed with harsh chemicals and processing methods
- It is often fermented and not genetically modified

Other Reasons To Avoid Soy

- Isoflavones (phytoestrogens) in soy can mimic the activity of estrogen in the body, although it is not clear as to how much is actually harmful
- Trypsin Inhibitors in soy interfere with protein digestion
- Goitrogens and flavones in soy are dangerous for people with thyroid disorders

Peanuts



Lectins

Peanut lectins can penetrate the lining of the gut and leak out into the bloodstream (leaky gut), therefore putting you at risk for autoimmunity, digestive disorders and many other issues. Peanut lectins are hard to destroy with heat treatment (ie: roasted).



Aflatoxins

Aflatoxins - Aflatoxins are not a problem in the peanut itself. They are actually a kind of mold that grows on the peanuts when they're grown in hot environments or stored in warm, humid places. Therefore they are in almost all peanuts and nut butters.



Peanut Oil

One way many people have exposure to peanuts is through peanut oil. If you buy roasted nuts at a grocery store, chances are they were soaked in peanut oil. Peanut oil has a high concentration of unstable fats and it is therefore unhealthy and inflammatory.

Paleo Snack Ideas

- Nuts
- Coconut flakes/chips
- Chicken Drumstick or a couple of meatballs
- Deviled eggs
- Avocado
- Coconut water
- Hard boiled egg
- Organic deli meats
- Small serving of leftovers
- Fermented foods - ie: sauerkraut, pickles, kimchi
- Veggie sticks (carrots, celery, cucumber) with almond butter, salsa or guacamole
- Veggies Chips (dehydrated kale, zucchini or other veggies)
- Olives
- Organic Jerky
- Can of fish

One Week Paleo Meal Plan

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Breakfast (Eat one hour from waking)	2 egg Omelet with Veggies of your choice (ie: spinach, bell pepper, mushroom) ½ avocado and fruit of your choice	Smoothie - 1½ cup spinach blanched, ¼ cup mango or pineapple, ½ cup mixed berries, ½ small avocado, 2 tbsp seed mixture, 1 serving paleo or pea vanilla protein powder, water to desired consistency (can use frozen fruits)	Smoothie - 1½ cup spinach blanched, ¼ cup mango or pineapple, ½ cup mixed berries, ½ small avocado, 2 tbsp seed mixture, 1 serving paleo or pea vanilla protein powder, water to desired consistency (can use frozen fruits)	Smoothie - 1½ cup spinach blanched, ¼ cup mango or pineapple, ½ cup mixed berries, ½ small avocado, 2 tbsp seed mixture, 1 serving paleo or pea vanilla protein powder, water to desired consistency (can use frozen fruits)	Smoothie - 1½ cup spinach blanched, ¼ cup mango or pineapple, ½ cup mixed berries, ½ small avocado, 2 tbsp seed mixture, 1 serving paleo or pea vanilla protein powder, water to desired consistency (can use frozen fruits)	Smoothie - 1½ cup spinach blanched, ¼ cup mango or pineapple, ½ cup mixed berries, ½ small avocado, 2 tbsp seed mixture, 1 serving paleo or pea vanilla protein powder, water to desired consistency (can use frozen fruits)	2 egg Omelet with Veggies of your choice (ie: spinach, bell pepper, mushroom) ½ avocado and fruit of your choice
Snack (optional - 1.5-2 hours after breakfast)	Handful of Nuts (raw and unsalted)	Cucumbers, Carrots, Celery Sticks	Handful of Nuts (raw and unsalted)	Cucumbers, Carrots, Celery Sticks	Handful of Nuts (raw and unsalted)	Cucumbers, Carrots, Celery Sticks	Handful of Nuts (raw and unsalted)
Lunch (eat 4 hours after breakfast)	Leftovers from dinner with Steamed Veggies or Salad	Leftovers from dinner with Steamed Veggies or Salad	Leftovers from dinner with Steamed Veggies or Salad	Leftovers from dinner with Steamed Veggies or Salad	Leftovers from dinner with Steamed Veggies or Salad	Leftovers from dinner with Steamed Veggies or Salad	Leftovers from dinner with Steamed Veggies or Salad
Snack (optional - eat 1.5-2 hours after lunch)	Fruit of your choice	Handful of Nuts (raw and unsalted)	Fruit of your choice	Handful of Nuts (raw and unsalted)	Fruit of your choice	Handful of Nuts (raw and unsalted)	Fruit of your choice
Dinner (eat 5 hours after lunch)	Chicken & Asparagus with Lemon & Herbs - with steamed vegetables of your choice and 2 tbsp fermented foods	Baked Lemon Dill Salmon - with steamed vegetables of your choice and 2 tbsp fermented foods	Pan Fried Moroccan Chicken - with steamed vegetables of your choice, ½ medium sweet potato baked and 2 tbsp	Baked Lemon Cod - with steamed vegetables of your choice and 2 tbsp fermented foods	Chicken Fajitas - with steamed vegetables of your choice and 2 tbsp fermented foods	Baked Salmon with Asparagus and Beets - with steamed vegetables of your choice, ½ medium sweet potato baked and 2 tbsp fermented foods	Citrus Beef Salad Stir Fry - with salad of your choice and 2 tbsp fermented foods

All dinner recipes can be found at www.drpatelsdiet.com

Autoimmune Paleo Diet (AIP) Section

The Autoimmune Diet (also known as Autoimmune Paleo Diet) allows the immune system to rest and the gut to repair. This diet eliminates foods that trigger the immune system and really helps to modulate the immune system.

Typically this diet should be followed for a minimum of four weeks. Depending on your progress we may need to keep you on this diet longer or we may consider re-introducing a few foods back into the diet one by one after the four weeks.

Many people with autoimmune disease discover that this diet or some variation of this diet allows them to function optimally with no flare ups of their disease.

A key aspect of this diet is keeping your blood sugar stable. This means you should eat often enough that you do not become hungry or feel your energy crash, which will trigger stress and inflammation. As your blood sugar becomes more stable you may find you can go longer between eating.

Keeping overall carbohydrate consumption low compared to the standard American/Canadian diet is crucial to stabilizing blood sugar. The amount of carbohydrates you need depends on your lifestyle and your health issues.

One of the key aspects of this diet is preparation. You need to give yourself more time to shop and prepare so you always have something on hand to eat when you go out.

Foods to eat

Most Organic Vegetables

Including anise, artichoke, asparagus, beets, bok choy, broccoli, cabbage, carrots, cauliflower, celery, chives, cucumbers, garlic, kale, kohlrabi, leeks, lettuce, mustard greens, onions, parsley, radishes, rhubarb, shallots, spinach, squash, sweet potatoes, water chestnuts, watercress, yams, zucchini, sea vegetables, among others.

Fermented Foods

Including pickled ginger, sauerkraut, unsweetened coconut yogurt, fermented cucumbers.

Meats

Including beef, chicken, fish, lamb, turkey. Fish should be ocean caught with a low mercury content. Swordfish, most tuna, and king mackerel are very high in mercury. Select hormone-free and antibiotic-free chicken, turkey, and lamb. Select beef that is grass fed, hormone free, and antibiotic free. Bone broth and organ meats are allowed. No pork.

Low Glycemic Organic Fruits

Including apples, apricots, avocados, berries, cherries, grapefruit, grapes, lemons, oranges, peaches, pears, plums, to name a few

Coconut

Including coconut butter, coconut cream, coconut milk, coconut oil, unsweetened coconut flakes, unsweetened coconut yogurt.

Herbs and Spices

Including basil, cilantro, chives, cinnamon, cloves, dill, horseradish, marjoram, onion powder, saffron, tarragon, turmeric, garlic, ginger, lemongrass, mint, oregano, parsley, rosemary, sage, sea salt, and thyme.

Noodles

Brown shirataki yam noodles (sold in Asian grocery stores or health food stores - Brand is Miracle Noodles)

Other

Apple cider vinegar, herbal teas, olive oil, olives.

Foods to avoid

Sugars

Including agave, candy, chocolate, corn syrup, fructose, high fructose corn syrup, honey, maple syrup, molasses, sucrose.

High Glycemic Fruits

Including bananas, canned fruits, dried fruits, mango, pineapple, raisins, watermelon.

Grains

Including amaranth, barley, buckwheat, bulgur, corn, couscous, kamut, millet, oats, quinoa, rice, rye, spelt, wheat, wheat germ.

Nuts and Seeds

Including almonds, peanuts, sunflower seeds, sesame seeds. Nuts and seeds contain lectins which can promote leaky gut and disrupt the repair of the gut lining. Seed spices should also be removed including: Anise, annatto, black caraway, celery seed, coriander seed, cumin, allspice, cardamom, black pepper, white pepper, peppercorns, vanilla bean, dill seed, poppy seed, sesame seed, fennel, fenugreek, mustard and nutmeg.

Gluten-Containing Compounds

Including barbecue sauce, binders, bouillon, brewer's yeast, cold cuts, condiments, emulsifiers, fillers, chewing gum, hot dogs, hydrolyzed plant and vegetable protein, ketchup, soy sauce, lunch meats, malt and malt flavoring, malt vinegar, matzo, modified food starch, monosodium glutamate, nondairy creamer, processed salad dressings, seitan, some spice mixtures, stabilizers, teriyaki sauce, textured vegetable protein, instant coffee.

Dairy Products and Eggs

Including butter, cheeses, cow milk, creams, frozen desserts, goat milk, margarine, mayonnaise, sheep milk, whey, yogurt (except coconut). Ghee might be okay for certain individuals.

Soy

Including edamame, miso, soy milk, soy protein, soy sauce, tempeh, tofu.

Fungi

Edible fungi and mushrooms.

Alcohol

All alcohol.

Beans and Legumes

Including black beans, lentils, peanuts, peas, pinto beans, soybeans. These contain lectins which can promote leaky gut and disrupt the repair of the gut lining.

Nightshade Foods

Including eggplant, paprika, peppers, potatoes, Tabasco. sauce, tomatillos, cayenne, chili pepper flakes, chili powder, and tomatoes.

Other

Canned foods, coffee, processed foods.

One Week Autoimmune Meal Plan

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Breakfast (eat within one hour from waking)	2 organic Turkey Sausage with Sauteed Veggies	Smoothie - 1½ cup blanched spinach or kale, ½ cup mixed berries, ½ avocado, 1 serving of paleo vanilla protein powder, water to desired consistency.	Smoothie - 1½ cup blanched spinach or kale, ½ cup mixed berries, ½ avocado, 1 serving of paleo vanilla protein powder, water to desired consistency.	Smoothie - 1½ cup blanched spinach or kale, ½ cup mixed berries, ½ avocado, 1 serving of paleo vanilla protein powder, water to desired consistency.	Smoothie - 1½ cup blanched spinach or kale, ½ cup mixed berries, ½ avocado, 1 serving of paleo vanilla protein powder, water to desired consistency.	Smoothie - 1½ cup blanched spinach or kale, ½ cup mixed berries, ½ avocado, 1 serving of paleo vanilla protein powder, water to desired consistency.	2 organic Turkey Sausage with Sauteed Veggies
Snack (optional - 1.5 -2 hours after breakfast)	Cucumbers, Carrots, Celery Sticks	Fruit on Allowed List	Cucumbers, Carrots, Celery Sticks	Fruit on Allowed List	Cucumbers, Carrots, Celery Sticks	Fruit on Allowed List	Cucumbers, Carrots, Celery Sticks
Lunch (eat 4 hours after breakfast)	Leftovers from dinner with Salad	Leftovers from dinner with Salad	Leftovers from dinner with Salad	Leftovers from dinner with Salad	Leftovers from dinner with Salad	Leftovers from dinner with Salad	Leftovers from dinner with Salad
Snack (optional - eat 1.5-2 hours after lunch)	Kale Chips	Cucumbers, Carrots, Celery Sticks	Kale Chips	Cucumbers, Carrots, Celery Sticks	Kale Chips	Cucumbers, Carrots, Celery Sticks	Kale Chips
Dinner (eat 5 hours after lunch)	Chicken Coconut Curry Stir Fry with Steamed Vegetables of your choice and 2 tbsp fermented food	Baked Salmon with Asparagus & Roasted Beets with Salad of your choice and 2 tbsp fermented food	Moroccan Chicken with Roasted Vegetables of your choice and 2 tbsp fermented food	Grilled Cilantro-Lime Halibut with your choice of steamed vegetables and 2 tbsp of fermented food	Garlic & Rosemary Roasted Chicken Bites with Salad of your choice and 2 tbsp fermented food	Baked Lemon Cod (omit red bell pepper) with Salad of your choice and 2 tbsp Fermented food	Citrus Beef Salad Stir Fry with Steamed vegetables of your choice and 2 tbsp fermented foods

All dinner recipes can be found at www.drpatelsdiet.com

The Autoimmune Paleo Diet – Quick Start to Reintroducing Foods

What is AIP?

The autoimmune protocol or AIP is a more specific version of the paleo diet aimed at regulating the immune system and giving the body the opportunity to heal from the damage of autoimmune disease. It works by addressing four key areas known to be important contributors to immune and autoimmune diseases. Drawing on insights from more than 1,200 scientific studies, these diet and lifestyle recommendations specifically target gut health, hormonal regulation, the immune system and nutrient density.

The first dietary recommendation for those with autoimmune disease is to adhere to a strict paleo diet with no cheating. To be clear, this means: no grains, no legumes, no dairy, no refined sugars, no modern vegetable oils, and no processed food chemicals. While other people may be able to enjoy the occasional bowl of rice or corn chips or even ice cream, if you suffer from an autoimmune condition, you are most likely not one of these people. Gluten-containing grains should be banned for life. Other grains and legumes can be very problematic for those with autoimmune conditions. Dairy of any kind (even grass-fed ghee which can still have trace lactose and dairy proteins!) should be avoided initially. This may be true for the rest of your life but some people may be able to reintroduce many foods after their diseases are in remission.

If you have an autoimmune condition, other foods can be triggers, including: eggs, nuts, seeds, nightshades, gluten cross-reactive foods, fructose in excess of 20g per day, alcohol, Non-steroidal anti-inflammatories (NSAID's), non-nutritive sweeteners, and food additives.

These foods are also omitted from the Autoimmune Paleo Diet because they:

- Cause gut irritation
- Cause gut dysbiosis
- Act as carrier molecules across the gut barrier
- Stimulate the immune system
- Increase gut permeability, and/or
- Cause inflammation

In addition, its important to ensure that your blood sugar levels are well managed. This does not mean low carb. It just means not high carb.

Perhaps even more important than removing foods that negatively impact gut health or stimulate the immune system is eating a nutrient-dense diet. Micronutrient deficiencies are the strongest diet-related factors contributing to increased risk of autoimmune disease. If you have autoimmune disease, it is highly likely that you are deficient in a number of nutrients. So, just as some foods should be eliminated, there is also a focus on eating more highly nutrient-dense foods like organ meat, fish and shellfish, green and colorful vegetables, fruit, cruciferous vegetables, sea vegetables, quality meats and fats, probiotic foods, and bone broth.

However, the autoimmune protocol is not a life sentence. Reintroducing some foods after your health has improved can be a big boost to quality of life for many people. Being able to eat eggs for breakfast or bake with almond flour or enjoy a square of dark chocolate can make a huge difference in terms of being able to sustain your healthy new habits. However, don't be too eager to start reintroducing foods. Generally, the more time you give your body to heal, the greater the likelihood that you will be able to reintroduce some foods successfully. This section will explain when to reintroduce foods, how to reintroduce foods safely, and what kinds of food reactions to look out for.

When Do I Get to Reintroduce Foods?

At a bare minimum, you should be strictly compliant with the Autoimmune Paleo Diet for at least one month (three to four months would be better) before reintroducing foods. And you should definitely see significant improvements in your symptoms first, with evidence that your gut has healed substantially and that your immune system is no longer attacking your body (which will be apparent by how you feel).

It is very important to make sure that your stress is well managed, that your activity level is appropriate, that you are getting plenty of sleep every night, and that you are spending time outside every day before starting food reintroductions, because these all affect your body's ability to tolerate foods as you reintroduce them.

Unfortunately for some, permanent damage to organs or tissues may mean that a full recovery is not possible, but it doesn't mean that food reintroductions are impossible. Even though you have successfully regulated your immune system and healed your gut, you may, for example, continue to require thyroid hormone replacement therapy if you have Hashimoto's thyroiditis, or you may not completely regain your balance if you have multiple sclerosis. If you are in this camp, you can gauge whether or not you feel ready for some food reintroductions after all of the following are true:

- You are able to completely digest your food (even if you still need digestive-support supplements) and do not suffer any gastrointestinal symptoms.
- Your autoimmune disease is no longer progressively getting worse.
- You are able to manage your autoimmune disease without disease modifying anti-rheumatic drugs (DMARD's), steroids, or NSAIDs.

When you introduce particular foods is ultimately your choice. How you feel is the best gauge, and only you will know if you are ready. A word of caution, though: don't let cravings influence you. Your decision should come from feeling good and seeing improvement in your disease.

How to Reintroduce Foods

Reintroducing a food after eliminating it from your diet for a while is called an "oral food challenge test," an "oral challenge," or simply a "food challenge." The suggested procedure for a food challenge detailed here assumes that you are not allergic to these foods—that is, you do not have an anaphylactic reaction to them (IgE mediated reaction). If you have a diagnosed allergy to a food and want to perform a food challenge to see if your allergy persists, consult with your doctor.

Food challenges are done one food at a time, once every three to seven days. If you generally tolerate new foods well as you challenge them, you can reintroduce them faster (every three to four days). If you are sensitive to many foods, you should reintroduce them more slowly (every six to seven days, or even longer).

Reintroducing foods can be tricky because non- IgE reactions can take anywhere from an hour to a few days to manifest (although symptoms generally appear one to four hours after consuming the food and peak within four to twenty-four hours).

Remember that symptoms can occur even a couple of days after you eat the food. If your symptoms are delayed, it can be a little tricky to determine whether or not there is a link to the food you are challenging. If you aren't sure, go on to the next food (without incorporating the other one back into your diet) and then revisit that particular food in a couple of weeks. Don't reintroduce a new food if you have an infection, had an unusually strenuous workout, got less sleep than normal, are feeling unusually stressed, or are under any other circumstances that may make interpreting a reaction difficult.

What Does A Food Reaction Look Like?

Reactions can vary wildly and include any of the following



Even having just one of these symptoms may indicate that you are sensitive to a food.

1

First, select a food to challenge. Be prepared to eat it two or three times in one day (but not again for a few days).

2

The first time you eat the food, eat half a teaspoon or even less (one teensy little nibble). Wait fifteen minutes.

3

If you have any symptoms, don't eat any more. Next, eat one teaspoon of the food (a tiny bite). Wait fifteen minutes.

4

If you have any symptoms, don't eat any more. Next, eat one and-a-half teaspoons of the food (a slightly bigger bite).

5

That's it for now. Wait two to three hours and monitor yourself for symptoms.

6

Now eat a normal-size portion of the food—either by itself or as part of a meal.

7

Do not eat that food again for three to seven days (and don't reintroduce any other foods in that time, either). Monitor yourself for symptoms.

8

If you have no symptoms in the next three to seven days, you may reincorporate this food into your diet.



Alcoholic beverages are an exception to this protocol for reintroductions:

You will have just one small portion on the challenge day. Drink a small glass and make sure that the beverage is gluten-free. The maximum you should drink is eight to nine ounces of cider or gluten-free beer, five ounces of wine, three to four ounces of fortified wine (like sherry, port, or Madeira), two to three ounces of liqueur, or one to one-and-a-half ounces of spirits. Enjoy your beverage slowly so you can stop drinking if you notice any immediate symptoms. Wait at least one week before having another glass. You can gradually increase the frequency of indulgence to about twice a week. (It is unlikely that those with autoimmune disease will tolerate alcohol in larger doses or more frequently, but you are welcome to test this for yourself.) Keep in mind that you will feel the effects of alcohol sooner than you used to. Please drink responsibly.

If you are testing a food that would normally be consumed in small amounts (such as a spice), the most you should eat is a normal serving size. This means scaling back the amount in step 2—so instead of starting with half a teaspoon, you would start with a pinch. Alternatively, you can cook a dish that uses that food and scale your portion up or down to consume the recommended amount of the new food.

Sometimes symptoms can creep up on you. It is easy to want a food to be tolerated so badly that you ignore your body's reaction to it until you have been eating that food for so long that you just can't ignore the symptoms anymore (which may take several weeks). This is especially easy to do when symptoms are mild and fairly nebulous (such as mood changes and fatigue). In this case, it may be difficult to retrace your steps and determine the real culprit. Look to any foods you have been eating frequently since reintroduction. Eliminate all possible candidates (which might mean the last six or more foods you reintroduced). When in doubt, roll back to the full-on Autoimmune Paleo Diet for a few weeks or until your symptoms resolve completely, and then start food reintroductions again (being more critical and more patient this time, and waiting longer between reintroductions).

You might be able to tolerate a food if it's eaten occasionally, but not if it's part of your everyday diet. It may be difficult to determine which foods these are, how often you can tolerate them, and how much of them you can eat. These are often the foods that cause a slow development of symptoms after reintroduction and the same ones that sent you back to square one when you reintroduced them. If you aren't sure if a food is causing a reaction, it's best to avoid it until you have finished reintroductions and have found a maintenance diet that works for you. You might then reintroduce these gray-area foods at irregular intervals and in small portions, always monitoring yourself for symptoms of a reaction.

You may wish to keep many of these reintroduced foods in reserve as occasional indulgences. For example, even though you used to drink several cups of coffee a day, you may choose to keep your coffee consumption extremely minimal even if your challenge was successful. Maybe coffee will now be a treat you save for Sunday brunch. Some of the foods excluded from the Autoimmune Paleo Diet (like coffee) create the most havoc when consumed frequently, in large quantities, or in the presence of a disrupted gut barrier, hormone imbalance, and an overactive immune system. This means that thinking of these foods as occasional treats is a good way to enjoy them while avoiding the downside that comes with habitual consumption of them. After all, if giving up coffee was hard for you, do you really want to get sucked back into an emotional or physical reliance on it? Also keep in mind that some of these foods may never be well tolerated, even as a once-in-a-blue-moon indulgence, so you may just decide not to challenge any of the foods most likely to be problematic and believe that you are healthier without them.

Which foods you tolerate may change over time. If you reintroduce a food now and have a reaction to it, that doesn't necessarily mean you will never be able to eat that food. Especially if your reaction is mild, you may want to re-challenge that food in six months or a year. Also, new food sensitivities may develop. It is possible that a food that you successfully reintroduce now won't work for you in the future. (This usually occurs in tandem with increased stress, decreased sleep, infection, or other assaults on your gut health and immune system.) If a food stops working for you, it's important to recognize that as early as possible and exclude it from your diet.

Suggested Order of Reintroduction

When it comes to food reintroductions, there is no right or wrong way to choose where to start. This suggested order of food reintroductions takes into consideration both the likelihood of reaction (based on what science says about how that particular food interacts with the gut barrier or the immune system) and the inherent nutritional value of the food. There are four stages. The first stage includes foods that are most likely to be well tolerated or are the most nutrient-dense. The second stage includes foods that are less likely to be well tolerated or are less nutrient-dense. The third stage includes foods that are even more unlikely to be well tolerated. The fourth stage includes foods that are most likely to be intolerated and that you may never wish to challenge.

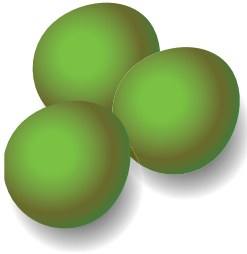
Challenge all the foods in stage 1 that you want to reincorporate (except any that you are allergic to or have a history of severe reactions to) before moving to stage 2. Follow the same protocol before moving from stage 2 to stage 3 and then from stage 3 to stage 4. You don't have to tolerate all the foods in stage 1 to be able to move to stage 2, but if you don't tolerate many (or most) of the foods, take a break from new food reintroductions for a few months and then rechallenge those stage 1 foods. If you still react to them, wait a few more months and then start challenging stage 2 foods (keeping the intolerated ones from stage 1 out of your diet).

The foods in stage 4 might normally be allowed (at least as infrequent treats) on a standard Paleo diet, a primal diet, or a traditional-foods diet, such as one based on Weston A. Price Foundation guidelines. Especially if your autoimmune disease does not remain in full remission throughout the process of food reintroductions, you may not want to challenge any of the foods in stage 4 (or even stage 3).

Some foods that are similar are divided into two or more stages. This includes nightshades (stages 3 and 4), dairy products (stages 1, 2, 3, and 4), and both nuts and seeds (stages 1 and 2). If the foods in these "families" are not tolerated in earlier stages (for example, if ghee causes a reaction), then do not challenge the other foods in that family in later stages (that is, do not challenge butter, cream, fermented dairy, or other dairy products).

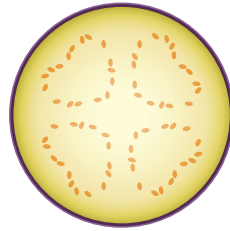
If you don't want to challenge a food (because you don't like it or because you suspect, given your history, that it may be particularly problematic for you), then don't. You don't have to challenge any at all if you like how you are feeling and just aren't tempted by your old foods. There is no nutritional advantage to adding these foods back in. What's important is that you find something that works for you.

Yes, food reintroductions can be a long process, but reintroducing foods too quickly may cause a flare in your autoimmune disease, which has the potential to set you back for much more time than it would have taken to reintroduce foods carefully and methodically.



Stage One

- Egg yolks
- Legumes with edible pods (green beans, scarlet runner beans, sugar snap peas, snow peas, peas, etc.)
- Fruit and Berry based spices
- Seed based spices
- Seed and nut oils (sesame seed oil, macadamia nut oil, walnut oil, etc.)
- Ghee from grass fed dairy



Stage Three

- Cashews & Pistachios
- Eggplant
- Sweet peppers
- Paprika
- Coffee
- Grass-fed raw cream
- Fermented grass fed dairy (e.g., yogurt and kefir)



Stage Two

- Seeds (including whole, ground, and butters, like tahini)
- Nuts (including whole, ground, and butters, like almond butter), except cashews and pistachio
- Cocoa or Chocolate
- Egg Whites
- Grass fed butter
- Alcohol in small quantities



Stage Four

- Other dairy products (e.g., grass-fed whole milk and cheese)
- Chili peppers
- Tomatoes
- Potatoes
- Other nightshade and nightshade spices
- Alcohol in larger quantities
- White rice
- Traditionally prepared legumes (ideally soaked and fermented)
- Traditionally prepared gluten free grains (ideally soaked)
- Foods you are allergic to.

How to Keep Track

Keeping a food journal can be very helpful in identifying which foods are problems for you. The most basic way to do so is simply to make note of every time you introduce a new food, start a new supplement, or eat something that isn't part of your normal routine. If you have a reaction, it's a simple matter of checking what out of the ordinary foods you've eaten in the last week.

In the case of mild reactions that make identifying problem foods more challenging, it's worthwhile to keep a more detailed journal. Write down all the ingredients of a meal and what time you ate. Also document what symptoms you experience and when, whether you think they are related to food or not. These more detailed records can help you or a health care professional identify patterns and links between foods and symptoms that might not otherwise be obvious.

Adapted from Sarah Ballantyne

A Healthy Modified Mediterranean Diet

A Healthy Diet Is The Most Important Therapy for Preventing Disease

The latest research shows that choosing a healthy dietary pattern is the most important therapy for preventing diseases such as cardiovascular disease and diabetes. The opposite is also true; regularly choosing unhealthy food patterns typical of the Standard American Diet (SAD) will increase your risk of cardiovascular disease and diabetes. Cardiovascular disease is still the most common cause of death in the USA and diabetes is in the top 10 as well and is slowly making itself closer to number one.

One of the big health discoveries of the past several decades is related to how meals affect your risk of cardiovascular disease and diabetes through changes in blood sugar and insulin. The effect that a food has on your blood sugar and insulin levels is called its “glycemic impact”. You may already be familiar with the glycemic index (GI) of foods, which reflects the glycemic effect of the available carbohydrates in the food you eat, relative to the effect of an equal amount of glucose. Glycemic load (GL), another related term, is based on the amount of carbohydrates in your meal and is calculated by taking the GI and multiplying it by the weight of your food and percent available carbohydrates in the food.

While both GI and GL are based on relative units, it’s harder to translate them into grams of total carbohydrates or calories consumed. On the other hand, the glycemic impact takes into account the impact of all the macronutrients (carbohydrates as well as proteins, fats, non- digestible carbohydrates and fermentable fibers) and micronutrients (vitamins, minerals and phytonutrients) that impact your control of glucose and insulin. Dietary recommendations are focused on reducing the glycemic impact of meals by decreasing the amount of high-glycemic index foods and increasing dietary fiber (reducing glycemic load), while increasing insulin- sensitizing nutrients from fruits, vegetables and spices.

The ideal diet for reducing diabetes and cardiovascular disease include as many of the following traits as possible:

- Improves insulin sensitivity
- Reduces inflammatory burden
- Promotes weight reduction
- Reduces fat mass
- Improves cholesterol and triglycerides
- Improves omega-3 to omega-6 fatty acid ratio
- Is easy to implement and flexible
- Tastes great
- Not financially burdensome

The diet that we will focus on during your journey to become healthier will be the Mediterranean diet. Studies on this diet have found that those that lived in the Mediterranean region had a much lower risk of heart disease. Since then, the diet has frequently been recommended for its benefits in lowering rates of CVD, diabetes and increasing longevity.

The Mediterranean diet is rich in phytonutrients from vegetables, fruits, herbs/spices and grains, as well as monounsaturated fats that come mostly from olive oil and nuts, both of which are largely responsible for the positive impact of the diet on cardiometabolic risk factors.

In addition to the Mediterranean diet, low-carbohydrate diets have been shown to have a profound effect on markers for CVD and diabetes. While early research questioned the safety of long term impact of going “low carbohydrate”, doctors now know that reducing carbohydrates helps control cardiometabolic risk factors and as a bonus helps promote weight loss too.

Studies have shown that a combination of the low-carbohydrate and Mediterranean diets can help reduce cardiometabolic risk by:

- Decreasing inflammation
- Increasing HDL cholesterol and decreasing LDL and total cholesterol
- Reducing blood pressure
- Helping with weight loss
- Increasing insulin sensitivity and improving glycemic control

Food Groups to Emphasize on a Traditional Mediterranean Diet

- Fresh and cooked vegetables and fruits, herbs and spices (mostly non-starchy)
- Legumes/plant proteins (such as beans and lentils) and gluten free whole grains such as quinoa and amaranth
- Organic fish and chicken
- Monounsaturated fats in the form of nuts and olive oil
- Moderate dairy products, fermented products such as yogurt and cheeses
- Moderate intake of red wine, grape juice or pomegranate juice
- Reduce consumption of red meat, refined grains and sweet foods

Tips to Maintain Daily Glycemic Control

- Reduce refined carbohydrate consumption (ie: grains, pasta, muffins, cereals).
- Eat a higher fiber breakfast; research has shown that a single breakfast meal containing high amounts of soluble fibers and insoluble fibers will decrease the glycemic impact of the next meals.
- Increase your phytonutrients by using brightly colored vegetables, spices and herbs to improve insulin sensitivity and reduce inflammation
- Pack small, high protein snacks to eat between meals to keep blood sugar stable.

The Key Components of Low-Glycemic Mediterranean

1. Vegetables

The consumption of a variety of local and seasonal vegetables is central to this diet. Choose mineral-rich leafy green and brightly colored vegetables to improve insulin sensitivity and reduce inflammation. The Mediterranean diet also highlights the use of garlic which is rich in both inulin and has potent anti-inflammatory and anti-bacterial properties. Vegetables can be cooked in a variety of ways or eaten raw, drizzled with olive oil and may be enjoyed at all meals including the breakfast table. Avocados, which are rich in the same monounsaturated fats found in olive oil, also fall under the category of healthy fats.

2. Fruits

Fruits are virtually omnipresent in the Mediterranean lifestyle and diet. Commonly consumed fruits include plums, dates and figs, although fruits should be selected based on what is local and in season. Fruits are commonly offered as dessert in place of sugary pastries. Berries are especially rich in vitamin and anti-inflammatory polyphenols; they are also an excellent source of insoluble fiber, key for glycemic control and a healthy gut.

4. Legumes, nuts and seeds

Commonly consumed legumes include lentils, chickpeas and white beans which can be found in salads as dips (like hummus) and soups. Nuts are also used throughout the Mediterranean diet as snacks and to add flavor and texture to main dishes. Almonds, cashews, pumpkin seeds, sesame seeds, sunflower seeds and walnuts are all included. Avoid peanuts and pistachios as they are usually grown in a fungus contaminated soil which produces aflatoxins which are harmful to the nervous system. Choose organic almonds for a great snack, add pumpkin seeds to salads, and toasted sesame seeds to grain dishes. Sesame seeds are also enjoyed as tahini in salad dressing, dips and spreads.

5. Olive oil

The most famous component of the Mediterranean food traditions is olive oil, which is used liberally in this diet. It is rich in phytonutrients and monounsaturated fatty acids which are known to increase good HDL cholesterol levels. Olives can be served as appetizers or incorporated into main dishes. Olive oil is used both as a salad dressing and can be drizzled on top of cooked food. We recommend cooking with virgin unrefined coconut oil. Avoid using olive oil in cooking to prevent burning and oxidation which destroy monounsaturated fatty acids. High quality olive oil should be purchased as extra virgin olive oil (EVOO).

Tips to increase olive oil in your diet

- Add flavor to olive oil infusing it with sprigs of dried herbs, like rosemary
- Toss warm green vegetables with olive oil instead of butter
- Make pesto and serve with vegetables or rice pasta
- Add it to soups
- Prepare your own vinaigrette for salads
- Add to homemade hummus and bean dips

6. Herbs and spices

Fresh herbs are included in almost all meals as a salad staple as well as in cooked dishes. Their presence reduces the need for added salt in dishes. Herbs offer great antioxidant value, reduce inflammation and assist in digestive processes. Commonly used herbs include oregano, thyme, basil, cilantro, parsley and mint in fresh and dry forms and brewed into herbal teas.

7. Fish and meats

Fish is an excellent source of protein and the fatty varieties are rich in omega-3 polyunsaturated fatty acids, including tuna, herring, sardines, salmon and bream. Shellfish and crustaceans such as mussels, clams and shrimp have similar benefits and are commonly consumed. Lean white fish is often grilled or baked and drizzled with olive oil, herbs and garlic.

8. Dairy and eggs

Although many adults are lactose intolerant, fermented dairy products can be eaten in moderation. The Mediterranean diet emphasizes cultured dairy products such as strained and Greek yogurt as well as soft cheeses, which are good sources of protein and calcium. Eggs are typically eaten in moderation up to four times a week.

9. Polyphenol-rich drinks

The traditional Mediterranean diet is known to include moderate intake of wine, an excellent source polyphenols. However the benefits of polyphenols can also be attained by drinking the juices of pomegranates and dark grapes as well.

The Importance of Dietary Fiber

The average American consumes about 15 grams of fiber per day, at best, when it should be closer to 30 grams. Dietary fiber, the indigestible component of our food, helps prevent the spikes in insulin the body uses to drive down blood sugar levels. By selecting foods common to the Mediterranean diet, such as whole grains and vegetables, which have a low-glycemic index (GI), you'll also naturally take in higher amounts of dietary fiber.

Fiber come in two forms:

Soluble fiber

Soluble fiber is readily fermented by bacteria in the colon forming other beneficial compounds. Examples of soluble fiber includes legumes, root vegetables and psyllium.

Insoluble fiber

Insoluble fiber absorbs water and passes through the GI tract, easing elimination. Examples of insoluble fiber include nuts and seeds, and the skin of some fruits, like tomatoes.

Both soluble and insoluble types of fiber reduce blood sugar response after meals, normalize blood lipids and have a profound effect on glycemic impact not only on the initial meal consumed, but on subsequent meals as well. When you start to increase your fiber intake, remember to go slow and increase gradually to avoid unpleasant side effects like gas and bloating. Your doctor may give you more detailed guidance regarding quantity of carbohydrates and fiber you should be getting in your diet.

Tips to Increase Your Total Daily Fiber Intake

- Add berries to your smoothie
- Include fiber in an afternoon snack by munching on high-fiber crackers, bean dip, hummus and veggies or a sliced apple with nuts.
- Add beans and legumes to soups
- Add seeds to salads and sprinkle them on soups and hot cereal
- Leave the skin on fruits in smoothies and add flax meal for an omega-3 rich extra kick

Sample Low-Glycemic Mediterranean Meal Options

Breakfast Options

- Yogurt Parfait - Low fat yogurt with sliced bananas and strawberries, handful chopped walnuts, flax seeds, hemp seeds and honey
- Hard boiled eggs with sliced tomatoes and cucumbers drizzled with olive oil
- Protein smoothie made with frozen berries, handful of spinach, scoop of rice protein and almond milk or water.
- Apple bowl with chopped apple, 1 tablespoon of flax seed, 1 tablespoon of hemp seed, slivered almonds, cinnamon and honey

Lunch & Dinner Options

- Veggie and Herb Chicken with Steamed Broccoli
- Grilled Salmon Fillet with Sauteed Greens with Garlic
- Grilled Chicken with side of Steamed Cauliflower and Spinach & Garlic Salad
- Simple Vegetable Stir Fry
- Grilled Lemon Cod with Mixed Greens Salad

Snack Options

- 2-3 tbsp mixed raw almonds and walnuts or homemade trail mix
- A handful of seeds - sunflower or pumpkin
- A handful assorted dried fruits such as figs or apricots
- 1/4 cup guacamole or 1/2 avocado
- 1/4 cup hummus and 1/2 cup vegetable sticks
- 1 medium sliced apple with 1 tbsp sunflower butter or almond butter
- 1 protein bar or fruit and nut bar
- Roasted seaweed
- 1/2 cup celery sticks and 1 tbsp sunflower butter or almond butter
- 1 cup steamed edamame with sea salt or Himalayan pink salt
- 1 hard boiled egg and 1/4 cup carrot sticks
- 1/2 cup mixed berries and cherries
- 1 handful spiced, dried green peas and chickpeas
- 1 berry smoothie made with 6 oz of nut milk and 1/2 cup fruit and flaxseeds

Living the Mediterranean Lifestyle!

- Slow cook whenever possible
- Take the time to savor each bite of food
- Enjoy meals with friends and family
- Use mealtime for lively chats with friends
- Set aside enough time to eat in a relaxing atmosphere
- Lead an active lifestyle and walk whenever possible
- Take some time to soak in the sun's rays every day
- Set aside some time each afternoon to relax, even 15 minutes to enjoy a cup of tea in the fresh air.
- Remember to give thanks for the food on your plate

Typical Mediterranean Diet Shopping List

Vegetables

- Alfalfa sprouts
- Artichoke
- Asparagus
- Avocado
- Bell Peppers
- Bok Choy
- Broccoli
- Brussels sprouts
- Carrots
- Cauliflower
- Celery
- Cucumber
- Eggplant
- Fennel
- Garlic
- Green Peas
- Kale
- Leeks
- Mushrooms
- Napa cabbage
- Onions
- Parsnips
- Radishes
- Salad greens
- Scallions
- Spinach
- Squash
- Snap peas
- Swiss chard
- Tomatoes
- Turnips
- White mushrooms
- Zucchini

Oils and dressings

- Apple cider vinegar
- Balsamic vinegar
- Coconut oil (virgin, unrefined)
- Olive oil (EVOO)
- Grape seed oil
- Sunflower oil
- Sesame oil
- Lemon juice

Fruits

- Apples
- Apricot
- Berries
- Cherries
- Dates
- Figs
- Grapes
- Kiwi
- Lemons
- Nectarines
- Oranges
- Papaya
- Peaches
- Pears
- Pineapples
- Plums
- Raisins
- Strawberries

Meats & Fish

- Beef (Organic-Grass Fed)
- Chicken (Organic)
- Wild Cod or other white fish
- Wild Salmon
- Tuna (up to once weekly)

Nuts and Seeds

- Almonds
- Cashews
- Flaxseed
- Hazelnuts
- Walnuts
- Pecans
- Pine nuts
- Chia seeds
- Hemp seeds
- Pumpkin seeds
- Sunflower seeds
- Sesame seeds

Beans and peas

- Black beans
- Black-eyed peas
- White beans
- Chickpeas
- Green beans
- Lentils
- Mung beans
- Red Kidney beans
- Split peas

Herbs, spices, seasonings

- Black pepper
- Cayenne pepper
- Chili powder
- Cilantro
- Cinnamon
- Cumin
- Garlic
- Ginger root
- Himalayan pink salt
- Mint leaves
- Mustard
- Nutmeg
- Oregano
- Paprika
- Parsley
- Red chili
- Rosemary
- Tarragon
- Thyme
- Turmeric

Sweeteners

- Honey
- Stevia

Water/Hydration

Try to drink 1/2 your body weight in ounces of water per day.

150 pound person should drink 75 ounces of water each day or consume that fluid through foods. Fruits and vegetables are very high water content foods as are soups and smoothies. These would count towards this goal.

Drinking water can help with appetite control, fatigue, detoxification, better skin, better elimination, reduce the chances of kidney stones and countless other benefits. Water is the key element for life. In fact, water is the determining factor for life on other planets. It is often something we take for granted.

I recommend that you drink filtered water. Water that has the fluoride and chlorine removed is a start.

Water should be consumed from a stainless steel container or glass container (try to avoid plastic or use only BPA free plastic) since these are re-usable but do not leach unwanted chemicals in to the water.

I highly recommend that you drink 20 ounces of water first thing in the morning before you eat or drink anything else, this has tremendous cleansing properties especially when combined with a squeeze of fresh lemon. Remember this quote.

“The body’s solution to pollution is dilution”

Protein Intake

Protein is required by every tissue in the body and is very important for bone health, hormone health and building lean muscle. Proteins also make up the enzymes that we need for day to day bodily functions. However most of us think that we require large amounts of protein per day. This is far from the truth.

Protein is very interesting since it is not really well indicated on our food label how much protein a person needs per day. There is a conspiracy in my opinion for people to eat too much protein since that is what drives the dairy and meat industry. You will notice on any food label that every macro and micro nutrient has calculated daily intake except protein.

The amount of protein that can be digested in one sitting is about 20-30 grams. Anything more than this will result in poor digestion and poor absorption. At the same time this undigested protein rots in the gut and creates a severe imbalance in the gut ecosystem.

Signs that you are getting too much protein or not digesting it is having gas with a strong odor. This is not normal. Lowering protein intake or taking a digestive enzyme will help.

So how much do we really need?

Protein equation for average person = $(\text{desired weight in pounds} / 2.2) \times 0.8$

Protein equation for athletic person = $(\text{desired weight in pounds} / 2.2) \times 1.0$

Example:

If your ideal weight is 110 lbs then the calculation is as follows: $(110/2.2) \times 0.8 = 40$ grams of protein per day

You may notice that this is not a large amount, yet enough for you to meet your requirements and function with little waste product. Your protein should be spread out throughout the day.

Good sources include: nuts, seeds, lentils, beans, legumes, high quality protein powders, lean organic meats and eggs. I strongly recommend to strive for plant strong source of protein since (unlike animal sources) they also come with fiber, phytochemicals and anti-oxidants and no cholesterol.

Why Eat Organic Food?

Adopting an organic lifestyle helps to enhance the health of ecosystems and organisms. It is generally agreed upon by its supporters that growing and eating organic food is better for the environment. Growing foods organically excludes, when possible, the use of synthetic fertilizers, pesticides, growth regulators, and additives to livestock feed. Organic farmers usually rely on crop rotation and animal manures to maintain soil productivity, to supply plant nutrients, and to control weeds, insects, and other pests.

As a result, in addition to reducing your exposure to harmful pesticides, eating organically may also reduce your exposure to hormones, antibiotics, and potentially harmful irradiated food. Less antibiotic use may help to avoid the development of antibiotic resistance. According to the Environmental Working Group (EWG), (a non-profit organization that focuses on protecting public health and the environment regarding public policy), scientists have begun to agree that even small doses of pesticides and other chemicals can have long-term health consequences that begin during fetal development and early childhood.

The Organic Seal of Approval guarantees the consumer that there has been no usage of genetically modified crops or sewage sludge as fertilizer, helping to reduce toxic runoff into rivers and lakes and the subsequent contamination of watersheds and drinking water. When you eat organically grown food, you may also be supporting small, local farmers, who are able to use less energy in transporting food from the field to the table. Organic beef, chicken, and poultry are raised on 100% organic feed and never given antibiotics or hormones; in addition, their meat is never irradiated. Organic milk and eggs come from animals not given antibiotics or hormones and fed 100% organic feed for the previous 12 months. (Free-range eggs come from hens that are allowed to roam, but they are not guaranteed to be organic.)

Several studies support the claim that organic diets can dramatically reduce pesticide exposure. One such study compared pesticide metabolite levels in 18 children who got at least 75% of their juice and produce servings from organic sources with those in 21 children who got at least 75% of their juice and produce from conventionally grown food. Levels of organophosphorus pesticide metabolites in the urine collected were six to nine times higher in the children who ate conventionally grown foods than in those who ate organic diets. More recent studies have corroborated these claims.

Claims of enhanced nutritional benefits of organic foods have caused much controversy. However, studies have been able to support this claim. The Journal of Alternative and Complementary Medicine reported one study showing that, on average, organic crops contain 86% more chromium, 29% more magnesium, 27% more vitamin C, 21% more iron, 26% more calcium, 42% more manganese, 498% more iodine, and 372% more selenium. Significantly less nitrates were also found in the organic foods. Resulting from nitrogen-based fertilizers, high nitrates in food and drinking water can be converted to potentially carcinogenic nitrosamines.

The Journal of Agriculture and Food Chemistry reported that organically grown corn, strawberries, and marion berries have significantly higher levels of anticancer antioxidants than non-organically grown foods. Protective compounds, such as flavonoids, are produced by plants to act as their natural defense in response to stresses, such as insects or other competitive plants. The report suggested that good soil nutrition seems to increase the amount of these protective compounds, while pesticides and herbicides disturb their production. Another important issue was brought to light in a 2010 review of studies that found an increased incidence of thyroid disease and diabetes with exposure to organochlorines.

What foods are most important to eat organically? Organic meats and dairy appear to be the most heavily contaminated with hormones, pesticides and herbicides. Produce can be quite variable. If you are unable to eat organic produce, it is wise to be aware of those products that are the least contaminated with pesticides. The EWG publishes the lists below (Dirty Dozen™ and Clean 15™); they are updated annually. Foods are listed in order of importance.

DIRTY DOZEN PLUS - HIGHEST IN PESTICIDES	CLEAN 15 - LEAST CONTAMINATED
Apples	Onions
Celery	Sweet Corn
Bell Peppers/Hot Peppers	Pineapples
Peaches	Avocado
Strawberries	Cabbage
Nectarines - imported	Sweet Peas
Grapes	Asparagus
Spinach	Mangoes
Potatoes	Eggplant
Cucumber	Kiwi
Blueberries - domestic	Cantaloupe - domestic
Cherry Tomatoes	Sweet Potatoes
Kale/ Collard Greens	Grapefruit
Summer Squash	Watermelon
	Mushrooms

Genetically-modified Produce:

In order to determine if produce has been genetically modified, check the number PLU (product look- up) code on the sticker on most produce. If the number code is simply four digits, the produce is conventionally grown, which means it is not genetically modified and not organic. If the PLU code is a five digit code beginning with an “8”, the product has been genetically modified. If the PLU code is a five digit code beginning with a “9”, the product is organic, and also, by definition of organic, not genetically modified.

Cruciferous Vegetables

Cruciferous vegetables may play an important role in cancer prevention. These vegetables contain phytochemicals known as isothiocyanates. These phytochemicals change the way estrogen is metabolized or broken down in the body. This in turn decreases the risk of hormone or estrogen related cancers such as breast and uterine cancer.

Chopping or chewing cruciferous vegetables results in the formation of these bioactive products. Eating these vegetables either raw, lightly sautéed, or steamed is best to retain the full array of nutrients. Cruciferous vegetables are also known as important sources of fiber, vitamins and minerals. Eating a serving of these vegetables daily (particularly broccoli, kale and brussels sprouts) can help lower disease risk.

The following vegetables are included in the cruciferous family:

- Arugula
- Bok choy
- Broccoli rabe
- Collard greens
- Kale
- Mustard greens
- Rutabaga
- Watercress
- Brussels sprouts
- Broccoli
- Cabbage
- Chinese cabbage (napa)
- Daikon (a type of radish)
- Kohlrabi
- Radish
- Turnips
- Cauliflower

Eat the Colors of the Rainbow

There are amazing and unique compounds found in all different fruits and vegetables from all different colors of the rainbow. Each of these unique compounds provides our cells with the nutrients needed to make our bodies function optimally. Below is a list of fruits and vegetables and the benefits they provide. Please note that different diets may limit certain vegetables/fruits (ie: Autoimmune Paleo Diet restricts tomatoes). The list is more so for educational purposes.

Color	Compounds	Benefits	Foods
RED	Anthocyanidins Astaxanthin Carotenoids Ellagic Acid Ellagitannins Fisetin Flavones Flavonols Flavan-3-ols Flavanones Luteolin Lycopene Proanthocyanins Quercetin	Anti-cancer Anti-inflammatory Cell protection DNA health Immune health Prostate health Vascular health	Adzuki beans Apples Applesauce Cranberries Cherries Kidney Beans Plums Pomegranate Radishes Raspberries Red grapefruit Red grapes Strawberries Sweet red peppers Rooibos tea Tomato
ORANGE	Alpha carotene Beta-carotene Beta-cryptoxanthin Bioflavonoids Carotenoids Curcuminoids Naringenin	Anti-cancer Anti-bacterial Immune health Cell protection Reduced mortality Reproductive health Skin health Source of vitamin A	Acorn squash Apricots Bell pepper Butternut squash Cantaloupe Carrots Dried Fruit (apricot, mango, papaya) Grapefruit Mango Nectarine Orange Papaya Sweet Potato Tumeric Root Winter squash
YELLOW	Carotenoids Lutein Rutin Zeaxanthin	Anti-cancer Anti-inflammatory Cell protection Cognition Eye health Heart health Vascular health	Bell peppers Greens Kale Spinach Succotash

Color	Compounds	Benefits	Foods
GREEN	Catechins Chlorogenic acid Chlorophyll Epigallocatechin gallate Flavolignans Folates Glucosinolates Hydroxytyrosol Indole-3-carbinol Isoflavones Isothiocyanate Oleocanthal Oleuropein Phenolic diterpenes Phytosterols Phenols Phenylethylisothiocyanate Silymain Suldoraphane Tannins Theaflavins Thearubigins Tyrosol	Anti-cancer Anti-inflammatory Brain health Cell protection Skin health Hormone balance Heart health Liver health	Artichoke Asparagus Avocado Bamboo sprouts Bean sprouts Bok choy Broccoli Brussels sprouts Cabbage Celery Chard/Swiss chard Cucumbers Green beans Green peas Green tea Greens (Beet, dandelion, collard, mustard, turnip) Lettuce Okra Olives Rosemary Spinach Snowpeas Watercress
WHITE/TAN	Allicin Allyl sulfides Cellulose (fiber) Lignans Lignins Sesamin Sesamol Tannins Terpenoids Theobromine	Anti-cancer Anti-microbial Cell protection Gastrointestinal health Heart health Hormone balance Live health	Cinnamon Clove Dark Chocolate Flaxseed meal Garlic Ginger Nuts Onions Sesame seeds Shallots Tahini Whole flaxseed
BLUE/PURPLE	Anthocyanidins Hydroxystilbenes Procyanidins Pterostilbene Resveratrol	Anti-cancer Anti-inflammatory Cell protection Cognitive health Heart health	Berries (blue or black) Cabbage (purple) Carrots (purple) Cauliflower (purple) Dates Eggplant Figs Grapes (purple) Kale (purple) Plums Potatoes Prunes Raisins

Dietary Fats

Fats and oils may well be the most important part of your daily diet. Over the past 20-30 years, there has been an explosion of research on the significance of fats in health and disease. There is considerable evidence which links certain fats with many of the most common forms of degenerative diseases afflicting society today, including cancer and heart disease. But it is fundamental to realize that not all fats are created equal. Simply put, there are actually good fats and bad fats, that is, fats that support beneficial body processes and fats that have detrimental effects. Becoming familiar with different types of fats and oils will help you make informed, health-enhancing decisions.

In order to understand the subject, we need to start with some basic definitions. All fats are known as lipids, and the two words are often used interchangeably. Lipids include fats and oils, (the difference between them is that fats are solid at room temperature, whereas oils are liquid) and fat-like substances that are greasy and waxy such as cholesterol. Fatty acids are the basic units of all fats. The physical characteristics and nutritional activity of a fat depends on the kind of fatty acids it contains. A fat is classified as saturated, monounsaturated, or polyunsaturated according to the type of fatty acids it contains in the greatest quantity.

Dietary fats are available primarily from two basic sources: animal and vegetable. Animal fats (butter and lard) are saturated and tend to be solid. Vegetable fats like olive oil (monounsaturated) and sesame oil (polyunsaturated) tend to be liquid. Dietary fats serve many functions in the body. Perhaps the most important is structural -- they are the major constituent of every cell membrane in the body. The membrane, or outer lining of a cell, determines what goes into and out of that cell -- like a gatekeeper. As such, they are critical in the proper functioning of the cell.

As mentioned, there are “good” and “bad” fats. Those fats derived from unprocessed food sources are generally good fats. The polyunsaturated and monounsaturated oils are more fluid and allow easier and healthier function. There are also some natural unprocessed saturated fats that participate in many functions such as repair of gut cells and formation of healthy brain and nerve cells. These saturated fats are short and medium chain saturated fats like coconut oil.

There are two families of fats that are not only good, they are termed essential - meaning that the body cannot make them and they must be obtained from the diet. They are the Omega-3 and Omega-6 essential fatty acids (EFAs). These essential fats perform a crucial function in the body by producing messengers called prostaglandins.

Prostaglandins are hormone-like substances that can be thought of as “master switches” that regulate and control almost all cellular activity. Examples of their work include controlling inflammation, blood pressure, and immune system activity. Omega-3 fats, for example, affect the balance of certain prostaglandins. The regulation of this balance is crucial for proper function. Under ideal circumstances, the diet supplies the appropriate ratio and amount of essential fats resulting in a balance of prostaglandins.

EFAs are very important, but unfortunately they are fragile and easily “deactivated.” The main processes that deactivate EFA's are heat, oxygenation, and hydrogenation.

- Oils can be exposed to high heat during processing and cooking.
- Oxygenation, a more subtle process, occurs when the oil is exposed to air and light, such as when oils sit on grocery shelves.
- Hydrogenation occurs when hydrogen is bubbled through oils, as is done in the making of margarine. This process, which results in fats that are labeled as “hydrogenated” or “partially- hydrogenated,” extends the shelf life of the oil, and, as in the case of margarine, turns a liquid vegetable oil into one that is solid at room temperature.

Two things that can happen to EFAs when they undergo any of the above processes are:

First, they can release what are called free radicals. Think of free radicals as particles zipping around cells looking to attach or “link” with just about anything. In so doing, they damage the other molecules in the cell and set off chain reactions producing other free radicals. Premature aging, heart disease, cancer, and other degenerative processes are the result of unbridled free radical activity.

Second, the beneficial natural oils actually change their molecular configuration or shape when they are “partially hydrogenated,” forming what are termed trans fatty acids (TFAs). These TFAs are biochemically different and are not able to fulfill the same function as the original oil. Unfortunately, they can still take the place of the biochemically active essential fats in cell membranes, acting to slow production of the beneficial prostaglandins. There is also some evidence to suggest that they may act like free radicals and promote tissue destruction.

A variety of dietary and lifestyle factors are known to interfere with proper EFA function.

These include:

- Trans fatty acids (found in starchy foods: crisps, chips, and bread)
- Cortisone found in topical creams, nasal sprays, and inhalers
- Pesticides and environmental pollutants such as lead and cadmium
- Aspirin, acetaminophen and other anti-inflammatory drugs
- Alcohol
- Refined sugar and white flour
- X-rays

Recommendations

For most people, total fat consumption should be about 20-30% of total calories. A 1500 calorie diet should include no more than 35-50 grams of fat; a 2000 calorie diet should include no more than 45-66 grams of fat a day; and a 2500 calorie diet should include up to 55-83 grams from fat.

Eat at least half of your fat intake a day as essential unprocessed fats.

For medium-heat cooking, use coconut oil or avocado oil. These oils are more stable and don't have the health risks associated with hydrogenated processed saturated fats. It is best to keep high heat or deep frying to a minimum since EFAs are destroyed with cooking. When you do cook with oils over higher heat, it is best to use a high oleic safflower oil as this is most stable under higher heat conditions. Add healthy monounsaturated and polyunsaturated fats to your foods. The best to use is cold-pressed extra-virgin olive oil, along with sesame (tahini), flax, walnut, almond, grapeseed, and avocado oils.

Avoid ALL processed fats. This means margarine, processed baked goods and chips – anything labeled “hydrogenated” or “partially hydrogenated.” These are unnatural damaged fats and there is absolutely nothing good about them. If you have to choose between butter and margarine, choose butter (and use it sparingly).

Keep consumption of animal-derived saturated fat to a minimum. Avoid fatty cuts of meat, items cooked or prepared with high amounts of saturated fats. Small amounts of the short or medium chain saturated fats, such as coconut oil are acceptable.

Purchase good quality oils. It is important that they be labeled “cold-pressed” so they are not exposed to high heat and chemical alteration. These oils should be kept in tinted, glass bottles with a tight lid, refrigerated and not used for high heat frying. Additionally, olive oil should be labeled “extra- virgin” or “first-pressing.” Coconut oil should be labeled both “organic” and “virgin.”

The following symptoms have been found to be common indicators of an insufficient intake of essential fatty acids. It is important to remember that when consuming saturated and altered fats, we not only experience the negative effects of consuming these fats, but we are also missing out on an opportunity to consume our essential fatty acids.

HEALTH CONDITIONS THAT MAY BE CONNECTED WITH OMEGA-6 DEFICIENCIES

Eczema-like skin eruptions	Growth retardation
Loss of Hair	Impairment of learning ability
Behavioral disturbances	Lack of motor coordination
Excessive water loss through skin and increased thirst	Impairment of vision - Eye/Optic Nerve degeneration
Susceptibility to infections	Tingling sensation in arms and legs
Failure of wound healing	Behavioral changes
Arthritis-like conditions	High triglycerides
Heart and circulatory problems	Increased blood pressure
Sterility in males, miscarriage in females	Sticky platelets
Dry skin	Edema

Food Sources of 'Good' Essential Fats

OMEGA - 3	OMEGA - 6
Flax	Safflower, high oleic, cold pressed
Dark green leafy vegetables	Sunflower, cold pressed
Algae (DHA)	Walnuts
Walnuts	Sesame oil or Tahini
Pumpkin	Avocado Oil
Cold water fish (cod, salmon, tuna)	Flax, cold pressed

FOOD SOURCES OF 'GOOD' MONOUNSATURATED FATS

Olive Oil, extra virgin cold pressed	Almonds or Almond Butter
Sesame Oil	Macadamia Nuts or Oil
Brazil Nut	Walnut
Hazelnut/Filberts	Cashew
Avocado	Pine Nuts
Peanuts or Peanut Butter (non-hydrogenated)	Cashews

**be aware of aflatoxin mold, a potential carcinogen in peanuts*

FOOD SOURCES OF "GOOD" SATURATED FATS	FOOD SOURCES OF 'BAD' TRANS FATS *
Ghee (clarified butter)	Commercially Prepared Cookies, Crackers, & Chips
Coconut & Palm Oils	Shortening, Chops, & Other Fried Foods
	Hydrogenated Peanut Butter
	Margarine
	Chocolate & Candy
	Pastry & Doughnuts

(Microwaved food can form bad fats)

**Most processed foods contain hydrogenated or partially hydrogenated oils*

FOOD SOURCES OF 'BAD' SATURATED AND PROCESSED FATS
Shortening (Crisco)
All "Hydrogenated Oils" All "Partially Hydrogenated Oils"
High Temperature Deep Fried Foods
Rancid Oils* (Exposed To Oxygen - smell "sharp")
Poultry Skin
Cheese

**All oils left exposed to oxygen can go "rancid" which can be toxic to human tissue)*

Understanding Glycemic Index and Glycemic Load

The glycemic index (GI) is a number that indicates how quickly a particular food will raise the blood sugar. The higher the number, the higher the blood sugar response. Not all of these foods taste “sweet.” Even some complex carbohydrates are broken down quickly into sugar in the body, particularly potatoes or grains that have been ground into flour.

Foods with a high glycemic index signal the body to produce large amounts of insulin, a hormone that carries blood sugar into the cells to be used for energy or stored for later use. After eating high GI foods, large amounts of insulin may be released causing a rapid drop in blood sugar (called “reactive hypoglycemia”) that can lead to shakiness, “spaciness,” or fatigue several hours after eating, as well as an increase in appetite.

High glycemic index foods should be avoided by people who are trying to lose weight, people who have diabetes or may be at high risk for diabetes, and people who have “hypoglycemia” symptoms. If you have any of these conditions, try to avoid foods with a high glycemic index and avoid foods with a high glycemic index (70 or more).

Some foods have low impact on the blood sugar despite their high glycemic index when they are eaten in normal portion sizes. Carrots, for instance, have a high glycemic index, but it takes 6.6 cups of carrots to deliver the same amount of carbohydrate that is found in 1 cup of cooked spaghetti. Since most people do not eat that many carrots at a sitting, carrots do not tend to have a big impact on blood sugar. The Glycemic Load takes the amount of carbs in a typical serving into account along with the glycemic index and can give a more balanced view of how eating typical servings of a particular food will affect blood sugar.

Some basic tips to keep the glycemic load of the diet down include:

- Eat a diet which is mostly comprised of a protein and vegetables
- Pass on the potatoes and bananas.
- Beans are a great source of protein as well as a good source of slowly digested carbohydrates.

*For more information, see <http://www.mendosa.com/gi.htm> or read *The GI Diet* by Gallop or *The New Glucose Revolution* by Wolliver*

GLYCEMIC INDEX AND GLYCEMIC LOAD OF CERTAIN FOODS

	Glycemic Index	Carbs (grams per serving)	Glycemic Load per serving
<i>High</i>	70 or more		20
<i>Medium</i>	50-69		11 to 19
<i>Low</i>	40 or less		10 or less
Fruits			
1 Average Apple	38	16	6
1 Banana whole, ripe	51	26.5	14
1 Orange whole	42	12	5
1/2 cup Raisins	64	44	28
Watermelon	72	6	4
Strawberries	40	3	1
Vegetables			
1/2 cup Broccoli steamed	6	2	1
1 cup Carrots raw	47	6	3
1 Sweet Corn on the Cob (boiled 20 min)	48	16	6
1/2 cup Green Beans	28	5	1
Baked Potato, White, No skin	98	27	26
1/2 cup Spinach steamed	6	3.5	1
Sweet Potato, Boiled	44	25	11
Green Peas	51	80	4
Grains			
Bagel, white	69	35	24
Corn Tortilla	49	22	11
White Bread	70	14	10
Instant Oatmeal	83	22	18
Cheerios 20g	74	20	15
1 cup Popcorn 20g	55	10	6
White Rice, boiled, 150 g	72	42	30
Brown rice, 150 g	62	42	26
Quinoa, 150 g	53	25	13
Legumes			
Baked beans, canned, 150 g	50	15	6
Chickpeas, canned, 150 g	38	23	9
Kidney beans, boiled, 150 g	25	25	6
Lentils, 150 g	29	18	5
Refried Pinto beans, 150 g	38	26	10
Beverages			
8oz Apple Juice	40	30	12
8oz. Pepsi ®	58	25	15
1/2 cup Tomato Juice	38	10	4

Health Benefits of Nuts

It has recently been suggested that nuts may be considered a “health food.” During the recent low-fat craze, Americans were convinced that nuts were too high in fat to include in a healthy diet. The fact that they are excellent sources of protein, minerals (magnesium and copper), “good” monounsaturated fats, vitamin E, folic acid, fiber, and naturally occurring cholesterol-lowering compounds called plant sterols, as well as quite low in “artery-clogging” saturated fats and therefore good for the heart, was not ever mentioned.

Several studies over the past several years have shown the health benefits of nuts:

- The Nurses’ Health Study found that women who ate 5 ounces or more of nuts per week reduced their risk of dying from heart disease by 35%. The researchers also noted that the nurses who were nut-eaters tended to weigh less than the nurses who did not eat nuts (BMJ 1998;317:1341-1345).
- In the Iowa Women’s Health Study, women who ate nuts or seeds more than 4 times a week were 40% less likely to die of coronary heart disease than similar women who didn’t eat nuts (N Engl J Med 1996;334: 1156-1162).
- 31,000 Seventh-Day Adventists who ate nuts more than 4 times a week were half as likely to die of a heart attack as those who ate nuts less than once a week (Arch Intern Med 1992;152:1416-1424).
- In the Physicians’ Health Study, men who ate nuts at least twice a week had half the rate of sudden cardiac death as men who rarely or never ate nuts (Arch Intern Med 2002;162:1382-1387).
- A study in Circulation (2004;109:1609-1614) reported that when walnuts were substituted for about one third of the calories supplied by olives and other monounsaturated fats, the elasticity of the arteries increased by 64%, and levels of vascular cell adhesion molecules were reduced.

Many studies using peanuts, walnuts, almonds, macadamia nuts, pecans, pistachios, and hazelnuts showed that diets containing nuts or nut butters lowered LDL cholesterol levels by about 10 to 15 points. In addition, nuts may help dilate blood vessels due to the presence of the amino acid arginine, which may help to lower elevated blood pressure levels. Certain nuts like pecans, walnuts, and almonds contain tryptophan, an amino acid that stimulates the production of serotonin in the brain, which can improve depression and promote relaxation. While nuts are calorically dense and easy to overeat, they are also a satisfying snack. It has been suggested that people trying to lose weight who eat nuts tend to be more compliant with their diets because the fat and fiber content of nuts makes them very filling.

An ounce of nuts is usually equal to about 170 to 180 calories. Sample amounts are approximately 20 almonds, 15 cashews, 18 hazelnuts, or 10 walnut halves. The best way to add nuts to your diet is to eat them instead of other foods, especially ones that contain heart-damaging fat (cakes, cookies, chips, etc.). Portion control is key. Here are some ways to add healthy “nut” fat to your diet:

- Sprinkle almonds on top of yogurt.
- All nuts are healthy, but walnuts & almonds have particular benefit
- Use nuts to replace croutons in salads or soups.
- Add slivered almonds to chicken salad.
- Add nuts to your salads.
- Add a handful of nuts to steamed veggies.
- Walnuts, a great source of omega-3 essential fatty acids, are heart-protective, promote better cognitive function, and provide anti-inflammatory benefits. Walnuts also contain the antioxidant compound ellagic acid, known to fight cancer and support the immune system. In a study reported in Phytochemistry (2003;63:795-801), researchers identified 16 polyphenols in walnuts, including three new tannins, with “remarkable” antioxidant activity.
- Almonds, one of the best nuts for lowering cholesterol, are rich in many nutrients: potassium, manganese, copper, vitamin E, selenium, magnesium, and calcium. One-fourth cup of almonds contains almost as much calcium as a 1/4 cup of milk.

Facts on Refined Sugar

There is evidence that refined sugar contributes to tooth decay, obesity, nutrient deficiencies, and hypoglycemia. It appears to play a role in increasing total cholesterol levels, decreasing HDL (good cholesterol) levels and in the development of diabetes. Refined sugars, along with chemical additives such as artificial colors and flavors are also suspected of causing behavioral problems in children.

Various studies in public schools have demonstrated that classroom performance has improved when junk food was taken out of their school lunch program.

According to figures from the U.S. Department of Agriculture (USDA), consumption of various sweeteners, often in calorie-dense foods and drinks, has risen in the United States from an estimated 113 pounds per person in 1966 to 147 pounds in 2001.

Sugar affects people in different ways. Sugar provides empty (non-nutritive) calories. In the refining process, it is stripped of all its vitamins and minerals. Then, after consuming it, we must use some of these very nutrients to metabolize it. Because it is so addictive and so available it is not easy to remove from our diets. Refined sugar shows up in so many foods on the supermarket shelf – foods like spaghetti sauce, salad dressing, crackers, breads, canned soups and vegetables. It is EVERYWHERE.

Refined sugar is often responsible for many common chronic complaints. If you remove it from your diet for just 2-3 weeks, you may be amazed to find that some of your long-standing symptoms will disappear. Energy, joint or muscle pains may improve, headaches may disappear, you may sleep better, and your stomach may no longer rumble and bloat.

To make it more complicated, food processors try to mask the total amount of refined sugars in their products by using a variety of added sugars with different names. Some examples of these are high fructose corn syrup, dextrose, honey, glucose, sucrose, sorbitol, and brown sugar. It is difficult to calculate the total amount of added sugars eaten because food labels include both naturally occurring sugars and added sugars. For example, the label claim on a container of plain yogurt (which has NO ADDED SUGAR) may show a total of 17 grams of carbohydrate, with 16 grams sugar. Regulations require that labels show all refined sugars in a product lumped together, not just the added sugar. But generally speaking, it is the added refined sugars that cause the most problems. In this example, the naturally occurring sugar in yogurt is lactose, which does not affect the body the way that most refined sugars may.

People do want to sweeten their foods though, and there are good and bad choices. Many alternative sweeteners are available. Which is best is a complicated question. Generally an added sweetener that has a “low glycemic index” – one that does not cause a spike in blood sugar--is preferable. One favorite is stevia, which has no impact on blood sugars. Another good sweetener is agave nectar which has a lower glycemic index. While molasses is more refined, blackstrap molasses does have a significant amount of iron, calcium, potassium and B vitamins.

Mystic Lake Dairy fruit sweetener is another natural sweetener made from mixed fruit concentrate of pineapple, peach and pear, with the consistency of honey. Fruit concentrates still contain many nutrients and are comprised mostly of fructose. More recently, stevia, a powdered or liquid herbal sweetener that has no affect on blood sugar and is many times sweeter than white sugar, is becoming a popular replacement for aspartame (Nutra Sweet) or sucralose (Splenda).

Fructose, while it is a refined sugar, can sometimes be a good alternative as an added sweetener as well because it also has a very low glycemic index. Fructose is sometimes confused with high fructose corn syrup (HFCS), an ingredient in much of the processed foods and soda pop Americans ingest daily. HFCS is a thick liquid made from corn starch, consisting of 42-55% fructose and the remainder glucose. Therefore it has a much higher glycemic index than fructose alone and is not a preferred added sweetener. All the preferred sweeteners mentioned place less stress on the body's glucose/insulin balancing mechanism.

Hints to keep refined added sugars to a minimum:

1. Ingredients are listed by weight in descending order. Unless low glycemic index, such as fructose or agave, sweeteners should never be one of the first ingredients. They should be listed toward the end in the list of ingredients. If they appear near the beginning of the list, that food probably should be avoided.
2. The following are different names for sweeteners as they appear on the label, e.g., high fructose corn syrup, fructose, maple syrup, brown rice syrup, barley malt, dextrose, glucose, molasses, sorbitol, evaporated cane juice, honey, brown sugar. A product may contain more than one kind of sugar. When making choices, choose lower glycemic index and/or naturally occurring sweets over refined sweets, e.g., fruit juice or fruit, pure maple syrup, brown rice syrup, fructose, barley malt, stevia (an herb), agave nectar, or date sugar.
3. Use of artificial sweeteners, including NutraSweet, Splenda, Acesulfame, and Sweet N'Low can disrupt the body's ability to gauge calories and lead to overeating. There have been allergic reactions associated with the use of these sweeteners. Use of artificial sweeteners also encourages our taste buds to desire more foods with a very sweet taste. Stevia is a sweet tasting herb and is a healthier alternative but should be used in moderation.

Facts You Need To Know About Some Popular Artificial Sweeteners:

Aspartame (aka Nutrasweet, Equal, Spoonful) was approved over the objections of the FDA's Board of Inquiry. Adverse reactions attributed to aspartame include headaches, dizziness, difficulty breathing, memory loss, blindness and even death. In all there have been 92 different adverse reactions reported to the FDA. Symptoms caused by aspartame can mimic the symptoms present in various diseases like Alzheimer's, epilepsy, severe depression, mental illness, Epstein Barr, chronic fatigue syndrome, multiple sclerosis and others. Aspartame has been shown to cause cancer in rats at levels approved for human consumption. It is genetically engineered.

Acesulfame-K (aka Ace-K, Acesulfame-potassium) causes cancer and elevated cholesterol in lab animals. It is known to cause low blood sugar attacks. It has not been adequately tested for safety.

Splenda (aka Sucralose) is chlorinated sugar. Contrary to manufacturers claims, it is partially absorbed by the body. The U.S. FDA states it is 11% – 27% absorbed; the Japanese Food Sanitation Council says it's 40% absorbed. It has caused shrunken thymus glands, enlarged liver and kidneys, miscarriage and diarrhea in animal studies. Small amounts of dangerous contaminants have been detected in sucralose. Only six human studies have ever been done as of 2006, and the longest was three months. No studies have ever been done with children or pregnant women. People with chlorine allergies may suffer severe reactions.

Saccharin, previously thought to cause cancer, was delisted as a carcinogen in 1997. However, there are a number of prominent scientists who warn that saccharin still poses a cancer risk and it should be avoided.

Fermented Foods

For thousands of years, people around the world have consumed fermented foods. The process of fermenting foods not only preserves them, but improves their flavor and enhances their digestibility and nutrient status. The fermentation process produces beneficial microbes as well. A health balance of gut flora is critical for immune health, nutrient absorption, weight control, detoxification, and more. Beneficial bacteria are affected by processed foods, sugar intake, antibiotics, acid-reducing medications, toxins, and chronic stress.

Fermentation is the process where beneficial bacteria such as lactobacilli and yeasts break down foods sugars, starches, and proteins into lactic acid, carbon dioxide, and enzymes, which produce more beneficial bacteria. The lactic acid produces an environment that inhibits pathogenic and opportunistic bacteria.

Proper fermentation must be done with salt, NOT vinegar. Salt is antimicrobial in nature, and will inhibit the growth of putrefying bacteria while the lactic acid preserves the vegetables. Also, salt aids in the proper activation of enzymes. The salt should preferably be non-iodized and unprocessed as this type of salt contains minerals that help the lactobacilli grow.

A lot of fermented foods use a starter to immediately establish a presence of beneficial bacteria and shortens the fermentation time. Something to be mindful of is the whey starters if a person has a dairy sensitivity or allergy. The water ideally should be filtered to be free of fluoride and chlorine. Herbs and spices such as garlic are frequently added, as the bacteria uses the minerals for energy that helps with enzyme production.

The pasteurization of fermented dairy food kills what the bacteria use for energy, thereby the bacteria can't thrive in that environment for long resulting in their death. Dead bacteria stimulate the immune system in the GI tract, which is something that would want to be avoided. Therefore if you are purchasing fermented foods instead of making them, buy them unpasteurized.

Fermented foods:

- kimchi
- sauerkraut
- Natto (has the most research)
- pickles
- ginger
- cheeses
- yogurt

Benefits of fermented foods:

- Enzymes produced aid in the digestion of foods eaten in the same meal
- The beneficial bacteria act as chelators, aid in detoxification, improve the immune system, and reduce growth of harmful yeasts, bacteria, and parasites
- Easy to digest due to fibers, starches, and proteins being pre-digested
- Lower the glycemic load as the natural sugars have already been metabolized
- Produces vitamin C and folic acid
- Aid in absorption of minerals such as calcium, magnesium, zinc, and copper by reducing phytates and oxalates (found in grains, nuts, and veggies)
- Acidic which can aid in the digestive process further by lowering the pH of the contents of the stomach

Fermented foods should be consumed regularly. However, it is more beneficial to use them in small amounts (2-3 tablespoons) at least one to two times per day than in large amounts less frequently. They should be consumed cold to preserve their enzymes and probiotics.

Lectins

What are they?

A lectin is a dietary protein found in foods. They are naturally occurring in organic and conventionally grown vegetables, fruits, legumes, and grains. They are more prominent in raw legumes and grains and are mostly found on the seed coat. Lectins are a plant's defense against microorganisms, pests, and insects while the plant is growing and before seeds are ready for dispersal.

The genetic modification of food and cross-breeding has led to higher amounts of lectins in certain foods. The same foods can have different levels of lectins. This can change based on whether a food is in season, properly ripe, how it is processed/prepared and whether or not it is cooked. But the process of reducing lectins is different based on the type of lectin. There are two types: soft lectins and hard lectins. Soft lectins are in certain fruits and vegetables, whereas hard lectins are in grains, legumes, fruits, and vegetables. Soft lectins are diminished by the cooking process. Raw or uncooked foods that contain soft lectins are moderately high in lectins. Raw or uncooked foods that contain hard lectins are extremely high in lectins.

The problem with these proteins is that they can bind to “glycans” or sugars - including the sugars found on cell membranes. Lectins are notoriously hard to break down. They are resistant to cooking and digestive enzymes. These undigested lectins bind to not only sugars and translocate - or move to a different area of the body - but they also take bacterial antigens from the gastrointestinal (GI) tract to other tissues causing the immune system to become aggravated. This can contribute to autoimmune disease, as well as a leaky gut.

Damage caused by lectins:

- Toxic to damaged cells and inhibit the natural repair of the GI tract
- Lectins can breakthrough the GI barrier and allow large undigested proteins into the bloodstream
- They can bind to red blood cells causing them to clump together resulting in anemia
- Damage collagen and connective tissue in joints
- Bind to the stomach lining - even if the proper pH of the stomach is reached
- Thicken the lining of the pancreas interfering with exocrine cell production of enzymes and endocrine cells producing insulin
- Damage the lining of the GI tract
- Promote the overgrowth of E. Coli
- They bind to the thyroids TSH-receptors, stimulating the activation of TSH-receptor antibodies

Symptoms of lectin exposure can be obvious such as gas, bloating, diarrhea, constipation. Some less obvious complaints can be headache, fatigue, acne, swollen joints, or water retention. Lastly, other symptoms may occur chronically and seem unrelated. These symptoms include a lot of degenerative diseases and autoimmune disease such as hypertension, osteoporosis, fibromyalgia, and chronic fatigue.

Some diseases associated with lectins are:

- Inflammatory Bowel Disease (IBD)
- Diabetes Mellitus
- Rheumatoid Arthritis
- Glomerulonephritis
- Psoriasis
- Multiple Sclerosis
- Cataracts
- Congenital Malformations (Birth Defects)
- Infertility
- IgE-mediated allergies

Since lectins directly stimulate the immune system by what are called inflammatory cytokines, they can “hide” from traditional food sensitivity testing. Food sensitivity testing looks for IgA and IgG antibodies. To test whether or not lectins are causing an issue, some people may need to have a test performed called a Stimulated Cytokine Analysis.

But how can some people eat lectins and others can't?

It depends on the state of health of the GI tract, behavior of microflora, and immune status. IBD is a good example. Typically, the GI cells of someone with IBD turn over faster than the GI cells of someone that doesn't have IBD. They typically have a dysbiosis, and their immune system is constantly on the attack. The new cells have a lot of glycans for lectins to bind to, causing things such as disarrangement of the cytoskeleton (shape of the cell), increase endocytosis (how a cell absorbs molecules), and shortens the microvilli (poor absorption of nutrients). This is why IBD patients typically have a hard time with anything that contains peels or seeds. It doesn't take a lot of lectin absorption to disrupt the physiology of a GI tract that is already inflamed - around 1-4%.

Lectins have also been shown to increase gut permeability. Since they aren't broken down and change the way cells behave with one another, it takes longer for the tight junctions between GI cells to heal. This prolonged healing time allows dietary and bacterial antigens to enter into the bloodstream.

Lectins also cause more white blood cell production. Couple this with the fact that lectins also up-regulate genetic expression of autoimmune disease and increase inflammatory markers. Therefore a person with an autoimmune disease has created a perfect storm of tissue destruction if they have a negative response to too many dietary lectins.

Ways to reduce lectins

Remember, lectins are virtually everywhere. A person can't eliminate them all together, but they can significantly reduce their intake. The foods with the highest lectin counts are grains (wheat, quinoa, brown rice, buckwheat, oats, barley, rye, millet, and corn), all dried beans (including soy), and nightshades (tomatoes, potatoes, eggplants, and peppers). Dairy should also be avoided. Not because dairy contains it directly, but the lectins can be transferred from the cow when they are grain fed (mother's can also pass lectins to infants with breast milk - this is why babies get gassy when mothers eat more beans).

Buy fresh fruits and vegetables in season. In season tastes better because lectins are at their lowest toxicity. The greater the distance that produce is transported the higher the lectin count due to a changed harvest time, so try and buy local when possible. Vegetables should be picked when they are ready to eat, and fruit should be picked before it is ripe. If vegetables are overly-ripe then the seeds start to take over the “flesh” and this raises the lectin count. Please visit <http://dailyinfographic.com/fruitsvegetablesherbs-when-are-they-in-season-infographic> for more information on when various fruits, vegetables and herbs are in season.

Soaking grains and legumes before consumption can reduce lectin counts. Make sure they are fully covered in water and add 1-2 tablespoons of lemon or lime juice and 1 teaspoon sea salt. Beans that have been presoaked overnight before cooking have reduced activity of soft lectins. If beans are boiled without pre-soaking they would still have the activity of hard lectins. Slow cookers are ideal, in that they can get over 158 degrees F for over 30 minutes - which is the lowest heat and time needed to start degrading hard lectins. Pressure cookers can also break down hard lectins. Over consumption of raw vegetables can be problematic for people that have a lectin issue. Raw vegetables contain what is called Panhemagglutinin Lectins. These lectins cause blood cells to stick together. Again, the best way to reduce lectins for fruits and vegetables is to eat them in season. Also, consider peeling and removing seeds before consumption (potatoes, cucumbers, etc). Frozen vegetables are typically the lowest source of lectins when a food is out of season. If you discover you have a problem with canned or frozen fruits and vegetables, then wait until they are in season. Once someone's condition has improved, then they can most likely eat more lectins. Fermentation also cultivates enzymes that help break down lectins.

There are also things called “sacrificial sugars” that when taken or eaten with the same meals containing lectins they cause the lectins to bind to them instead of the cells of an inflamed GI tract. Some examples are N-Acetyl Glucosamine, D-mannose, and Mucin. Honey has also been shown to inhibit bacterial and soft lectins. Honey should be added after the cooking process to avoid denaturing the honey.

For the purpose of healing the GI tract, some people will need to eliminate lectins for a period of time - anywhere from 14-90 days. To reintroduce sources of lectins, a person should consume one serving and wait three days to see if they have any negative reactions. Then they can attempt to reintroduce the same food with one more serving, and again, they wait three days to see if they notice symptoms. After two provocations, if a person fails to notice symptoms, then they can reintroduce that food back into their diet and then try another food.

Reading Labels

General rules:

- Shop from the outer perimeter walls of the store – fresh, raw foods.
- If it is in a box, most likely it is not good for you!
- If the food will not rot/spoil, not good for you!
- Avoid foods with any types of preservatives.
- Watch out for words ending in –ite, -ate (preservatives), natural flavoring
- Words ending in –ose or –ase
- Fats to avoid: Canola, Safflower, hydrogenated or partially hydrogenated fats.
- Citric acid
- High fructose corn syrup
- Fractionated vitamins: An added vitamin that is separated from other whole food components that have the minerals and enzymes that are needed to make the vitamin efficient in your body. This will rob you of nutrients to process.
- Fortified or enriched with...
- Injected with broth
- Corn or potato starch
- Any dyes
- Whey

Watch out for statements like these on packages:

- NATURAL FRUIT FLAVORS, with Real Fruit Juice
- ALL NATURAL INGREDIENTS
- NO ARTIFICIAL PRESERVATIVES
- 100% NATURAL
- REAL FRUIT
- NO PRESERVATIVES
- NO ARTIFICIAL INGREDIENTS

Statements like these do not mean there are no harmful additives in the product. There still may be harmful ingredients. The manufacturer hopes you'll think there are no harmful ingredients, but as you will see from the following examples, it's not true. Buying a product in a health food store does not guarantee that packaged products you buy will be free of harmful additives either. So, it's important to always READ LABELS VERY CAREFULLY.

Worst Food Additives

Here is a list of some of the worst food additives. Check food labels to make sure that what you buy does not contain these ingredients.

- *Acesulfame-K* - "Sunette"; may cause low blood sugar attacks; causes cancer, elevated cholesterol in lab animals.
- *Ammonium sulfate* - may cause mouth ulcers, nausea, kidney and liver problems.
- *Artificial colors* - contribute to hyperactivity in children; may contribute to learning and visual disorders, nerve damage; may be carcinogenic
- *Artificial sweeteners* - associated with health problems
- *Aspartame* - may cause brain damage in phenylketonurics; may cause central nervous system disturbances, menstrual difficulties; may affect brain development in unborn fetus.

- *BHA/BHT* - can cause liver and kidney damage, behavioral problems, infertility, weakened immune system, birth defects, cancer; should be avoided by infants, young children, pregnant women and those sensitive to aspirin.
- *Blue No. 1* - see FD&C colors.
- *Blue No. 2* - see FD&C colors.
- *Brominated vegetable oil (BVO)* - linked to major organ system damage, birth defects, growth problems; considered unsafe by the FDA, can still lawfully be used unless further action is taken by the FDA.
- *Brown sugar* is frequently white sugar with molasses added. It is associated with blood sugar problems, depression, fatigue, B-vitamin deficiency, hyperactivity, tooth decay, periodontal disease and indigestion.
- *Caffeine* - psychoactive, addictive drug; may cause fertility problems, birth defects, heart disease, depression, nervousness, behavioral changes, insomnia, etc.
- *Citrus Red No. 2* - see FD&C colors.
- *FD&C colors* - colors considered safe by the FDA for use in food, drugs and cosmetics; most of the colors are derived from coal tar and must be certified by the FDA not to contain more than 10ppm of lead and arsenic. Certification does not address any harmful effects these colors may have on the body. Most coal tar colors are potential carcinogens, may contain carcinogenic contaminants, and cause allergic reactions.
- *Free glutamates* - may cause brain damage, especially in children; always found in autolyzed yeast, calcium caseinate, enzymes, flavors & flavorings, gelatin, glutamate, glutamic acid, hydrolyzed protein, hydrolyzed soy protein, plant protein extract, protease, protease enzymes, sodium caseinate, textured protein, yeast extract, yeast food and yeast nutrient. May be in barley malt, bouillon, broth, carrageenan, malt extract, malt flavoring, maltodextrin, natural flavors, natural chicken flavoring, natural beef flavoring, natural pork flavoring, pectin, seasonings, soy protein, soy protein concentrate, soy protein isolate, soy sauce, soy sauce extract, stock, whey protein, whey protein concentrate, whey protein isolate, anything that is enzyme modified, fermented, protein fortified or ultrapasteurized and foods that advertise NO MSG (see MSG).
- *Green No. 3* - see FD&C colors.
- *High fructose corn syrup* is basically sugar derived from corn. It is associated with blood sugar problems, depression, fatigue, B-vitamin deficiency, hyperactivity, tooth decay, periodontal disease and indigestion.
- *Hydrogenated vegetable oils* - associated with heart disease, breast and colon cancer, atherosclerosis, elevated cholesterol.
- *Mono and diglycerides* may be soy, corn, peanut or fat based. They may cause genetic changes, cancer, birth defects, and allergic reactions.
- *MSG* - may cause headaches, itching, nausea, brain, nervous system, reproductive disorders, high blood pressure. Pregnant, lactating mothers, infants, small children should avoid. Allergic reactions are common. May be hidden in infant formula, low fat milk, candy, chewing gum, drinks, over-the-counter medications, especially children's, binders and fillers for nutritional supplements, prescription and non-prescription drugs, IV fluids given in hospitals, chicken pox vaccine. It is being sprayed on growing fruits and vegetables as a growth enhancer.
- *Neotame* - similar to aspartame, but potentially more toxic; awaiting approval.
- *Nitrates* - form powerful cancer-causing agents in stomach; can cause death; considered dangerous by FDA but not banned because they prevent botulism.
- *Nitrites* - may cause headaches, nausea, vomiting, dizziness; see nitrates.
- *Nutrasweet* - see aspartame.
- *Olestra/Olean* - causes gastrointestinal irritation, reduces carotenoids and fat soluble vitamins in the body.
- *Partially hydrogenated soybean oil* - is associated with heart disease, breast and colon cancer, atherosclerosis and elevated cholesterol.
- *Partially hydrogenated vegetable oils* - see hydrogenated vegetable oil.
- *Potassium bromate* - can cause nervous system, kidney disorders, gastrointestinal upset; may be carcinogenic.
- *Red No. 3* - see FD&C colors.
- *Saccharin* - delisted as a carcinogen in 1997, however, studies still show that saccharin causes cancer.
- *Sodium stearoyl lactylate* may be corn, milk, peanut or soy based, and may cause blood pressure and kidney disturbances, and water retention.

- *Sulfites* - destroys vitamin B1; small amounts may cause asthma, anaphylactic shock; dangerous for asthma, allergy sufferers; has caused deaths; banned on fresh fruits and vegetables, except potatoes.
- *Sweet 'N Low* - contains saccharin.
- *Yellow No. 6* - see FD&C colors.

These are not the only harmful additives you will find on food labels. *FOOD ADDITIVES: A Shopper's Guide To What's Safe & What's Not* lists over 1300 food additives classified according to safety, whether they may cause allergic reactions and if they are GRAS (Generally Recognized As Safe) by the FDA. It's a handy pocket-sized book that you can carry with you when you shop to help you read food labels and make sure that the food you're buying does not contain any harmful ingredients.

Smoked foods may contain nitrosamines and polycyclic aromatic hydrocarbons (PAH), both of which can cause cancer. There is not enough information to know if smoked flavorings pose the same risk. Lack of information about the safety of the chemicals added to the processed food you eat every day is very common in the food industry.

Hidden Sources Of MSG

Which of these ingredients are hiding places for MSG in the foods you eat?

- Autolyzed yeast
- Yeast extract
- Yeast food
- Hydrolyzed protein
- Textured protein
- Calcium caseinate
- Sodium caseinate

Do you eat foods with these ingredients? These may be sources of hidden MSG.

- Bouillon
- Broth
- Carrageenan
- Natural flavors
- Protein concentrates
- Protein isolates
- Natural flavorings
- Seasonings
- Stock
- Spices

Genetically Modified Foods and Ingredients

Genetic Engineering (GE) or Genetic Modification (GM) of food involves the laboratory process of artificially inserting genes into the DNA of food crops or animals. The result is called a genetically modified organism or GMO. GMOs can be engineered with genes from bacteria, viruses, insects, animals, or even humans. Most Americans say they would not eat GMOs if labeled, but unlike most other industrialized countries, the U.S. does not require labeling.

This Non-GMO Shopping Guide is designed to help reclaim your right to know about the foods you are buying, and help you find and avoid GMO foods and ingredients.

Tips for avoiding GM crops

Tip #1: Buy Organic: Certified organic products are not allowed to contain any GMOs. Therefore, when you purchase products labeled “100% organic,” “organic,” or “made with organic ingredients,” all ingredients in these products are not allowed to be produced from GMOs. For example, products labeled as “made with organic ingredients” only require 70% of the ingredients to be organic, but 100% must be non-GMO.

Tip #2: Look For “Non-GMO” Labels: Companies may voluntarily label products as “non-GMO.” Some labels state “non-GMO” while others spell out “Made Without Genetically Modified Ingredients.” Some products limit their claim to only one particular “At-Risk” ingredient such as soy lecithin, listing it as “non-GMO.”

Tip #3: Avoid At-Risk Ingredients: Avoid products made with any of the crops that are GM. Most GM ingredients are products made from the “Big Four:” corn, soybeans, canola, and cottonseed, used in processed foods. Some of the most common genetically engineered Big Four ingredients in processed foods are:

Corn - Corn flour, meal, oil, starch, gluten, and syrup, sweeteners such as fructose, dextrose, and glucose, modified food starch

Soy - Soy flour, lecithin, protein, isolate, and isoflavone, vegetable oil and vegetable protein

Canola - Canola oil (also called rapeseed oil)

Cotton - Cottonseed oil

Sugar - Anything not listed as 100% cane sugar. May be derived from other sources. In addition, GM sugar beet sugar recently entered the food supply. Look for organic and non-GMO sweeteners, candy and chocolate products made with 100% cane sugar, evaporated cane juice or organic sugar, to avoid GM beet sugar.

Tip #4: Buy Products Listed In This Shopping Guide

Keep this Guide with you whenever you shop. Store it inside your reusable shopping bag, put it into your coupon holder or check book, or leave it in your car.

Fruits & Vegetables

Very few fresh fruits and vegetables for sale in the U.S. are genetically modified. Novel products such as seedless watermelons are NOT genetically modified. Small amounts of zucchini, yellow crookneck squash, and sweet corn may be GM. The only commercialized GM fruit is papaya from Hawaii—about half of Hawaii’s papayas are GM.

Meat, Fish & Eggs

No genetically modified fish, fowl, or livestock is yet approved for human consumption. However, plenty of non-organic foods are produced from animals raised on GM feed such as grains. Look for wild rather than farmed fish to avoid fish raised on genetically modified feed, and 100% grass-fed animals.

Meat and Fish: Non-GMO

- Vital Choice
- Organic Prairie

Eggs: Non-GMO

- Egg Innovations Organic
- Eggland's Best Organic
- Land O'Lakes Organic
- Nest Fresh Organic
- Organic Valley
- Pete and Jerry's Organic Eggs
- Wilcox Farms Organic

Alternative Meat Products

Many alternative meat products are processed and include ingredients that can be genetically engineered, so give the ingredient lists close attention to avoid the Big Four at-risk ingredients, especially soy.

Non-GMO

- 365 Brand (Whole Foods)
- Amy's
- Bountiful Bean
- Sunshine Burger
- Wildwood
- White Wave
- The Simple Soyman
- Vitasoy

May contain GMO ingredients

- Boca, unless labeled organic (Kraft)
- Gardenburger
- Morningstar Farms, Morningstar Farms Natural Touch, unless labeled organic (Kellogg)

Baby Foods & Infant Formula

Milk or soy protein is the basis of most infant formulas. The secret ingredients in these products are often soy or milk from cows injected with rbGH. Many brands also add GMO-derived corn syrup, corn syrup solids, or soy lecithin.

Non-GMO

- Baby's Only (certified organic products)
- Earth's Best
- Gerber products
- HAPPYBABY
- Mom Made Meals
- Organic Baby
- Plum Organics

May contain GMO ingredients

- Beech-Nut
- Enfamil
- Similac/Isomil
- Good Start
- Nestlé

Dairy Products & Alternative Dairy Products

Some U.S. dairy farms inject the genetically engineered hormone rbGH, also called rbST, into their cows to boost milk production. Organic dairy products are rbGH-free and do use GM grains as feed. Products with a label that indicates cows free of rbGH or rbST may come from cows fed GM feed. Many alternative dairy products are made from soybeans and may contain GM materials.

Dairy Products:

Non-GMO Certified Organic

- Alta Dena Organics
- Butterworks Farm
- Harmony prHills Dairy
- Horizon Organic
- Morningland Dairy
- Natural by Nature
- Organic Valley
- Radiance Dairy
- Safeway Organic Brand
- Seven Stars Farm
- Straus Family Creamery
- Stonyfield Farm
- Wisconsin Organics
- Nancy's Organics

Produced Without rbGH

- Nancy's Natural Dairy
- Alta Dena
- Ben & Jerry's Ice Cream
- Brown Cow Farm
- Joseph Farms Cheese
- Sunshine Dairy Foods
- Tillamook Cheese
- Wilcox Family Farms
- Wilcox Dairy
(rbST-free dairy line only)
- Crowley Cheese of Vermont
- Franklin County Cheese
- Grafton Village Cheese
- Great Hill Dairy
- Chippewa Valley Cheese
- Erivan Dairy Yogurt
- Promised Land Dairy
- Westby Cooperative Creamery
- Oakhurst Dairy
- Lifetime Dairy
- Alpenrose Dairy
- Berkeley Farms
- Clover Stornetta Farms
- Blythedale Farm Cheese
- Crescent Creamery
- Erivan Dairy Yogurt
- Farmland Dairies
- Derle Farms (milk with "no rbST" label only)

Alternative Dairy Products:

Non-GMO

- Belsoy
- EdenSoy
- Imagine Foods/Soy Dream
- Nancy's Cultured Soy
- Pacific Soy
- Tofutti
- VitaSoy/Nasoya
- WestSoy
- WholeSoy
- Yves The Good Slice

- Silk
- Soy Delicious
- Sun Soy
- Zen Don
- Stonyfield Farm O'Soy

May contain GMO ingredients

- Colombo (General Mills)
- Dannon
- Kemps (aside from "Select" brand)
- Land O' Lakes
- Parmalat
- Sorrento
- Yoplait (General Mills)
- 8th Continent

Grains, Beans & Pasta

Other than corn, no GM grains are sold on the market. Look for 100-percent wheat pasta, couscous, rice, quinoa, oats, barley, sorghum, and dried beans (except soybeans).

Prepared Meals:

Non-GMO

- Annie's Natural Pasta
- Bob's Red Mill (organic line)
- Eden certified organic grains
- Kamut
- Lundberg Family Farms
- Sunridge Farms
- Dr. McDougall's Right Foods
- Fantastic Foods
- Lundberg Farms Rice Sensations
- Organic Planet
- Vita-Spelt pasta
- Packaged Meals: Non-GMO
- Amy's
- Annie's Homegrown certified organic macaroni & cheese
- Casbah (Hain-Celestial)
- Ian's Natural Foods
- Lotus Foods
- Seeds of Change certified organic boxed meals

May Contain GMO ingredients

- Betty Crocker meals (General Mills)
- Knorr (Unilever)
- Kraft Macaroni & Cheese
- Lipton meal packets (Unilever)
- Near East (Quaker)
- Pasta Roni and Rice-a-Roni meals (Quaker)

Cereals And Breakfast Bars

Cereals and breakfast bars are very likely to include GMO ingredients, because they are often made with corn and soy products.

Non-GMO

- Ambrosial Granola
- Barbara's (organic line)
- Cascadian Farms
- Eden
- EnviroKidz
- Golden Temple
- Grandy Oats
- Health Valley (organic line)
- Ruth's
- Lundberg® Purely Organic
- Rice Cereal
- Nature's Path
- Nonuttin'
- Omega Smart Bars
- Peace Cereal Organic
- Simple Sweets
- Sunridge Farms

May Contain GMO Ingredients

- Betty Crocker meals (General Mills)
- Knorr (Unilever)
- Kraft Macaroni & Cheese meals
- Lipton meal packets (Unilever)
- Near East (Quaker)
- Pasta Roni and Rice-A-Roni meals (Quaker)
- Quaker
- General Mills
- Kellogg
- Post (Kraft)

Baked Goods

While baking ingredients such as wheat flour, rice, kamut, and oats are not genetically modified, many packaged breads and bakery items contain other GMO ingredients such as corn syrup.

Non-GMO

- Arrowhead Mills (organic line)
- Bakery on Main
- Bob's Red Mill (organic line)
- Dr. McDougall's Right Foods
- Dr Oetker Organics
- Rumford Baking Powder
- French Meadow
- Natural Ovens Bakery, organic line
- Nature's Path
- Rudi's Organic Bakery

May Contain GMO Ingredients

- Aunt Jemima (Pinnacle Foods)
- Betty Crocker (General Mills)
- Calumet Baking Powder (Kraft)
- Duncan Hines (Pinnacle Foods)
- Hungry Jack (Smucker's)
- Pillsbury (Smucker's)

Frozen Foods

Many frozen foods are highly processed. Keep an eye out for the Big Four at-risk ingredients and stay away from frozen foods that contain them, unless they are marked organic or non-GMO.

Non-GMO:

- A.C. LaRocco
- Amy's Kitchen
- Cascadian Farms Organic frozen meals and vegetables
- Cedarlane
- Helen's Kitchen
- Ian's Natural Foods
- Linda McCartney frozen meals
- Mom Made Meals
- Plum Organics Kids
- The Simple Soyma

May Contain GMO Ingredients

- Boca, unless labeled organic (Kraft)
- Celeste (Pinnacle Foods)
- Eggo Waffles (Kellogg)
- Gardenburger
- Green Giant frozen meals (General Mills)
- Healthy Choice (ConAgra)
- Tombstone (Kraft)
- Swanson (Campbell's)
- Voila! (Birds Eye/Unilever)
- Kid's Cuisine (ConAgra)
- Lean Cuisine (Nestle)
- Marie Callender's (ConAgra)
- Morningstar Farms, Morningstar
- Farms Natural Touch, unless
- Labeled organic (Kellogg)
- Rosetto Frozen Pasta (Nestle)
- Stouffer's (Nestle)
- Totino's (Smucker's)

Soups, Sauces & Canned Foods

Many soups and sauces are highly processed, so give the ingredient lists close attention to avoid the Big Four at-risk ingredients.

Soups: Non-GMO

- Amy's
- Fantastic Foods
- Health Valley/Westbrae
- Walnut Acres certified organic
- Imagine Natural
- Natural/Hain
- ShariAnn's Organics

Sauces/Salsas: Non-GMO

- Amy's (organic line)
- Annie's Natural
- Eden
- Emerald Valley Kitchen
- Green Mountain Gringo & certified-organic salsa
- Walnut Acres certified-organic pasta sauce
- Muir Glen Organic pasta sauce & salsa
- Seeds of Change certified-organic pasta sauce

Canned Food: Non-GMO

- Amy's
- Annie's Natural
- Eden
- ShariAnn's certified organic beans
- Westbrae certified organic beans
- Yves Veggie Cuisine (Hain Celestial)

Soups: May Contain GMO Ingredients

- Chef Boyardee, Healthy Choice (ConAgra)
- Campbell's products (including Healthy Request, Chunky, Simply Home, and Pepperidge Farm)
- Hormel products
- Progresso products (General Mills)

Sauces/Salsas: May Contain GMO Ingredients

- Bertolli (Unilever)
- Chi-Chi's (Hormel)
- Classico (Heinz)
- Del Monte
- Prego (Campbell's)
- Healthy Choice (ConAgra)
- Hunt's (ConAgra)
- Old El Paso (General Mills)
- Pace (Campbell's)
- Ragu (Unilever)

Canned Food: May Contain GMO Ingredients

- Chef Boyardee
- Dinty Moore, Stagg, Hormel
- Franco-American (Campbell's)

Condiments, Oils, Dressings & Spreads

Unless labeled explicitly, corn, soybean, cottonseed, and canola oils probably contain genetically modified products. Choose pure olive, coconut, sesame, sunflower, safflower, almond, avocado, and peanut oils. Also choose preserves, jams, and jellies with cane sugar, not corn syrup.

Non-GMO

- Annie's
- Bountiful Bean
- Crofter's Organic
- Drew's salad dressing
- Emerald Valley Kitchen
- Emperor's Kitchen
- Follow Your Heart
- Harvest Moon Mushrooms
- Ian's Natural Foods
- I.M. Health SoyNut Butters
- Maranatha Nut Butters
- Miso Master
- Muir Glen organic tomato ketchup
- Bragg's liquid amino
- Carrington Farms Flax Seed
- Eden
- Emerald Cove
- Nasoya
- Newmans Own Organic
- Ruth's
- Spectrum oils and dressings
- SushiSonic Asian Condiments
- The Simple Soyman
- Vegan by Nature Buttery Spreads
- Vigoa Cuisine
- Wholemato

May Contain GMO Ingredients

- Crisco (Smucker's)
- Del Monte
- Heinz
- Hellman's (Unilever)
- Kraft condiments and dressings
- Mazola
- Pam (ConAgra)
- Peter Pan (ConAgra)
- Skippy (Unilever)
- Smucker's (except their "Simply 100% Fruit" line of preserves)
- 100% Fruit" line of preserves)
- Wesson (ConAgra)
- Wish-Bone (Unilever)

Snack Foods

Look for snacks made from wheat, rice, or oats, and ones that use sunflower or safflower oils. There is no GM popcorn on the market, nor is there blue or white GM corn.

Snacks: Non-GMO

- Barbara's (organic line)
- Bearitos/Little Bear Organics (Hain Celestial)
- Eco-Planet
- Eden
- Ian's Natural Foods
- Kettle Foods
- Kopali Organics
- Late July Organic Snacks
- Mary's Gone Crackers
- Nature's Path Organic
- Garden of Eatin'
- Grandy Oats
- Hain Pure Snax/Hain Pure Foods
- Health Valley
- Namaste Foods
- Newman's Own Organics & Newman's Own
- Sunridge Farms (except salad dressing)
- Simple Sweets

Energy Bars: Non-GMO

- Cliff Bar
- Genisoy Bars
- Lara Bar
- Luna Bar
- Macrobars
- Weil by Nature's Path Organic
- Nature's Path
- Nutiva
- Odwalla
- Optimum Energy Bar
- Organic Food Bar

Snacks: May Contain GMO Ingredients

- FritoLay (Lay's, Ruffles, Doritos, Cheetos, Tostitos)
- Hostess Products (Interstate Brands)
- Keebler (Kellogg's)
- Kraft (Nabisco, Nilla Wafers, Oreos, Ritz, Nutter Butter, Honey Maid, SnackWells, Teddy Grahams, Wheat Thins, Triscuit)
- Pepperidge Farm (Campbell's)
- Pringles
- Quaker Oats Company

Energy Bars: May Contain GMO Ingredients

- Balance Bar
- Nature Valley snack bars and granola bars (General Mills)
- Nabisco Bars (Kraft)
- PowerBar (Nestle)
- Quaker Granola Bars

Candy, Chocolate Products, & Sweeteners

Many sweeteners, and products like candy and chocolate that contain them, can come from GMO sources. Look for organic and non-GMO sweeteners, candy and chocolate products made with 100% cane sugar, evaporated cane juice or organic sugar to avoid GM beet sugar, and watch out for soy lecithin in chocolates and corn syrup in candies.

The sweetener aspartame is derived from GM microorganisms. It is also referred to as NutraSweet® and Equal® and is found in over 6,000 products, including soft drinks, gum, candy, desserts, yogurt, tabletop sweeteners, and some pharmaceuticals such as vitamins and sugar-free cough drops.

Chocolate: Non-GMO

- Chocolove
- Endangered Species Chocolate
- Green & Black's Organic Chocolate
- Kopali Organics
- Pure Fun Confections
- Reed's Crystallized Ginger candy (certified organic)
- Nonuttin'
- Newman's Own
- Nonuttin'
- Candy: Non-GMO Jelly Belly
- Sunridge Farms
- St. Claire Organic

Sweeteners: Non-GMO

- Eden
- Sweet Cloud
- Nonuttin
- Newman's Own

Chocolate: May Contain GMO Ingredients

- Hershey's
- Nestlé (Crunch, Kit Kat, Smarties)
- Toblerone (Kraft)
- Ghiradelli's Chocolate
- Hershey's
- Lifesaver (Kraft)
- Nestlé

Sodas, Juices & Other Beverages

Most juices are made from GMO-free fruit (avoid papaya though, as it could be GMO), but the prevalence of corn-based sweeteners—e.g. high-fructose corn syrup—in fruit juices is cause for concern. Many sodas are primarily comprised of water and corn syrup. Look for 100-percent juice blends.

Non-GMO

- After the Fall organic juices
- Big Island Organics
- Blue Sky
- Cascadian Farm
- Crofters Organic
- R.W. Knudsen organic juices and spritzers (Smucker's)
- Santa Cruz Organic (Smucker's)
- Teeccino Herbal Caffè
- Eden
- Frey Vinyards
- Odwalla
- Organic Valley
- Quinoa Gold
- Mixerz All Natural Cocktail Mixers
- Sea20 Organic Energy Drink
- Walnut Acres Organic Juices

May Contain GMO Ingredients

- Coca-Cola (Fruitopia, MinuteMaid, Hi-C, NESTEA)
- Hansen Beverage Company
- Hawaiian Punch (Procter and Gamble)
- Kraft (Country Time, Kool-Aid, Crystal Light, Capri Sun, Tang)
- Libby's (Nestlé)
- Ocean Spray
- Pepsi (Tropicana, Frappuccino, Gatorade, SoBe, Dole)
- Sunny Delight (Procter and Gamble)

Special Note: This guide was compiled based on company statements, not genetic testing. Any product labeled as Non-GMO indicates that its manufacturing process is designed to avoid GMOs, but consumers should be aware that GM contamination is possible due to natural pollen movement, weather events, seed contamination, or human error. Hence there is no guarantee such products are 100% free of GMOs.

Invisible GM Ingredients

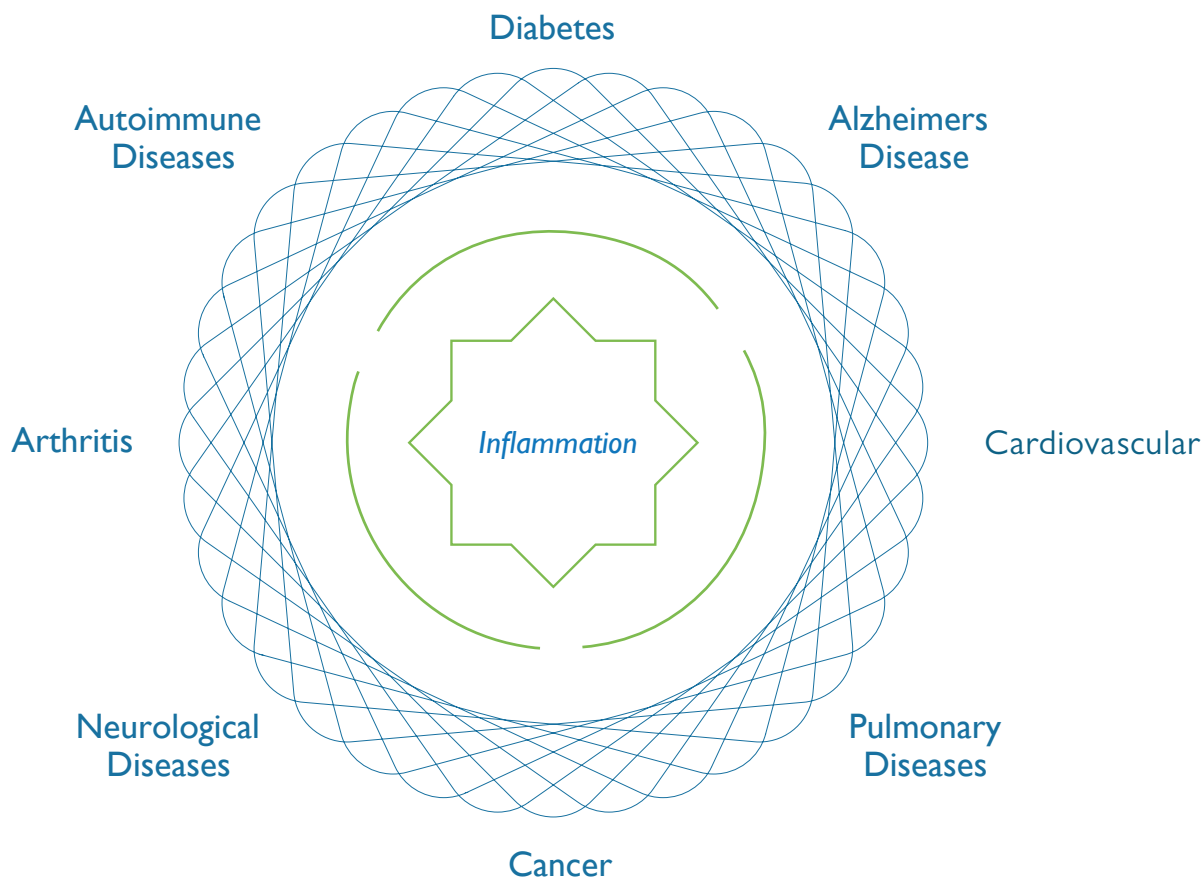
Processed foods often have hidden GM sources (unless they are organic or declared non-GMO). The following are ingredients that may be made from GMOs.

- Aspartame
- Baking Powder
- Caramel Color
- Cellulose
- Citric Acid
- Cobalamin
- Corn Gluten
- Corn Masa
- Corn Oil
- Corn Syrup
- Cornmeal
- Cornstarch
- Cyclodextrin
- Cystein
- Dextrin
- Dextrose
- Diacetyl
- Diglyceride
- Fructose
- Fructose (Crystalline)
- Soy Protein
- Glucose
- Glutamate
- Glutamic Acid
- Xanthan Gum
- Invert Sugar (Colorose Or Inversol)
- Tamari
- Isoflavones
- Lactic Acid
- Lecithin
- Leucine
- Lysine
- Malitol
- Maltodextrin
- Maltose
- Mannitol
- Methylcellulose
- Milo Starch
- Modified Starch
- Monosodium Glutamate MSG
- Starch
- Oleic Acid
- Phenylalanine
- Phytic Acid
- Sorbitol
- Soy Flour
- Soy Isolates
- Soy Lecithin
- Tempeh
- Threonine
- Tocopherols
- Vitamin E
- Tofu
- Trehalose
- Triglyceride
- Vegetable Fat
- Vegetable Oil
- Vitamin B12
- Glycerol
- Monooleate
- Glycine
- Hemicellulose
- Glycerin
- Hydrogenated Starch
- Hydrolyzed Vegetable Protein
- Inositol
- Vitamin E
- Stearic Acid
- Inverse Syrup
- Glycerides
- High Fructose Corn Syrup (HFCS)
- Gluten

Reference: <http://covvha.net/gmo-comprehensive-food-ingredient-lists/#.Uh5furxjhCw>

Inflammation

Inflammation is a low grade process that occurs around the clock. It is a process that is required for healing and repair. Excessive inflammation can lead to chronic issues such as heart disease, stroke, arthritis and many more. Below is a list of habits that promote inflammation in the body.



CAUSES OF INFLAMMATION

Standard American/Canadian Diet (S.A.D.)	Insulin (as a result of too much sugar)
Diet high in calories, fat, sugar and processed foods	Vegetable oils (except olive and coconut oil)
Diets low in fruits and vegetables	Lack of water—dehydration
Smoking	Lack of exercise
Toxins in food, water, cleaning products, the environment	Lack of sleep
Drugs/medications	Essential Fat Deficiency (Omega 3 fats, GLA)

General Tips for Eating Out

1. Fast Food Chains

Choose grilled chicken salads without croutons and ask for dressing on the side. Use dressing sparingly. Chicken chili and a salad is another good choice. Often there are “light” menu items on the menu that will fit your dietary guidelines

2. Asian Restaurants

Choose chicken or seafood with broccoli or asparagus. Ask for no MSG and cornstarch and for the vegetables to be steamed. Ask if they have gluten free soy sauce. If they do not then avoid dishes with soy sauce.

3. Mexican Restaurants

Choose grilled chicken, shrimp or beef with grilled vegetables or placed on top of a mixed salad. Half a cup of whole beans(not refried), guacamole or salsa may be served with meal. Stay away from the corn chips and rice if possible.

4. Italian Restaurants

Order grilled chicken breast with steamed vegetables or grilled chicken salad.

5. Steakhouse

Order traditional salad, grilled vegetables with lean sirloin steak or lobster.

6. Seafood

Order any fish on the menu and have it prepared broiled or baked. Add salad and/or steamed vegetables.

7. Breakfast Café

Choose 2-3 egg omelet with vegetables and a side of fresh fruit

8. American Family Restaurant

Choose grilled lean chicken, turkey or steak with steamed vegetables and side salad. Grilled salmon and double side vegetables are a good option. Steamed broccoli, zucchini or asparagus is often available.

Recommended Brands

Gluten Free Alternatives

Bread Rudi's® Multigrain Gluten Free Bread - Available at Kroger or Loblaws (Canada) in Natural Foods Freezer

Pizza Crust Kinnikinnick® Personal Size Pizza Crust - Available at Kroger or Loblaws (Canada) in Natural Foods Freezer

Pasta/ Rice Noodles Brown Rice Pasta - Available at Kroger, Trader Joe's; Loblaws (Canada) and Whole Foods
Annie Chun's - Brown Rice Noodles

Soy Sauce San-J® - Tamari Gluten Free Soy Sauce - Available at Whole Foods and some Kroger Stores

Chocolate Endangered Species® 88% Cacao Dark Chocolate - Available at Kroger

Crackers Blue Diamond Nut Thins® / Crunchmasters® / Mary's Gone Crackers® - Kroger/Whole Foods or Loblaws (Canada)

Organic Meats

Boars Head® - Kroger/Whole Foods

Applegate Farms® - Kroger/Whole Foods

Local Farms that sell free range, grass fed meats

Wild Caught Fish

Organic Free Range Meats and Eggs

Miscellaneous

Smuckers® Peanut Butter, Almond Butter or Earth Balance® -Whole Foods/Kroger or Loblaws (Canada)

Almond Milk or Coconut Milk - Almond Breeze®, Silk®, Blue Diamond®, So Delicious®

Diamond® Almond Milk - Whole Foods/Kroger or Loblaws (Canada)

Chobani Yogurt® or Fage Yogurt® Brands - Whole Foods/Kroger or Loblaws (Canada)

Gluten-Free Low Glycemic Menu Plan

Protein _____servings/day

Serving size: 3-4 oz. cooked, or as indicated
1 serving = approximately 150 calories

Animal Protein

- Beef, very lean (5% or less fat); buffalo, venison, elk
- Cottage cheese, ¾ cup (5 g)
- Eggs, 2 whole or 3 egg whites plus 1 whole egg
- Fish, shellfish, fresh or ¼ cup canned in water
- Sardines, 1 cup in water, sardine oil, or olive oil
- Leg of lamb, lean roast
- Mozzarella, 2 oz. or ½ cup shredded (1 g)
- Poultry: chicken or Cornish hen (breast only), turkey
- Parmesan cheese (grated), 6 Tbsp. (1.5g)
- Ricotta, 1/2 cup (4 g)

Meat, poultry, and fish should be grilled, baked, or roasted; fish may also be poached; keep cheese intake low.

Vegetable Protein

- Garden burgers - depends on brand.
- Tempeh, 8 g
- Tofu, 10 g
- Vegan protein powder, 10 g

Legumes _____servings/day

Serving size: ½ cup cooked, or as indicated
1 serving = approximately 110 calories

- Beans—garbanzo, pinto, kidney, black, lima, navy, cannellini, mung, adzuki, refried (22 g)
- Bean soups, ¾ cup (15 g)
- Hummus, ¼ cup (13 g)
- Split peas, sweet green peas, lentils (20 g)

Dairy/Dairy Alternatives _____servings/day

Serving size: as indicated
1 serving = approximately 80 calories

- Almond milk, plain, 8 oz. (8 g)
- Feta cheese, 2 oz. (2 g)
- Hemp milk, plain, 6 oz. (1 g)
- Unsweetened coconut milk, 8 oz. (in carton)(7 g)
- Yogurt (goat milk or Greek), plain unsweetened, 6 oz. (6 g)

Nuts & Seeds _____servings/day

Serving size: approximately ½ oz. or as indicated
1 serving = approximately 100 calories
Preferably raw and unsalted. Eat more nuts than seeds

- Almonds, hazelnuts, 12-14 (3 g)
- Chia seeds, 2 tsp. (4 g)
- Coconut, unsweetened (7 g)
- Flax seeds, 1 Tbsp. (3.5 g)
- Pine nuts, 2 Tbsp. (4 g)
- Sunflower, Pumpkin, Sesame, Hemp seeds 2 Tbsp. (6 g)
- Walnut or pecan halves, 8-10 (3 g)
- Cashews, brazil nuts, macadamia nuts, 12-14 (4 g)
- Nut butter, 1 Tbsp. made from above nuts (4 g)

Category 1

Vegetables _____servings/day

 (minimum 5 per day)

Serving size: ½ cup, or 1 cup for raw greens
Fresh juices made from these are allowed
1 serving = approximately 10-25 calories

- Artichokes, asparagus, bamboo shoots (4 g)
- Bean sprouts, sprouts all varieties (3 g)
- Bell or other peppers (3.5 g)
- Broccoli, broccoflower, Brussel sprouts (3 g)
- Cabbage (all types), cauliflower, kohlrabi (3 g)
- Celery, cucumber (2.5 g)
- Eggplant, green beans (2.5 g)
- Greens—bok choy, escarole, Swiss chard, kale, collards, spinach, dandelion, mustard/beet greens (2 g) (kale 7 g)
- Leeks, onions, chives, scallions, garlic (7.5 g)
- Lettuce/mixed greens—Romaine, red/green leaf, endive, spinach, arugula, radicchio, watercress, chicory (2 g)
- Mushrooms (1 g), okra (3.5 g), radishes (2 g)
- Salsa (sugar-free), tomatoes (3.5 g), mixed veggie juice (low sodium)(5 g)
- Sea vegetables (kelp, dulse, nori, kombu, hijiki)(3 g)
- Snow peas, snap peas (3.5 g)
- Squash—zucchini, yellow, summer, spaghetti (3 g)
- Water chestnuts, 5 whole (11 g)

Category 2

Vegetables _____servings/day

Serving size: ½ cup, or as indicated
1 serving = approximately 45 calories

- Beets, winter squash (acorn, butternut) (7 g)
- Carrots, ½ cup cooked, 2 med. raw, 12 baby carrots (6 g)
- Rutabaga, turnips, parsnips, ½ cup (6 g)
- Sweet potatoes or yams, ½ medium baked (13 g)
- Yukon Gold, new or red potato, ½ medium (16 g)

Fruits _____servings/day

Serving size: as indicated
1 serving = approximately 80 calories

- Apple, 1 medium (25 g)
- Apricots, 3 medium (12 g)
- Berries—blackberries & blueberries 1 cup, (21 g);
- Raspberries (22 g) & strawberries (18 g);11/2 cups
- Cantaloupe, ¼ medium (12.5 g)
- Cherries, 15 (19 g)
- Dates, Medjool, 1 (17 g)
- Fresh figs, 2 (20 g)
- Grapefruit, 1 whole (18 g)
- Grapes, 15 (13.5 g)
- Honeydew melon, 1 cup small (15 g)
- Kiwi, 2 medium (22 g)
- Mango, ½ medium (17 g)
- Orange, 1 large; nectarines/tangerines, 2 small (17 g)
- Peaches, 1 large (26 g)
- Plum, 2 small (16 g)
- Pear, 1 small (23 g)
- Persimmon, 2 small - (16 g)
- Pomegranate, ½ (26 g)
- Watermelon, 2 cups (24 g)

Grains _____servings/day

Serving size: ½ cup cooked, or as indicated
1 serving = approximately 75-100 calories

- Basmati or other brown rice (23 g), wild rice (17 g)
- Buckwheat (15 g)
- Millet (20 g)
- Quinoa (20 g)
- Teff (25 g)
- Gluten free oats (29 g)

Buckwheat products may contain wheat. Use only wheat-free tamari soy sauce. Read labels carefully.

Oils & Fats _____servings/day

Serving size: 1 tsp. or as indicated
Oils should be cold pressed
1 serving = approximately 40 calories

- Avocado (fruit), ½ (6 g)
- Cod liver oil
- Coconut milk (canned), light, 3 Tbsp.
- Coconut milk (canned), regular, 1½ Tbsp.
- Coconut oil (organic), extra virgin
- Flaxseed oil (refrigerate)
- Ghee (clarified butter)
- Grapeseed oil
- Fish oil supplement
- Olives, 8-10 medium
- Olive oil, extra virgin
- Sesame oil

Medical Foods _____servings/day

Condiments

- Honey, 1 tsp
- Fresh or dried herbs—any (e.g., dill, basil, sage, thyme, rosemary, mint, chives, parsley, etc.)
- Fresh or dried spices—any (e.g., cinnamon, curry, paprika, chili powder, turmeric, etc.)
- Lemon, lime (2 g)
- Soy sauce (tamari)-gluten free
- Stevia, 1 packet, 5 drops
- Unsweetened tomato sauce or salsa (4 g)
- Vinegars (unsweetened)
- Ginger

Beverages 48-64 oz. daily

- Coffee (1 cup)
- Water (ideally filtered)
- Mineral water (still or carbonated)
- Green tea, rooibos tea (unsweetened)
- Non-caffeinated herbal teas (mint, chamomile, hibiscus, etc.)

Total Calories/Day:



OMNIA HEALTH

Personalized Lifestyle & Functional Medicine

Digestion

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Digestion Overview

Your digestive system will process 170,000 pounds of food over the course of your life. Your digestive system has more nerve endings than your brain. These facts are amazing and helps us to realize how critical the digestive system is to human health. One of the most important functions of your digestive system is to physically, and chemically breakdown food to allow for absorption further down the digestive tract. What is the point of eating all this healthy food if your body cannot break it down properly to get the nutrients that it needs to benefit you? We feel the digestive system is one of the most important yet overlooked systems in your body.

So let's break the process down so that you have a better understanding of how this amazing sequence of events takes place.

Phase 1 - Food for Thought

Digestion starts in the brain. The smell and anticipation of food triggers the brain and digestive system to start releasing enzymes and gastric juices to prepare for the incoming meal. It is important that you are in a calm and stress free environment when you eat. This will keep your body in the "rest and digest" mode.

Phase 2 - Chew Your Food: your stomach does not have teeth!

Mom was right, chewing your food is good for you, but she may not have told you why. Chewing your food is one of the most critical steps to digestion. The physical crushing of food in your mouth increases the surface area of your food and unlocks the nutrients in the food for further digestion in the stomach. Chewing your food also stimulates stomach secretions and mixes your saliva with your food to start the breakdown of carbohydrates. This critical step is not reproduced anywhere else and therefore is critical to the process. If your food is not properly chewed it will disrupt the entire process that follows, there is nothing that can replicate this step for you.

Phase 3 - Stomach

When food enters the stomach, your stomach starts to secrete hydrochloric acid and digestive enzymes that work mainly on breaking down protein. The hydrochloric acid also sterilizes your food to prevent bugs that may be in your food from entering your bloodstream.

A common reason for heartburn is a lack of stomach acid secretion or dilution of enzymes. This results from not chewing your food, or drinking lots of water with your food. Food remains partially digested and starts to rot. This rotten food becomes acidic (lactic acid), which is acidic enough to burn your esophagus, but not acidic enough to digest your food properly. For this reason, in our office, we often prescribe digestive enzymes that actually acidify the stomach contents.

Phase 4 - Pancreas

The next step once the food has been sterilized and acidified is to further breakdown that food via the release of pancreatic enzymes. The pancreatic enzymes also alter the pH of the food to make it more alkaline in preparation for entry into the ileum.

Phase 5 - Gallbladder Secretion

The final major step in digestion takes place once bile is released to emulsify fats. These fats are chemically broken down by bile so that they can be absorbed. The gallbladder does not make bile, it stores it. Bile is made from cholesterol and toxins that are neutralized by the liver. Bile not only digests fats but it further sterilizes the bowel and promotes regularity.

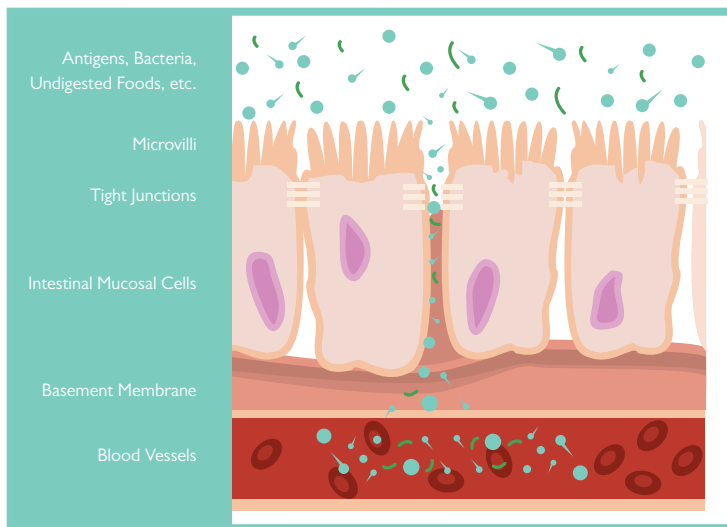
The physical and chemical breakdown of food is critical to proper digestion and absorption. The problem with undigested food is that these food particles can leak into the bloodstream. Then the immune system will recognize that food particle as an invader. This is where lots of food sensitivities come from. This immune response can also increase inflammation and raise blood sugars, causing a system-wide reaction.

So what can you do to help with proper digestion?

1. Chew food thoroughly
2. Don't drink more than 8 oz. of fluid with meals
3. Eat in a relaxing environment
4. Eat fresh fiber first

What is Leaky Gut?

Your gastrointestinal or GI tract is made up of cells that are tightly packed together and are connected by what are called tight junctions. It's almost like when you pull your shoelaces and the two sides come together and tighten up. The digestive tract becomes inflamed as a result of poor digestion, high stress, and several other factors. This inflammation results in a compromise of the tight junctions, thus allowing things like undigested food particles, toxins, and bacteria to enter the bloodstream. This is what is known as "leaky gut." Once these undigested food particles are absorbed, the immune system reacts and starts to attack them since they are viewed as foreign, and therefore, a threat. This creates a vicious cycle of further inflammation, which then promotes more leaking.



It is common for this to take years to progress. As the GI tract gets damaged, the cells become unable to properly digest food because they don't produce the enzymes to do so as well. This can lead to malnutrition, more inflammation, bacterial/yeast overgrowth, food sensitivities and an immune system constantly on the attack. This vicious cycle can be difficult to correct unless a strategic dietary and nutritional plan is employed.

Leaky gut is called a "syndrome" because the large protein molecules that get into the system activate a certain part of your gut called your gut-associated lymphatic tissue or GALT. Once activated, your immune system releases little molecules called inflammatory cytokines. That

is just basically a fancy way of saying that your immune system kills things with fire. Once these cytokines get into your blood circulation, they have been shown to cause inflammation in the brain, joints, heart, skin, and other tissues all over the body!

What can cause leaky gut?

There are several things that contribute to a leaky gut. A diet high in sugars, processed foods, fast food, casein (dairy), gluten (wheat, barley, rye), and alcohol. Certain medications like corticosteroids, antibiotics, and antacids can contribute as well.

Dysbiosis

Or an overgrowth of bad bacteria, parasites, yeast, or a virus can also contribute to a leaky gut. A high stress life or hormone deficiencies such as testosterone, estrogen, progesterone, or thyroid may promote inflammation and cause a more permeable gut lining. In diabetics, glycosylated end products (hemoglobin A1C measures this indirectly) from high blood sugar and insulin resistance destroy the proteins needed to hold together the junctions in your gut and can cause it to become leaky. Lastly, autoimmune patients release more of those inflammatory cytokines (think fire) which tell a certain chemical called inducible nitric oxide synthase, or iNOS, to destroy cells lining the GI tract.

What do you do for a leaky gut?

Well that depends on what is contributing to your specific case. If you have an overgrowth of harmful organisms then bringing the microbes in your GI tract back into balance will help. Balancing blood sugar and reducing stress will also help. Eating a healthy diet full of raw and organic food instead of "food" made with sugar and chemicals can be a benefit as well.

In our office, we use products that have been shown to nutritionally support the healing of the GI tract, as well as check for food intolerances so that you can eliminate those foods from your diet. We also encourage good stress management techniques and eating under calm conditions.

The Six “R’s” Remove, Replace, Reinoculate, Repair, Rebalance, Retest

A properly functioning digestive system is critical to good health. In fact, problems with the gastrointestinal (GI) tract can cause more than just stomach aches or diarrhea. GI issues may underlie several other chronic health problems that seem unrelated to digestive health, including autoimmune diseases such as rheumatoid arthritis and type 1 diabetes, skin problems such as eczema and acne rosacea, and heart disease (just to name a few). So in the bigger picture, how can we deal with all that can go wrong “down there”? In functional medicine we use a program that goes by the simple acronym of the ‘6Rs’: remove, replace, reinoculate, repair, rebalance and retest . When applied to various chronic problems, the 6R program can lead to dramatic improvement in symptoms, and sometimes even complete resolution of the problem. The elements of the 6R program are described briefly below.

1. Remove

Remove stressors: get rid of things that negatively affect the environment of the GI tract including allergic foods and parasites or other bad bugs such as bacteria or yeast. This might involve using an allergy “elimination diet” to find out what foods are causing GI symptoms or it may involve taking drugs or herbs to eradicate a particular bug.

2. Replace

Replace digestive secretions: add back things like digestive enzymes, hydrochloric acid, and bile acids that are required for proper digestion and that may be compromised by diet, drugs, diseases, aging, or other factors.

3. Reinoculate

Help beneficial bacteria flourish by ingesting probiotic foods or supplements that contain the so-called “good” GI bacteria such as bifidobacterium and lactobacillus species, and by consuming the high soluble fiber foods that good bugs like to eat, called “prebiotics.” Probiotics are beneficial microorganisms found in the gut that are also called “friendly bacteria.” Use of antibiotics kills both good and bad bacteria. Probiotics in the form of supplements or food are needed to re-inoculate the gut. Fermented foods, such as yogurt, miso, and tempeh are food sources of probiotics. Prebiotics are non-digestible food ingredients that selectively stimulate the growth of beneficial bacteria.

4. Repair

Help the lining of the GI tract repair itself by supplying key nutrients that can often be in short supply in a disease state, such as zinc, antioxidants (e.g. vitamins A, C, and E), fish oil, and the amino acid glutamine.

5. Rebalance

Pay attention to lifestyle choices – sleep, exercise and stress can all affect the GI tract.

6. Retest

Retesting may be required ensure all pathogenic bacteria have been eliminate, digestive enzyme secretion is optimal and to ensure that there is balance within the digestive system.

Top 5 Tips for Eating with Awareness

Taking time for the eating experience can help us to reduce cravings, control our portion sizes, and enhance our interconnectedness with the flow of people, animals, and nature that contributed to the food on our plate. Here are some tips to enhance your eating experience to make it more deep and healing:

1. Eat in a setting where you feel relaxed. If you are eating in the car, in front of a computer doing work, or on the phone, you are not able to give full attention to eating, and, as a result, you may tend to eat more or eat foods that are not healing. If you are feeling emotional and are tending towards eating, see if you can first acknowledge and express your emotions rather than eating them. These practices will all help with the digestive process – helping you to get the most out of food.
2. Eat a palette of colors. Many people eat a “brown, yellow, and white diet”. Instead of lackluster, bland eating, try to sample all the colors of food, including red, orange, yellow, green, and purple, to ensure that you get enough of the important phytochemicals that have health benefits.
 - a. Red: Red apples, beets, red cabbage, cherries, cranberries, pink grapefruit, red grapes, red peppers, pomegranates, red potatoes, radishes, raspberries, rhubarb, strawberries, tomatoes, watermelon
 - b. Orange: Apricots, butternut squash, cantaloupe, carrots, mangoes, nectarines, oranges, papayas, peaches, persimmons, pumpkin, tangerines
 - c. Yellow-Green: Green apples, artichokes, asparagus, avocados, green beans, broccoli, brussels sprouts, green cabbage, cucumbers, green grapes, honeydew melon, kiwi, lettuce, lemons, limes, green onions, peas, green pepper, spinach, zucchini
 - d. Blue-Purple: Purple kale, purple cabbage, purple potatoes, eggplant, purple grapes, blueberries, blackberries, boysenberries, marionberries, raisins, figs, plums
3. Eat with others. Eating is a communal event, a social occasion. The act of sharing food with others can be enriching for everyone involved and may help you with focusing on the people than on the amount of food eaten.
4. Sample a variety of flavors. When we don't eat all of the variety of flavors at a meal – salty, sweet, bitter, pungent, and savory – we may come away from the meal feeling like we are “missing something,” and ultimately, food cravings can result. By getting small amounts of all the flavors of food, a practice common in other cultures such as in Asia, we may feel more fulfilled and desire less food after a meal.
5. Chew thoroughly. The process of digestion begins in the mouth where enzymes are secreted in saliva to break down food. If we do not properly chew and make our food morsels smaller, we may be subject to indigestion and other digestive problems. The act of eating allows us to be mindful, and in the moment, of our exchange of energy with foods.

Probiotics

What are Probiotics?

Probiotics are live microorganisms, also known as “friendly bacteria,” that help maintain the natural balance of organisms (microflora) in the human gut. They are vital for a healthy immune system, protect against disease-causing microorganisms, and aid in both digestion and absorption of food and nutrients. The normal GI tract contains several hundred types of friendly bacteria that are able to promote healthy digestion and reduce the growth of harmful bacteria. The most well-known probiotics are *Lactobacillus acidophilus*, occurring naturally in yogurt, and *Bifidobacterium*, commonly found in the gut of breast-fed infants and thought to help confer natural immunity from disease. There are certain strains of yeast, such as *Saccharomyces boulardii*, that also function as probiotics.

What Are Probiotics Used For?

A healthy balance of friendly bacteria in the gut may be thrown off by disease-causing bacteria, fungi, and parasites. Drugs (particularly antibiotics), alcohol, and toxin exposure can also throw off the delicate balance in the body, allowing an overgrowth of bacteria, yeast, or harmful organisms, with subsequent development of vaginal yeast and urinary tract infections. When antibiotics are necessary to treat a bacterial infection, the concomitant destruction of beneficial bacteria often leads to diarrhea. Probiotics can be used to replace the loss of beneficial bacteria, helping to restore normal bowel function and prevent diarrhea from antibiotic use.

In addition, many immune cells reside in the intestines; overall health may be very dependent on the health of your GI system. For this reason, prophylactic daily use of a probiotic is helpful and may assist in improving overall immune function.

Scientific Evidence

In November 2005, a conference reported successful use of probiotics for the following: to treat diarrhea, irritable bowel syndrome, and the intestinal infection caused by *Clostridium difficile*, to prevent and treat infections of the urinary tract or female genital tract, to reduce recurrence of bladder cancer, and to prevent and manage dermatitis/eczema in children.

How to Take Probiotics

Yogurt is the most common food containing beneficial bacteria. Other foods are miso, tempeh, and sauerkraut. Fermented foods such as yogurt have been used since ancient times by cultures that report great health and longevity. When probiotics are suggested after a course of antibiotics to restore normal gut flora, supplementation in the form of capsules, powder, or liquid may help to improve gut flora more quickly than with yogurt alone.

Probiotic supplements should have both a manufacturing date and expiration date on the bottle, as potency is lost after time. While some products do not require refrigeration, this will ensure maximum potency. The bottle should state “contains live cultures.” Powders can be mixed with water, applesauce, or yogurt, depending on label instructions. If yogurt is used for its prophylactic dose of probiotic, it is important to use plain yogurt as the addition of sugars to yogurt can negate the good effect of the probiotic.

When taking a probiotic during antibiotic therapy, it is important to take the dose as far away from the antibiotic dose as possible and to continue to take it for at least two weeks after the antibiotic is finished. Initially, it is wise to start with half the recommended dose for the first day or two in order to minimize potential side effects of bloating or gas. Large doses are safe, as side effects, other than gas and bloating, are rare. Doses vary from brand to brand and may vary from 1 billion to several hundred billion organisms per dose. Some strains are to be taken on an empty stomach with water while others may be taken with food. It is wise to follow label instructions.

Side Effects

Gas and/or bloating are usually mild and often will abate after a period of adjustment. Since long-term maintenance doses of probiotics can improve the overall health of the GI tract, a beneficial side effect may be an increase in the bulk and frequency of bowel movements. There is a slight possibility that probiotics may react with immunosuppressant medication; those who are immunosuppressed should seek medical advice before using probiotics.

Which Strains to Take

When considering the use of probiotics, there is always a question of which strain to use. Because these bacteria are normally killed in the stomach, it is important to identify those strains that have been shown to actually colonize the GI tract. Different strains are effective for different health issues. Studies performed in inflammatory bowel disease suggest that high doses of combinations of different probiotic strains are more effective in decreasing inflammation and maintaining patients in remission than a single probiotic strain. There are many strains and a variety of research. You should follow the advice of your clinician, since he/she can test exactly which strains you may be deficient in.

Prebiotics (to distinguish from probiotics) are non-digestible carbohydrates that selectively stimulate the growth of the beneficial bacteria already present in the gut. Prebiotics can be taken in supplement form as fructo-oligosaccharides (FOS) and/or inulin and may be taken with probiotics. Food sources include oat bran, onions, asparagus, chicory, and banana.

Stool Testing

A true picture of the gut environment, with an easy-to-use single specimen collection

Why use stool testing?

Gastrointestinal (GI) function is important for general health. This includes balancing beneficial microbial flora in the gut to enhance health benefits. GI health is key in digestion, nutrient usage, and ridding the body of waste and pathogens. Poor digestion and malabsorption can lead to immune dysfunction, nutritional insufficiencies, and various disease states. Poor GI function can also lead to food allergies and other toxicities.

Your intestinal tract contains significant amounts of bacteria, some beneficial, some neutral, and some that can be harmful. It is essential to know the microbial balance of your GI tract, especially if you have chronic health problems. Health enhancing intestinal bacteria serve to prevent the overgrowth of potentially harmful bacteria in the gut.

Why we use the Stool Test:

- To maintain good health
- Requires only one, single sample collection
- Evaluates balance of microbes shown to contribute to weight gain
- Greater accuracy due to advanced technology DNA analysis
- Identifies drug resistance genes

Test for:

- Inflammation
- Pathogens
- Yeast
- Parasites
- Bacteria
- Immune function and gluten sensitivity
- Pharmaceutical and botanical sensitivities
- Cancer-preventative short chain fatty acids
- Pancreatic function
- Markers for digestion and absorption

Conditions and diseases related to GI disorders:

- Autism spectrum disorders
- Food sensitivities
- Irritable bowel syndrome
- Crohn's disease
- Ulcerative colitis
- Mal-digestion from history of celiac or other autoimmune disorders

Symptoms related to GI disorders:

- Abdominal pain
- Arthritis/joint pain
- Headaches/migraines
- Diarrhea or constipation
- Noticeable change in stool
- Bloating/gas
- Unexplained weight loss/gain
- Cramping
- Blood, mucus, or pus in stool
- Hives/skin rash/eczema
- Difficulty breathing
- Swollen tongue/lips
- Acid reflux/heartburn
- Chills/fever
- Chronic fatigue

Herxheimer reaction

Background

All pathogens invading the body put out toxins when they are alive. Pathogens (infestations) could be bacteria, viruses, parasites, fungi, mold, protozoa, and other forms like cancer cells. For most relatively healthy people, they are able to deal with the toxins put out by these invaders and dispose of them through the normal elimination processes. Normal detoxification and elimination pathways include things like the skin, kidneys, urinary tract, liver, bowel, and lungs. As long as infestation is not too large and your detoxification pathways are not overloaded or plugged, you can maintain reasonable health in the face of the infestation.

However, many people have large scale infestations and/or their detoxification pathways are not functioning as good as they should. For these people their body is continually dealing with massive amounts of toxins which get into the blood and go throughout the body. The result is that these people do not feel well at all and have very little if any detoxification reserve to handle more toxin load. When the invading pathogens or infestations are alive they give off some toxins; but when they die, they often empty their entire contents of toxins into the body quickly. So dead pathogens are usually much more toxic than alive ones.

So we have now arrived at that healing paradox. In order for sick people to get well we have to kill off the invading infestations. But as we kill off the invading pathogens, the toxic load on the body increases based on the amount and kind of pathogen killed. This results in the person feeling worse and in some cases much worse. In some cases the treatment protocol killing the pathogens must be stopped to relieve the extra toxic stress from the die-off.

Typical Herxheimer Symptoms

- Headaches.
- Increased fatigue.
- Muscle soreness, especially in the back, but all over the body.
- Kidney pain (lower back internal).
- Dizziness, depression.
- Flu-like symptoms all over.
- Sinus congestion.
- Diarrhea or constipation or gas.
- Skin rashes, flushing.

You get the point. You feel pretty bad all over and just do not want to get out of bed. The Herxheimer reaction comes in many different levels. Mild ones are easily tolerated and are fine. Really bad ones need to be fixed by stopping or cutting back on your “killing” protocol. There are many levels in between.

Recognizing a herxheimer reaction is important. Tune in to it right away and adjust things if the reaction starts getting too strong. It is nearly impossible to avoid all bad die-off reactions. That unfortunately is part of the recovery process.

Strategies for Minimizing Herxheimer Reactions

Improve your detoxification and elimination pathways.

Get the toxins out of the body as fast as possible. But how can we do that?

Drink lots of filtered water. Sounds easy but almost everyone does not do well at this one. We get too busy and don't drink or we don't want to go the bathroom too often.

Get the body sweating.

The far infrared Sauna Dome is the best skin detoxification device. Pricey (\$2000) but well worth if for long term uses. Or use any other saunas. Exercise is another good way to get sweating. Dress a little warmer at the gym or outside to get sweating faster and heavier. Drink extra water during and after all of the skin sweating activities. People who do not sweat regularly store many more toxins in their body and the kidneys get stressed much more by not sweating regularly.

Don't just lie in bed all day. I know you feel bad and just want to stay in bed.

It usually helps clear the body faster if you get up and walk around regularly. Lying around all the time leaves the body stagnant and the toxins in the lymphatic system will never clear out. Regular short walks outside in the fresh air will often help. So rest some, then walk and breath deeply, drink water, rest some, walk and breath deeply, drink water...

Help! I am still getting a bad reaction even though I tried some of the above ideas.

In this case the best thing to do is to completely stop taking the products causing the die-off reaction. Please consult your physician before doing so. Stopping for 2-3 days is often enough to get the body cleared and feeling better again. Of course continue doing the above die-off reaction reduction techniques. Then start up your killing/stressing products again but at a lower dose and gradually work up.



OMNIA HEALTH

Personalized Lifestyle & Functional Medicine

Detoxification Guide

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General Suggestions for Decreasing Toxicity and Harmful Chemical Exposures

Certain chemicals applied to your skin or in the air can be absorbed by your body and may cause harm to your cells and organ systems. They can cause inflammation and increase the body's production of free radicals, thus increasing your likelihood of developing chronic health problems.

Food

- Shift your food purchases and consumption to organic when possible. It is most important to use organic dairy products (milk, cheese, yogurt, ice cream, etc.). Free-range meats and eggs are desirable to purchase as organic. Minimize the use of large fish (swordfish, tuna, etc.) as they are higher in mercury.
- Purchase organic strawberries and apples, and refer to the Environmental Working Group or Consumer Reports websites to stay current about which fruits and veggies are most important to eat organic.

Products

- Purchase the most natural cleaning and other household products you can find.
- Avoid spraying pesticides or herbicides in your home or your property.
- For hair products (including shampoo and colors) look for products without alcohol, sodium lauryl sulfate, paraben, phthalate or other petrochemicals.
- Avoid perfumes or other skin or hair care products that use synthetic fragrances.

Skin Care and Makeup

- Use low-toxin makeup and skin creams (avoid products with: phthalates, parabens, propylene glycol, alcohols and fragrances). In general, skin care products from health food stores without the above ingredients are a safer bet.
- Consider using antioxidant creams on your skin: low solvent products with CoQ10 and Vitamin C.

Antiperspirants and Deodorant

- Avoid aluminum-containing antiperspirants and antacids. Since virtually all antiperspirants contain aluminum, it may be advisable to minimize or discontinue use.

Water

- Water can have many toxins and thus regular consumption of unfiltered water can significantly contribute to the toxic load of your body. Water quality will vary from city to city but in general it is better to filter tap water with a multi-stage carbon filter or reverse osmosis filter.
- Try to avoid bottled water in soft plastic containers as the plastics often leach into the water. Minimize the use of plastic water bottles that have been in a hot car. Minimize the use of camel-back type plastic water containers. Mineral waters in glass bottles are generally safe
- Drink approximately 6-8 glasses of water or healthy liquids each day. Use glass when possible.

Plastics

- Plastics can disrupt hormones in your body. Avoid plastic bottles and containers with the numbers 3, 6 and 7 on the bottom. These are most likely to leach plastics into the food, juice or water that they contain. Buy juices and water in glass containers when possible. Avoid PVCs. Do not microwave in plastic containers. Minimize washing plastic containers in the dishwasher under high heat. Minimize the use of cling wraps; try to use paper wraps.

Dental Care

- Avoid mercury amalgam fillings.
- Get second opinions on root canals.
- Avoid if possible having two different metals in adjacent teeth.
- Pick a dentist who is aware of healthy choices for the mouth perhaps a more holistic or biologically oriented dentist who does not place new mercury fillings.

Home

- Use only green and low-VOC products in a remodel or a new home.
- Avoid furniture with particle board or buy used furniture that has had a chance to “off gas.”
- Let a new car off gas by keeping the windows open.
- Use an air filter such as a HEPA filter with a charcoal filter to clean the debris in the air.
- Minimize the amount of regular carpet in your home, or use natural carpets.
- Avoid using pesticides in your house.

Home or Office Remodel

- Use a low- or no-VOC paint and carpet or rug.
- Minimize carpet and choose hardwoods but not laminates (avoid Pergo, for example).
- Take off shoes at the door to decrease indoor chemicals and pesticides.
- Avoid urea formaldehyde in building products.
- Change the filter on your furnace every 3 months, using the best allergy furnace filter you can find.

Electromagnetic Fields

- For patients with headaches or regional pain, decrease exposure to low-level electromagnetic fields:
- Minimize cell phone use.
- Minimize your use of portable phones at home and shift to corded phone.
- Take the clock radio away from the head of your bed.
-

Home and Personal Care Product Recommendations

Household Products to Avoid

- Chemical based cleaning products (disinfectants, bleaches, oven and drain cleaners, furniture polish, floor wax, window cleaners, etc).
- Mothballs, incense and commercially available scented candles
- Tap Water
- Chemical air fresheners

Our Household Product Recommendations

- Purchase a water filter for home use.
- Consider purchasing an air purification system. Change your air filters regularly
- Make or purchase chemical free cleaning products.
- Diffuse essential oils as your air freshener

How to Make Non-Toxic Household Cleaning Agents

What you will Need:

- Baking Soda
- Washing Soda
- White Distilled Vinegar
- Natural liquid soap or detergent
- Tea Tree Oil
- 6 Clean Spray Bottles
- 2 Glass Jars

Optional Items:

- Vegetable Glycerine
- Additional Essential Oils
- Fresh Lemon

Cream Soft Scrubber

- Pour 1/2 cup of baking soda into a bowl, and add enough liquid detergent to make a texture- like frosting. Scoop the mixture onto a sponge, and wash the surface. This is the perfect recipe for cleaning the bathtub because it rinses easily and doesn't leave grit.
- Note: Add 1 teaspoon of vegetable glycerin to the mixture and store in a sealed glass jar, to keep the product moist. Otherwise just make as much as you need at a time.

Window Cleaner

- 1/4 -1/2 teaspoon liquid detergent
- 3 tablespoons vinegar
- 2 cups water
- Spray bottle
- Put all the ingredients into a spray bottle, shake it up a bit, and use as you would a commercial brand. The soap in this recipe is important. It cuts the wax residue from the commercial brands you might have used in the past.

Oven Cleaner

- 1 cup or more baking soda
- Water
- A squirt or two of liquid detergent

- Sprinkle water generously over the bottom of the oven, then cover the grime with enough baking soda that the surface is totally white. Sprinkle some more water over the top. Let the mixture set overnight. You can easily wipe up the grease the next morning because the grime will have loosened. When you have cleaned up the worst of the mess, dab a bit of liquid detergent or soap on a sponge, and wash the remaining residue from the oven.

All-Purpose Cleaner

- 1/2 teaspoon washing soda
- A dab of liquid soap
- 2 cups hot tap water
- Combine the ingredients in a spray bottle and shake until the washing soda has dissolved. Apply and wipe off with a sponge or rag.

Furniture Polish

- 1/2 teaspoon oil, such as olive oil (or jojoba, a liquid wax)
- 1/4 cup vinegar or fresh lemon juice
- Mix the ingredients in a glass jar. Dab a soft rag into the solution and wipe onto wood surfaces. Cover the glass jar and store indefinitely.
- Put all the ingredients into a spray bottle, shake it up a bit, and use as you would a commercial brand. The soap in this recipe is important. It cuts the wax residue from the commercial brands you might have used in the past.

Vinegar Deodorizer

- Keep a clean spray bottle filled with straight 5% vinegar in your kitchen near your cutting board and in your bathroom and use them for cleaning.
- The smell of vinegar dissipates within a few hours. Straight vinegar is also great for cleaning the toilet rim. Just spray it on and wipe off.

Mold Killers

1. Tea Tree Treasure

- Nothing natural works for mold and mildew as well as this spray. Tea tree oil is expensive, but a little goes a very long way. Note that the smell of tea tree oil is very strong, but it will dissipate in a few days.
- 2 teaspoons tea tree oil
- 2 cups water Combine in a spray bottle, shake to blend, and spray on problem areas.
- Do not rinse.
- Makes two cups.

2. Vinegar Spray

- Straight vinegar reportedly kills 82% of mold. Pour some white distilled vinegar straight into a spray bottle, spray on the moldy area, and let set without rinsing. The smell will dissipate in a few hours.



OMNIA HEALTH
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Hormones

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HORMONES

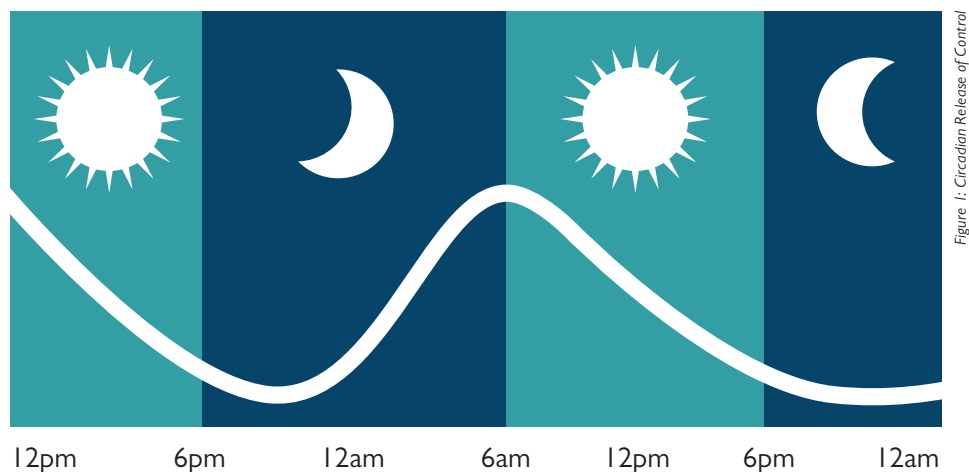
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The Adrenal Glands and Adrenal Exhaustion -An Overview

The adrenals are two small glands, each weighing 3 to 5 grams, that are located above the kidneys. The adrenals have one of the highest rates of blood flow per gram of tissue, and the highest content of vitamin C per gram of any tissue in the body. Each adrenal gland is composed of two separate functional entities. The outer zone, or cortex, accounts for 80% to 90% of the gland and secretes adrenal steroids (cortisol, DHEA-S, aldosterone and small amounts of sex hormones). The inner zone, or medulla, comprises 10% to 20% of the gland and secretes the catecholamines (adrenaline and nor-adrenaline). Cortisol, DHEA and adrenaline are the three main adrenal stress hormones. These hormones help you to buffer stress and adapt to everyday life demands by determining the stress response.

The Adrenal Rhythm and Its Importance

The human adrenal glands do not secrete steroid hormones at a constant level throughout the day. The hormones are actually released in a cycle, with the highest value in the morning and the lowest value at night when functioning properly. This 24-hour cycle is called the circadian rhythm and is depicted below in Figure 1.



Under stress, healthy adrenals increase their output of cortisol and DHEA to enable you to preserve health. They also secrete adrenaline, giving you a boost of energy when needed. If this becomes chronic, the adrenals can no longer keep up with the demand, and DHEA levels begin to fall, signifying adrenal exhaustion. In addition, the over-secretion of adrenaline can cause you to feel anxious and nervous. Complaints of insomnia, fatigue, depression, irritability, and digestive difficulties are also common. As adrenaline surges during stress, digestive enzymes are simultaneously lowered, and blood sugar levels initially rise. As this becomes a more chronic occurrence, the results of high cortisol and adrenaline levels from prolonged stress include:

- Diminished immune function
- Less restful sleep
- Water retention
- Increased lipid levels of blood fats
- Loss of the capacity to produce sufficient DHEA
- Depletion of cortisol, resulting in low blood sugar
- Lowered insulin sensitivity, with higher susceptibility to diabetes
- Loss of cellular potassium, a very important mineral

Functions of Cortisol

- Converts proteins into energy by increasing amino acids in the bloodstream.
- Stimulates the liver to convert amino acids to glucose as needed for energy
- Counters inflammation and allergies
- Helps maintain blood pressure
- Aids in stress reactions

Functions of DHEA

- Precursor to testosterone and estrogen
- Improves resistance to viruses, bacteria, parasites, allergies, and cancer
- Prevents osteoporosis
- Lowers total and LDL cholesterol
- Increase muscle mass and decrease body fat

An abnormal adrenal rhythm can influence many functions of the body, some of which are described in more detail below.

Energy Production

Abnormal adrenal function can alter the ability of cells to produce energy for the activities of daily life. People who have a hard time rising in the morning, or who suffer from low energy throughout the day, often have abnormal adrenal rhythms and poor blood sugar regulation.

The maintenance of a stable blood sugar level depends on food choice, lifestyle, adrenal function and insulin activity. The Adrenal Stress Index™ panel measures stress hormones and insulin, to help rule out the causes of fatigue, cravings and obesity.

Muscle and Joint Function

Abnormal adrenal rhythms are known to compromise tissue healing. Reduced tissue repair and increased tissue breakdown can lead to muscle and joint wasting with chronic pain.

Bone Health

The adrenal rhythm determines how well we build bone. If the night and morning cortisol levels are elevated, our bones do not rebuild well, and we are more prone to osteoporosis. Stress is the enemy of the bones. In postmenopausal women, the effect of stress worsens due to female hormone imbalances.

Immune Health

Various immune cells (white blood cells) cycle in and out of the spleen and bone marrow. The immune system trafficking follows the cortisol cycle. If the cycle is disrupted, especially at night, then the immune system is adversely affected.

Short- and long-term stress is known to suppress the immune response in the lungs, throat, urinary tract and intestines. With reduction in the surface antibody (called secretory IgA), the resistance to infection is reduced and allergic reactions are believed to increase.

Sleep Quality

In sleep deprived individuals, the mean cortisol levels are elevated, and the quiescent period is shorter. Evening cortisol level is increased in patients with insomnia, affecting the first part of the nocturnal sleep period, increasing risk for depression. Chronic lack of REM sleep can reduce a person's mental vitality, vigor and induce depression.

Fertility

Couples with high levels of stress markers are less likely to succeed in conceiving. Stress alters the brain signals that trigger the ovaries to release eggs each month, so women under non-stop stress ovulate fewer eggs than less stressed women. Stress can also affect testosterone level and sperm production in men. Helping couples to de-stress while trying to conceive can impact their success rate.

Memory

Sustained stress adversely affects brain function and memory processing. Too much cortisol interferes with the functioning chemicals the brain uses for its cellular intercommunication. Chronic long term stress, with increased cortisol level at night, makes it perplexing to think, organize and store new memories or retrieve long-term ones.

Skin Regeneration

Human skin regenerates mostly at night. With higher night cortisol values, less skin regeneration takes place. Thus normal cortisol rhythm is essential for optimal skin health.

Thyroid Function

The level of cortisol at the cell level controls thyroid hormone production. Often, hypothyroid symptoms such as fatigue and low body temperature are due to an adrenal maladaptation.

Grain Intolerance and Stress Response

Approximately 12-18% of the U.S. population suffers from a genetic intolerance to grains, such as wheat, rye or barley contained in cereals, breads and pasta. A high incidence occurs in people with Celtic, Nordic, non-caucasian and Mediterranean ethnicity. The gut becomes inflamed within 30 minutes after consuming grains, and this can lead to an adrenal stress response, increased cortisol and reduced DHEA.

Chronic Fatigue Syndrome (CFS)

A common HPA axis defect in CFS is impaired corticotrophin release. As a result, low cortisol and eventual adrenal atrophy may be observed. Depleted adrenals with flat rhythms are often seen on the ASI™ panel. Simultaneous use of several therapies can help improve the debilitating effects of CFS.

Glycemic Dysregulation

Chronic hypoglycemia can impair normal adrenal function by repetitive overstimulation of cortisol production. Recurring exposure to high cortisol will impair insulin activity, and invariably lead to insulin resistance and beta-cell exhaustion (diabetes). The ASI™ panel investigates the insulin-cortisol relationship under real-life conditions to allow targeted and meaningful interventions. This panel is useful in the following clinical situations: rapid weight gain and obesity, deranged blood lipids, sugar blues, early diabetes and associated emotional disturbances.

Allergies/Autoimmune Disorders

More than fifty years ago, Dr. W. Jefferies (author of *Safe Uses of Cortisol*) discovered that patients with environmentally triggered allergies and autoimmune diseases dramatically benefited when given cortisol for other purposes. More recently, German researchers reported that disruption of the adrenal axis and cytokine relationships lead to predisposition and aggravation of autoimmune diseases. The findings of the ASI™ help identify patients with autoimmune diseases and adrenal problems who can benefit from cortisol supplements.

Depression/ADD

Several recent publications report a hyperactive HPA axis in depressed patients. Elevated midnight salivary cortisol is now considered one of the best tests in diagnosing endogenous depression. Other anomalies in cortisol rhythm usually accompany the midnight elevation. On the other hand, cortisol elevations and rhythm disruptions throughout the day are typical of attention deficit disorders (ADD). The anomalous cortisol findings in depression and ADD can be diagnosed successfully with the ASI™. Subsequent interventions to rectify the time-specific cortisol elevations (during the day or night) are usually effective when applied under proper supervision.

Recovering From Adrenal Exhaustion

The following are some of the most important things to do and not to do to recover from adrenal fatigue. Pick a few at a time so you don't overwhelm yourself.

Do these Things:

- Pace yourself
- Eat real whole, fresh food
- Be compassionate and kind to yourself
- Eat every 2-3 hours. Include several small meals containing protein
- Eat a combination of carbs, fats and proteins
- Get to bed by 10:00 PM
- Eat balanced, nutritious food
- Drink water and herbal teas
- Become empowered and informed about your health care
- Be with people who are concerned for your well being and are helpful in your recovery
- Take care of and nurture yourself
- Find an inner balance and sense of peace
- Find things that make you laugh
- Do things you enjoy
- Determine allergic foods and avoid them
- Ginseng and/or licorice tea can be supportive
- Adequate vitamin C is important
- Use stress-management techniques
- Deal with emotions as needed with laughter, breathing, and/or professional help
- Engage in light exercise
- Get daily outdoor light

Avoid These Things

- Pushing yourself to exhaustion
- Sugar, caffeine, alcohol and junk food
- Being critical and harsh with yourself
- Skipping meals
- Eating carbohydrates by themselves
- Staying up late and catching your “second wind”
- Arising early if you don’t have to
- Food that you react to or allergic to
- Drinking soda, coffee, alcohol or juice
- Making someone else responsible for your health
- People who steal your energy
- Taking care of everyone and everything else
- Feeling guilty about caring for yourself
- Excessive seriousness
- “The grind”

Reduce Stress by Taking Control

1. Take Control of your Health

See a doctor for help finding the root cause of your illness or pain

Consider using natural supplements to control pain and inflammation rather than OTC or prescription anti-inflammatory drugs

Recognize it will take time to get back to normal again - don't get anxious; don't lose hope

2. Take Control of your Physical Activity

Start slow, but start

Build activity or exercise into your routine

Don't overdo it; you should feel rejuvenated, not exhausted

Incorporate stretching

Make it fun (add music or a friend)

3. Take Control of your Sleep

Address any medical reasons that wake you up at night

Write down tomorrow's tasks so you can sleep worry-free (keep a notebook by your bed if necessary)

Try to maintain a consistent sleep schedule

Get a minimum of seven hours of sleep each night

Reduce noise and distractions during the hour before bedtime

Consider using natural sleep-aids

4. Take Control of Your Diet

Plan to eat breakfast every morning

Eat protein with each meal (especially breakfast)

Avoid trans-fats and omega-6 fatty acids

Increase omega-3 fatty acids (fish, fish oil, green leafy vegetables, flaxseeds)

Reduce intake of high glycemic index carbohydrates and sugars
(a good resource can be found at <http://www.faqs.org/nutrition/Foo-Hea/Glycemic-Index.html>)

Increase dietary fiber

Schedule "comfort foods" so you won't splurge or feel guilty

Limit caffeine, alcohol, fried foods and sweets

5. Take Control at Work

Schedule as much vacation time as you are allotted

Don't skip meals and breaks to get more done

Resolve issues with supervisors and co-workers as soon as possible

Recognize the things that are truly under your control and don't fret about the rest

Use an organizer to plan your day - your mind stresses when it thinks you will forget something. Write it down!

Get new skills or training if needed to perform up to expectations

6. Take Responsibility for your Relationships

Make a list and make a call

Cultivate an attitude of thankfulness

Resolve your disputes

Practice forgiveness

7. Take Control of your R & R

Find enjoyable things (people, movies, etc..) that make you laugh

Create a place you can go (at work and at home) to relax without much preparation

Find some music that relaxes you and keep it handy

Schedule relaxing time into all your vacations so you feel rested when you return to work

Schedule a massage once a month

8. Take Control of your Finances

Create a plan (with an advisor if needed) to stabilize your financial situation

Create a Will or Estate Plan if you haven't already

Recognize that it might take time to clear your debt, but with a good plan in place, you can stop worrying about bills or creditor calls

Downsize or simplify

Simple Breathing Exercise for Stress Management

Both visualization and breathing exercises have been found to be great stress relief strategies. Here are some ways that you can use visualization techniques with breathing exercises to achieve quick and effective stress relief.

Time Required: 5 or more minutes

Steps to Follow:

1. Close your eyes and RELAX.
2. Let your breathing become slower and deeper.
3. Practice stress relief breathing.
Breathe from your diaphragm or belly instead of from your shoulders or chest. Don't force it, but let your breathing become natural and relaxed.
4. Visualize...
As you breathe in, imagine that 'relaxation' is coming into your body and flowing through your limbs, reaching every part of you. As you exhale, imagine that all the stress from your body is being exhaled. After a few minutes, you should feel more 'full' of peace and the stress in your body should be reduced.
5. Or...As you breathe, imagine that your hands and feet are getting warmer. With practice, this can further reverse your stress response and actually warm your extremities, relaxing your body in the process.
6. Another Idea...
Imagine that, with each breath your body is becoming more and more loose. With each exhale, your limbs are a little more like spaghetti, your face a little more expressionless, your body a still pool of water.
7. Keep Breathing
Continuing this exercise for a minimum of twenty minutes can relieve stress and help you return to your activities (and stressors) with a renewed sense of strength and serenity.

Tips

1. If you're really tired and fear that this will put you to sleep, keep your practice to about 5 minutes or set an alarm.
2. Conversely if you're having trouble sleeping, this exercise may prove to be very helpful.
3. Try this exercise while sun gazing (staring at the sun with your eyes closed).
4. You may also want to try other breathing exercise as your skill level improves.

Your Sleep and Suggestions for Better Sleep

Natural Stages of Sleep

You cycle through four stages of sleep every 60 to 100 minutes.

Stage 1: A drowsy, relaxed state between being awake and sleeping

Stage 2: Slightly deeper sleep state. Interestingly enough, here, you may still feel awake. So, you may be asleep and not “know” it

Stage 3: Deep sleep stage. Once in deep sleep, it’s quite difficult to wake up, as there’s so little physiological activity going on

Stage 4: After Deep Sleep, you briefly enter stage 2 again before entering REM (rapid eye movement) sleep, which is the dream state

In order to understand why you can’t fall asleep or stay sleep, you need to understand that sleep is the outcome of an interaction between two classes of variables: sleepiness and “noise.”

1. Sleepiness

Under normal conditions, your sleepiness should gradually increase throughout the day, peaking just before you go to bed at night. This is ideal, as you want your sleepiness to be high at the beginning of the night, leading you into Stage 1, as described above.

2. “Noise”

Refers to any kind of stimulation that inhibits or disrupts sleep. If noise is conceptually greater than your level of sleepiness, you will not fall asleep. “Noise” occurs in three zones: the mind level, body level, and the environmental level.

In order to easily fall asleep and stay asleep throughout the night, you want your sleepiness level to be high, and the noise level to be low. More often than not, the reason why people can’t fall asleep is NOT because of lack of sleepiness, but rather because of excessive noise. Therefore, the FIRST thing you need to ask yourself when you can’t sleep is:

“Where/What is the noise?” (Is it mind/body/environmental?)

Typically, you will find a number of different factors contribute to the noise burden keeping you awake, so it’s important to carefully evaluate your environment and inner/outer state to determine ALL the contributing factors.

If you address one problem, but not the others, you still may not be able to fall asleep, or stay asleep throughout the night.

Suggestions for Better Sleep

Minimize or Avoid Stimulants

Avoid alcohol (wine, beer, and hard liquor) within 3 hours of bedtime.

Avoid caffeine-containing beverages or foods after 2 pm; if sensitive to caffeine, avoid it after 12 noon. These items include Pepsi, Coke, Mountain Dew, tea, coffee, lattes, and chocolate; coffee- or espresso-containing ice creams or desserts). Read the labels of everything you eat and drink!

Avoid Sudafed or other decongestant cold medicines at night.

Some medications may have stimulating effects. Consult your pharmacist and doctor to determine whether any of them might be contributing to sleep problems. Do not discontinue them without permission from your doctor.

Complete any aerobic exercise before 6 pm (or at least 3 hours before bedtime).

Night Time Tension and Anxiety

Avoid anxiety-provoking activities close to bedtime:

Avoid watching the news before going to bed.

Avoid reading stimulating, exciting materials in bed.

Avoid paying bills before bed.

Avoid checking your financial reports or the stock market before bedtime.

Avoid arguments before bedtime.

Schedule difficult conversations well before bedtime—preferably at least 3 hours before.

Try to achieve some action plan or resolution of a discussion or argument before bedtime.

Sleep Planning and Bedroom Preparation

Plan your sleep by putting it into your schedule; plan for 8½ to 9 hours in bed.

As much as possible, go to sleep and wake up at the same time each day. This will help train your biological clock.

Avoid getting in bed after midnight as late-hour sleep is not as helpful as earlier sleep.

Avoid late afternoon or evening naps.

Avoid naps longer than 45 minutes unless you are sick or quite sleep deprived.

Avoid large meals or spicy foods before bed.

Finish all eating 3 hours prior to going to sleep.

Avoid drinking more than 4-8 ounces of fluid before going to bed.

Take a hot salt/soda aromatherapy bath—raising your body temperature before sleep helps induce sleep. A hot bath also relaxes muscles and reduces tension. Add 1-2 cups Epsom salts (magnesium sulfate absorbed through the skin is very relaxing) and ½ to 1 cup baking soda (sodium bicarbonate which is alkalizing to a stressed out acidic body) to 10 drops lavender oil (helps lower cortisol levels).

Strategies to use with Trouble Falling Asleep or Staying Asleep

Consider reading a good neutral book under low light to help with falling asleep.

Don't stay in bed more than 20-30 minutes trying to fall asleep. Leave your bedroom and go to a relaxing room other than the bedroom and read or do a relaxation technique (e.g., meditation).

If you awaken early because of light, put a dark covering over your eyes.

If you awaken early because of recurrent thoughts, try writing them in a journal. If this does not help, consider counseling. Depression might be a factor.

Bedroom Air Quality

Keep your bedroom air clean, especially if you have nasal congestion or are prone to snoring. Use HEPA or other types of air purifiers/filters to clean the air in your bedroom. Use the filter on a low setting at night if the noise is soothing. Otherwise use the filter on a medium setting for 4-6 hours during the day.

Consider cleaning the vents in the house every year; change furnace filters every 3 months.

Avoid toxic glues or other items producing an odor.

If you see mold or have a musty smell in your bedroom, have it checked or cultured for mold with culture plates. If there is mold, have the house evaluated for water leaks and air quality issues to be fixed and see that the mold is cleaned appropriately.

If your nose is blocked and you have trouble breathing through it, take the above steps and consider using a saline spray before bed. Also consider Breathe-Easy strips on your nose. Make sure you read the instructions and fit the strips over the lower third of your nose.

Light, Noise, Temperature, and Environmental Issues

Turn down the light in the bathroom and in rooms you are in 15 minutes before going to bed.

Decrease the light in your bedroom by using a dimmer or a reading light with a dimmer.

Use dark window shades or consider a set of eye shades or a black covering for your eyes when trying to sleep or if you awaken too early because of light. Even the slightest bit of light in the room can disrupt your internal clock and your pineal gland's production of melatonin and serotonin. Even the tiniest glow from your clock radio could be interfering with your sleep and will also dramatically increase your risk of cancer. So close your bedroom door, and get rid of night-lights. Refrain from turning on any light at all during the night, even when getting up to go to the bathroom. Cover up your clock radio. If you need light to use the rest room you can use a RED light as those wavelengths will not shut off your melatonin production. Make sure to cover your windows - use blackout shades or drapes

Decrease irritating noises in your space by closing windows, using ear plugs, or using a white noise generator or a HEPA air filter.

Turn off or remove any appliances or clocks that make noise.

Make sure your sleeping area is the correct temperature range (not too hot or too cold). Keep the temperature in your bedroom no higher than 70 degrees F. Many people keep their homes and particularly their upstairs bedrooms too warm. Studies show that the optimal room temperature for sleep is between 60 to 68 degrees. Keeping your room cooler or hotter can lead to restless sleep. This is because when you sleep, your body's internal temperature drops to its lowest level, generally about four hours after you fall asleep. Scientists believe a cooler bedroom may therefore be most conducive to sleep, since it mimics your body's natural temperature drop.

Avoid sleeping near electric fields. Try to have your head at least 5 feet away from electric fields, if possible. Possible sources of electrical fields include: electrical outlets, clock radios, stereos, computers and monitors. Consider moving these devices or moving your bed or your position in the bed. Consider using a Tri Field or other meter to test for these fields. Being mindful of electromagnetic fields in your bedroom is also wise. EMFs can disrupt your pineal gland and the production of melatonin and serotonin, and may have other negative effects as well.

Avoid sleeping on a water bed or an electric mattress because of the excessive heat and the electric fields.

Consider replacing your pillows with hypoallergenic pillows. Use ultrafine allergy pillow and mattress covers.

Avoid watching TV or using your computer/iPad/smart phones at least an hour or so before going to bed. TV and computer screens emit blue light; nearly identical to the light you're exposed to outdoors during the day. This tricks your brain into thinking it's still daytime, thereby shutting down melatonin secretion. Under normal circumstances, your brain starts secreting melatonin between 9 or 10 pm, which makes you sleepy. When this natural secretion cycle is disrupted, due to excessive light exposure after sunset, insomnia can ensue.

Further Strategies for Dealing with Night time Tension and Anxiety

Avoid repeated negative judgments about the fact that you are unable to sleep.

Use positive self-talk phrases regarding your ability to relax and fall asleep: "I can fall asleep." "I can relax." "Any amount of sleep I get is just fine."

Try writing in your journal any disturbing thoughts that are running through your mind.

Schedule a time within the next few days to deal with whatever is troubling you. If you are having trouble managing your concerns for more than a few weeks, consult your healthcare provider for treatment suggestions or a counseling/therapy referral.

There are many relaxing yoga or stress reducing mindful breathing CDs or DVDs available to help you find a relaxing bedtime ritual that works for you.

Bedding and Pillows

Consider using a "side sleeper" pillow for under your neck when sleeping on your side

Consider using a body pillow to hug and put between your knees to align your back and shoulders at night.

Roll backwards at a slight angle onto a body pillow if you have hip bursitis.

Sleep on the highest quality bed linens you can afford.

Supplements and Light

Consider taking bedtime natural support. Discuss this with your functional medicine doctor before starting any supplementation.

Consider 1-5 mg of melatonin to fall asleep and/or 5-20 mg time released melatonin to stay asleep

5-HTP – 50-300 mg 1 hour before bedtime

Magnesium/Calcium – 250 mg /500 mg is a typical dose

Taurine – 500-2000 mg 1 hour before bedtime

Calming Herbs – Lemon balm, Passion flower, Valerian root

Establish an evening herbal tea habit to support relaxation and sleep onset.

Consider ½ hour exposure to a blue or 10,000 lux bright light (first thing in the morning) if you are going to bed too late and want to shift to an earlier bedtime.

Improve Your Body's Circadian Clock

Alignment is the key to health. One aspect of many people's lives that is out of alignment is their sleep and wake patterns. One of the greatest detriments to a person's health is a poor rest and recovery routine. Below are some of the things that you can do to optimize your natural clock. This short video will go over some of the things that you can do to optimize your natural clock. By doing so, you will have deeper sleep, wake up more refreshed, have better midday energy, better mental clarity, and natural weight loss.

12 immediate measures you can take to improve your body's circadian clock.

1. Wake up and go to sleep at the same time everyday. Ideally, asleep by 10pm and up around 6am.
2. Use a salt lamp in your bedroom as a way to reset your circadian clock. Turn it on in the morning and after the sun sets at night, candles are also an option. Avoid full spectrum light after sunset.
3. Be sure to get mid-day sunlight, this will help increase serotonin (happy) and melatonin (sleep).
4. Eliminate exposure to phones, tablets, computers, and television 2 hours before designated bedtime.
5. Sleep in completely dark room, you should not be able to see your hand in front of your face.
6. Avoid excessive fluid intake after 8pm.
7. Avoid opening the mail or watching the news in the evening.
8. Avoid checking and responding to email in the evening.
9. Settle any conflicts before going to bed.
10. Use lavender essential oils to help promote calm.
11. Practice deep breathing exercises before bed to help you relax.
12. If you use a computer, download f.lux at <https://justgetflux.com/> as a digital filter for your screen.

Your Attitude and Outlook

“Your thought become your actions, your action become your habits, your habits become your routine and your routine determines your destiny.”

The average person has over tens of thousands of thoughts with themselves per day. These conversations range from “what’s for lunch?” to “I wonder if I can pay my bills this month”. The thoughts that we have and the way we frame these thoughts has an impact on our physiology far beyond your wildest imaginations.

It is for this reason that it is so important for us to think and be positive. Of course you must also be realistic as well. Many of us simply don’t realize how negatively we think or how to reframe our minds to think more positively. We may have picked this up from our parents or growing up in a society that has so many negative undertones.

Thinking and being positive can be a very challenging for some at first. You must realize that unlike actions, your thoughts can be erased and simply reformed. No one will ever even know! If you have not read the book “The Secret”, I strongly suggest that you do. It simply states that the thoughts that we have in our minds become our reality. This is the universal “Law of Attraction” where like attracts like.

Just as you would be concerned about the food that goes into your mouth you should be just as concerned about the thoughts, ideas, information, images, music etc that you put into your head space. I personally started listening to motivational speakers during exercise rather than music. I find that I leave the gym invigorated and inspired to be a better husband, father and doctor. Remember, *the mind is a terrible thing to waste.*

The following are suggestions to help improve your mental and emotional health. Some may seem difficult at first, but once you reap the benefits you will never be the same person again.

Here is a list of what you can do create the Ultimate Attitude:

- Develop and read a positive affirmation(s) daily
- Do not watch the news
- Do not hang around those that are negative
- See the good in all circumstances
- Be the good in all circumstances
- Understand that your current situation is a result of choices that you have made (there are a few exceptions here)
- Give someone a compliment daily
- Count your blessings daily (these can be simple. ie job, friends, family, house)
- Spend time to reflect and have gratitude
- Realize the “grass only appears greener on the other side”
- In a world of 7 billion people, at least 6 billion would trade places with you
- Tell someone you love them
- Think positive at all times (there is good in everything)
- Learn from your mistakes
- “Failure is an event, not a person” Zig Ziglar
- Make friends with the past, realize that today is a new day, a new opportunity.
- Listen to motivational speakers on your phone or in the car

Hormone Summary

Fat Burning Hormones

1. Thyroid Hormones (T3, T4)

This hormone controls the metabolic rate, which influences temperature, bowel activity, skin, hair, nails, heart, etc. Iodine is needed to make thyroid hormone. It can be found in sea vegetable like sea kelp. Cruciferous vegetables tend to block the absorption of iodine, therefore add sea kelp when eating cruciferous vegetables.

INHIBITING FACTORS

Estrogen blocks thyroid hormones (ovarian, cysts, fibroids, fibrocystic breasts and even being pregnant)

Viruses interfere with thyroid function

Fluoride (from toothpaste), chlorine (from tap water) inhibit thyroid function

Poor liver function allows chemicals & estrogens to re-circulate & block thyroid function (the liver should detoxify these)

Low calorie diets cause the thyroid to slow down

High stress

Steroids

Thyroid medication inhibits thyroid function & makes the body dependent on medication - see doctor before altering dose

2. Growth Hormone (GH)

This hormone prevents proteins from breaking down, prevents wasting of muscles, wrinkling of skin, loss of joints, breakdown of bone, etc. It also helps a child grow. It's a fat-burning hormone and promotes lean muscle development. It is involved in sleep cycles the first half of the night. It's made by a gland called the pituitary and works through the liver.

INHIBITING FACTORS

Getting to bed too late

Heavy greasy fats and artificial fats (hydrogenated or trans-fat) inhibit liver function and GH

Sugar & Sweets (juice, sports drinks, sweetened power bars) 1 hour before working out & 90 minutes before bedtime block GH

Poor liver function

Alcohol

Aging slows the production of GH

Stress (Cortisol)

STIMULATING FACTORS

Exercise increase GH, but only if it is intense

Adequate sleep, especially during the first half of the night

Fasting increases GH

3. Insulin-like Growth Factor (IGF-I)

This hormone is made in the liver and triggered by GH. It has the same functions as GH. It also works closely with insulin whereas insulin deals with cellular fuels while eating, IGF-I deals with cellular fuel when you don't eat. It will take the stored energy (fat) and mobilize it. When this hormone decreases, insulin increases to compensate.

INHIBITING FACTORS	STIMULATING FACTORS
Sugar	Fasting
Poor liver function	Exercise
Heavy greasy fats and artificial fats (hydrogenated or trans-fat) blocks the liver which inhibits IGF	Taking GH or consuming commercial animals that have been given GH can block IGF

4. Testosterone

This hormone gives the male characteristics. It helps to form lean body muscle. It is also involved in male fertility and helps sperm fertilize the egg.

INHIBITING FACTORS	STIMULATING FACTORS
Overtraining without resting decreases testosterone	Intense Exercise
Alcohol	
High Insulin and Estrogen	

5. Glucagon

This is a fat-burning hormone which does the opposite of insulin; it works through the liver.

INHIBITING FACTORS	STIMULATING FACTORS
Sugar	Protein
Liver Damage	Intense Exercise
	Fasting

6. Adrenaline

This is the main fat burning hormone from the adrenals. It's a hormone that gets the body ready for the stress response.

INHIBITING FACTORS	STIMULATING FACTORS
Light low pulse rate (aerobic) exercise	Weight training and intense exercise (anaerobic)
Stimulants like caffeine and junk food	Stress Response- Same as cortisol

Fat Making Hormones

1. Estrogen

This hormone creates the fat layer around the female body. Gives female characteristics. Assists in fertility.

STIMULATING FACTORS	INHIBITING FACTORS
Birth control pills	Age decreases estrogen - after menopause
Hormone replacement therapy & hormones in food	Increasing testosterone (see testosterone)
Chemicals that mimic estrogen like pesticides, insecticides, herbicides, and fungicides	Cruciferous vegetables decrease the excess estrogens
Over-secretion can downgrade the fat-burning function	
Fat cells make estrogen. The more fat you have the more estrogen you make	
Taking estrogen or being exposed to estrogen inactivates the glands that are supposed to make it - ovary, adrenal, testicular	
Commercial milk has more estrogen than organic milk	
Red wine and Soy	
Pregnancy	

2. Insulin

This hormone keeps the blood sugar normalized by converting extra sugar into a storage form - fat and cholesterol.

STIMULATING FACTORS	INHIBITING FACTORS
Sugar and refined carbohydrates	Adequate protein inhibits insulin, however excess protein increases insulin
Excess Protein	Fat buffers or slows down insulin response
Hidden sugar like alcohol, wine, beer, vanilla yogurt, deli meats containing sugar, breads, pasta, cereals, crackers, biscuits, waffles and muffins	Fiber rich foods like green vegetables inhibit insulin; this is why you should not juice fruits or vegetables but eat the whole food, fiber and all.
Overeating any type of foods	
Stress activates cortisol, which increases blood sugar by mobilizing it from the liver & muscles and triggering insulin	

3. Cortisol

This is the main stress hormone. It is also an anti-inflammatory, balances sodium and potassium and assists in the regulation of blood sugars.

STIMULATING FACTORS	INHIBITING FACTORS
Intense exercise (with training) and very long aerobic exercise (marathons) increase cortisol	Light aerobic exercise (endurance type) keeping your pulse rate below 130
Alcohol	Deep Breathing
Caffeine (coffee, sodas)	Sleep
Steroids like prednisone inhibit adrenal function	Rest
Junk foods with chemicals	Bio-feedback
Sugar and refined grains that turns into sugar quickly	Chiropractic
Skipping a meal or low calorie diets	Massage Therapy
Stressful environment, including negative people	
Sitting at a computer screen all day	
Stress	
Pain and inflammation	
Infection	
Trauma or injury	
Losses, failures	
Bad news - newspaper, radio, media	
Allergies (even poison ivy)	
Menstrual cycle	
Menopause - shifting of hormone as well as the activation of back-up gland - adrenal	
Chronic health problem	
Vitamin deficiencies especially Vitamins C and B	



OMNIA HEALTH

Personalized Lifestyle & Functional Medicine

Exercise

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Your Exercise Plan

“Movement is Life, Life is Movement”

Movement is one of most important components of our health. It has many benefits beyond just helping us lose or maintain weight. Movement is necessary for the expression of over 500 different genes in the body. Movement is also important for detoxification, digestion, building lean muscle, healthy bone and also enhancing mood. Think of a flowing river versus a stagnant pond. One promotes life, while the other one is lifeless. Which one would you rather be.

Studies from Harvard Medical School demonstrate that even a 10 minute walk can reduce the effects of depression better than an anti-depressant medication. The fact that we were designed to move is demonstrated also by the fact that we have over 600 muscles, hundreds of joints and over 200 bones. We are also hard wired to move, there are hundreds of pre-wired movement patterns for activities such as walking, climbing, squatting, chewing, breathing, heart beating and digestion to name a few.

Now, more than ever, we are sitting for prolonged periods of time, causing poor posture, poor digestion, low mood/energy and chronic muscle tension. We can clearly demonstrate the need to move by observing children. It is almost impossible to get them to stay still since the innate intelligence calls for constant movement. Our ancestors walked an average of over 10 miles per day! Today, I am surprised if a person walks even one mile per day.

Movement does not equate to strenuous exercise, fancy gym memberships or even expensive personal trainers. It is important to move daily and as much as possible. One of the most important functions of movement is that it enhances mood, increases energy and it also helps remove waste from the digestive and lymphatic systems.

Look for movement ideas on the following page and find a few that appeal to you. Remember frequency is more important than intensity, so pick something you enjoy doing and stick to it. Every step counts and matters.

Physical Activity

Regular physical activity is a main component of the healthy lifestyle choices that help prevent cardiovascular disease and help reduce cardio-metabolic risk factors. Physical activity and/or exercise work to improve your body's ability to use insulin and process glucose; by using and building up your muscle mass, the body can better control glucose - and can do so without having to use insulin. As a result, combining physical activity with a low-glycemic Mediterranean diet may be the most effective way to reduce your risk or manage cardiovascular disease.

Physiological Benefits of Regular Physical Activity

- Lower resting blood pressure
- Less abdominal adiposity
- Improved blood lipids
- Better glucose management
- Lower morbidity and mortality from coronary heart disease
- Preserved physical function in older people
- Extended active life expectancy
- Supports stress management
- Promotes chemicals that help you relax
- Burns calories, stimulates weight loss
- Provides a healthy supply of oxygen and nutrients so cells can function properly
- The national guidelines on physical activity agree that the following recommendations are enough to help reduce the risk of type 2 diabetes, heart disease, stroke and high blood pressure:
- Moderate cardiovascular activity (brisk walking or equivalent) for 30 minutes a day, five days a week

OR

- Vigorous cardiovascular activity (such as running) for 20 minutes a day, three to four days a week

PLUS

- Resistance training, including 8 to 10 strength training exercises with 8 to 12 repetitions of each exercise twice a week

Aerobic exercise

- Includes walking, running, cycling and aerobic classes and any form of aerobic exercise that uses large muscle groups and causes sustained increases in heart rate

Resistance training

- Involves pushing or pulling against resistance and includes Pilates, cycling and stretching based exercise. It doesn't include activities such as running or swimming, which do not increase muscle mass.

Tips for Successful Physical Activity

- Include physical activity in your normal daily living activities, such as walking and gardening
- Use a pedometer to increase your steps per day - it really works!
- Take a slow, post meal walk - its been found to reduce blood-glucose response to a carbohydrate-rich meal
- Split your activity into 10-minutes bursts instead of longer workouts
- Try other forms of physical activity including flexibility training and low-impact activities, which are good choices for those who need less intensity
- Find a time to exercise that's comfortable for you
- Workout with a friend to stay motivated
- Consistency is key, even if its consistent, short periods of physical activity
- Remember that some physical activity is better than none at all - so get moving!

How to Gradually Increase Physical Activity

- Start by standing more, walking around at home and stretching.
- Take an after meal stroll for 15 minutes daily, slowly increase by five-minute increments
- Begin to walk at a moderate pace for 20-30 minutes
- Increase from moderate to brisk walking
- Add one day of weights to a weekly routine
- Slowly increase duration and pace of activity from walking to jogging or walking at an incline

The following movements are examples of things that you can do to improve your health.

Walking for 10-30 mins (ideally outside with a friend)

Swimming

Hiking

Jogging/running (1-2 miles without stopping)

Yoga

Pilates

Tai Chi

Non-contact sports

Playing with children

Weight lifting

50 body weight squats

Chin ups/pull ups - 3 sets to failure

Push ups - 3 sets to failure

Taking the stairs (if not up, then at least down)

Parking your car as far as possible

The 5 Omnia Health Exercises

Bodyweight Training Benefits:

1. It is FREE
2. Versatile, many different variations
3. Can be done anywhere
4. Improves movement
5. Improves relative strength
6. Can improve reactive strength

Body Weight Training Criteria:

This routine should take no more than 15 minutes every morning, regardless of your fitness level.

Perform each exercise for 50 seconds and then move on to the next one. Do as many repetitions per 50 seconds as possible. You will repeat this circuit 3 times for a total of 15 minutes every day.

Here Are My Top 5 Bodyweight Movements

1. Push-ups

Not only builds up the chest, shoulders and triceps, but is a great stabilizer of the torso and lower back. Can be done with various hand, feet and elevated positions. Push-ups are incredible rehabilitative exercises. You can also do push ups against the wall if you are a beginner.

2. Bodyweight Squats

This basic movement has huge benefits! It can be an indicator for ankle, hip and thoracic mobility or it can be an incredible conditioning tool for the core and the low back. Lower your body as low as possible with your heels on the ground and upper body upright. You can use your hands to counter balance your weight.

3. Pull-ups

One of the biggest mass builders for the back, pull-ups are also one of the most versatile.

How to Modify the Pull-up:

You may step on a stool in an effort to bring your weight up. Do many as you can.

4. Bulgarian Split Squats or Lunges

I really like this movement because it not only builds muscle and leg strength, but it also improves hip mobility and knee stability. If this is too difficult for you, you can do a simple lunge forward, going down as far as you can with your back knee.

5. Planks

Simply hold yourself in the blow position for 60 seconds. Keep your core stable and do not let your core drop. You can make this easier by using your knees instead of your feet.

Neutral Body Positioning at a Computer Work Station

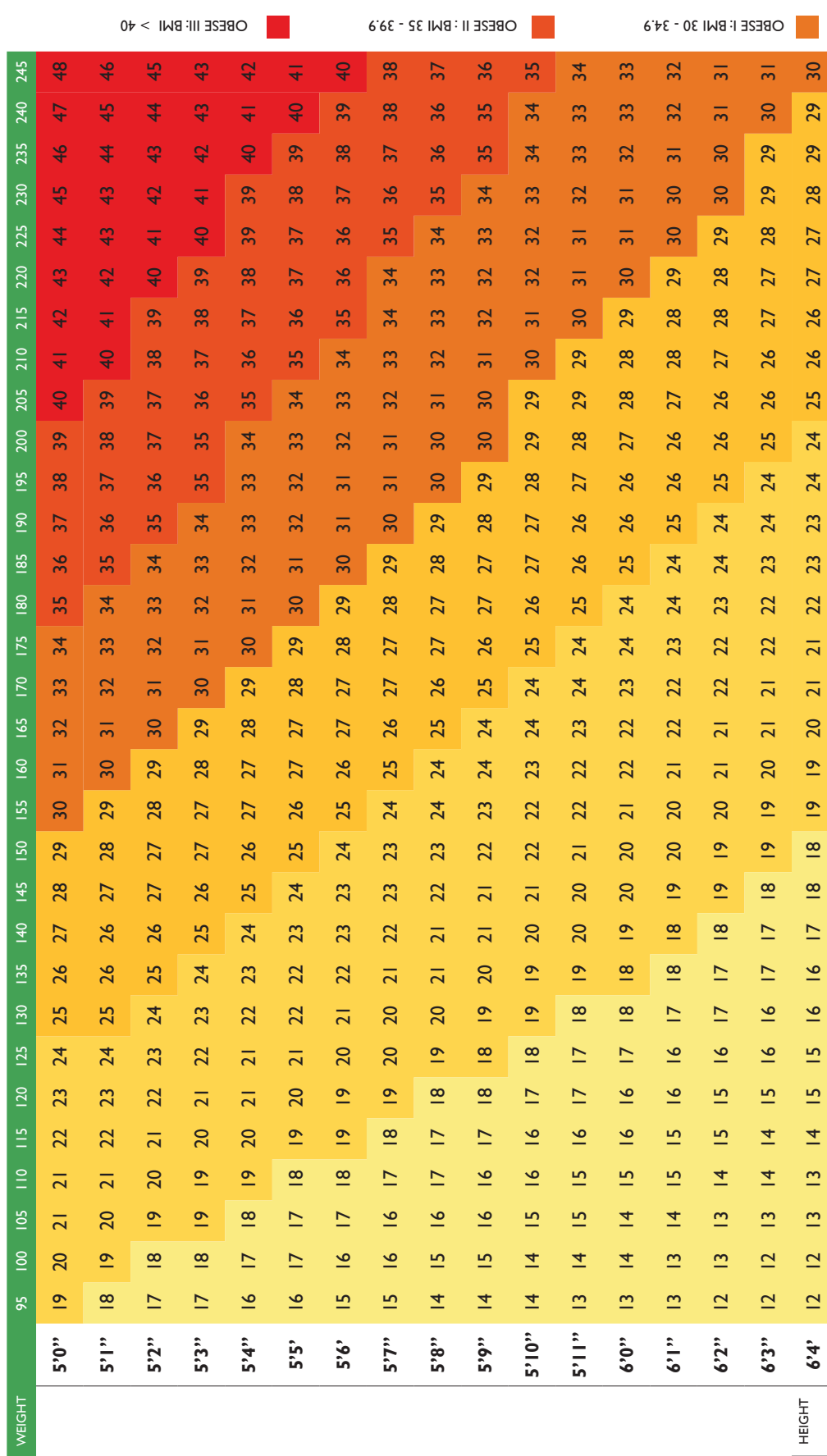
When possible, you should modify a computer workstation to best support a neutral body position. A Neutral body position is a comfortable working posture in which your joints are naturally aligned and there is the least stress and strain on your muscles, tendons, and joints. Sitting this way can help your tendons and joints heal. If you can, you should use a natural keyboard and sit in an ergonomic chair, which has an adjustable seat angle, back support, and padded elbow support. Here are some guidelines to help you maintain a neutral body position when sitting at a computer workstation.

- Your hands, wrists, and forearms are straight, in-line and roughly parallel to the floor.
- Your head is level, or bent slightly forward, forward facing, and balanced. Generally your head should be in line with your torso
- Your shoulders are relaxed and upper arms hang normally at the side of the body.
- Your elbows stay in close to the body and are bent between 90 and 120 degrees. Rest them on a padded elbow support if you have one on your chair.
- Your feet are fully supported on the floor.
- Your back is fully supported with appropriate lumbar support when sitting vertical or leaning back slightly. Your low back and upper back are in neutral with a slight lordotic (extension) curve in your low back and a slight flexion in your thoracic back. Neutral sitting is just relaxed from full extension and well away from a full slumped flexed posture. Your sternum is lifted slightly (sitting up and proud) and your shoulders are slightly back.
- Your thighs and hips are supported by a well-padded seat and generally parallel to the floor.
- Your knees are slightly lower than your hips with your feet slightly forward.

Regardless of how good your working posture is, working in the same posture or sitting still for prolonged periods is not healthy. Consider some of the following:

- Stretch your fingers, hands, arms, and rotate your torso periodically.
- Stand up periodically and stretch and walk around for a few minutes at your breaks.

BMI CHART



UNDER HEALTHYWEIGHT: BMI < 18.5 **HEALTHYWEIGHT: BMI < 18.5 - 24.9** **OVERWEIGHT: BMI 25 - 29.9**

Weight Loss Recommendations

- For people with a BMI > 30, weight loss is recommended.
- For people with BMI between 25 and 29.9, or who have a waist circumference greater than 40" in men and 35" in women, and who have additional risk factors, weight loss is recommended.
- For people with a BMI between 25 and 29.9 who have no risk factors and do not want to lose weight, prevention of further weight gain is recommended

Risk Factors

Disease conditions:

- Established CHD, other atherosclerotic disease
- Type 2 diabetes
- Sleep apnea
- Gynecological abnormalities
- Osteoarthritis
- Gallstones & their complications
- Stress incontinence

Cardiovascular factors:

- Cigarette smoking
- Hypertension
- High LDL cholesterol (> 160 mg/dl)
- Low HDL cholesterol: Men 40 mg/dl; Women < 50 mg/dl
- Impaired Fasting Glucose (110-125 mg/dl)
- Family history of premature CHD
- Men > 45 years; Women > 55 years (or postmenopausal)

Other Risk Factors:

- High serum triglycerides (> 150 mg/dl)
- Physical inactivity



OMNIA HEALTH

Personalized Lifestyle & Functional Medicine

Meditation and Mindfulness

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*“You should sit in meditation for 20 minutes a day.
Unless you are too busy, then you should sit for an hour.”*

-Zen Proverb



7 Steps to a Successful Meditation Practice

More and more people are turning to the ancient practice of meditation for cultivating clarity, peace, and purpose in their lives. While meditation is simple to practice, for some it is anything but easy. Just like having an entrepreneurial mindset is key to success in one's career, having the right meditation mindset is crucial for developing a worthwhile spiritual practice that will lead you to your life's purpose.

Here are seven steps for setting yourself up for a successful meditation practice and jump-starting a life full of purpose and clarity.

I. Ground Your Practice in the Physical

Meditation should be grounded in a proper lifestyle. Think of the way you're living as being a foundation for your meditation practice. For your practice to fully support you, you must also support your practice. It's not necessary to live at an ashram and renounce all things amazing in life, and yet it is important that you be mindful of what—and whom—you are allowing into your space, spiritually, mentally, emotionally, and physically. A clean diet, emotional intelligence, and understanding that your perception of experiences creates your reality opens a clear channel for energy and information to flow freely.

If you live a chaotic life full of rushing from one thing to the next without being conscious and grounded in your thoughts, words, and actions, your meditation will also feel like a chaotic swirling of sensations, images, feelings, and thoughts. The majority of today's western civilization struggles tremendously with slowing down, being still, and feeling the emotions within themselves. Meditation can help a great deal, but you have to set the foundation with the right lifestyle.

2. Show Up and Stay Committed

The late Dr. David Simon used to say that “commitment is walking through a door of change through which you never intend to return.” If there is anything that can derail your meditation practice, it is a lack of self-discipline. The meditation mindset requires that you decide on your path and you stay committed to it every minute of every day. This is not to say you have to meditate for hours upon hours every day and yet, the only way to be successful at something is to do it consistently.

Crisis meditating will not yield the results you seek. The results of meditation are cumulative, meaning they add up little by little. If you have a successful workout program, you know that the results you have seen did not happen overnight. On the contrary, if you’ve ever had an unsuccessful workout program—where you only hit the gym once every three months—you can attest that didn’t yield the results you were looking for. What you put your attention on grows stronger and what you take your attention away from withers. Commitment is key.

3. Have Intention and Purpose

Someone with a solid meditation mindset approaches his or her practice with intention and purpose. Maybe your intention is to slow down a bit and take a “time in” each day, or perhaps it’s to help you calm your mind and emotions so that you can feel more grounded and peaceful. It could be that your intention is to connect to a deeper aspect of yourself that you know is buried beneath all the sociological layers of a lifetime of conditioning—to find yourself.

Whatever your intention is for having a practice of meditation, you must approach it from a state of mindfulness and with purpose. Many of us at some point or another find ourselves seeking purpose—the purpose of life and our individual purpose for being here. When you tend to your practices purposefully, you remain grounded in your “why”—your reason for doing what you do.

4. Sit Still, Be Still

Sitting requires you to develop the mindset that it’s okay to sit still, to be still, and to do nothing. While that may be a shocking experience for many people who aren’t accustomed to—or comfortable with—just “being,” this is the way in which you practice. You might find it incredibly relaxing to allow yourself to simply be in the moment, to breathe and be present with yourself.

As you develop your practice, you are training your body and your mind in stillness. Plan on having experiences where your physical body feels fidgety, which may lead to thoughts like, “I can’t sit here any longer” or “I’m bored” or “I don’t want to do this any longer.” This becomes your training ground. These instances provide you with an opportunity to train your body-mind to unplug and connect to something other than your ever-busy conscious mind. Be patient with yourself as you cultivate your ability to sit in meditation and whatever you do, don’t fall prey to the thought that you can’t do it or that you’re not doing it right.

5. Practice Acceptance and Surrender

Another facet of developing a successful meditation practice is the concept of acceptance and surrender. As human beings, we spend a tremendous amount of energy trying to control everyday outcomes—how others think of us, completion of our never-ending to-do list, and ensuring that everything must go according to our plan. Not only is it exhausting, but when things don't go our way, we lose control of our own emotional states, which causes us to work harder to correct things.

Acceptance and surrender—in your daily life and in your meditation practice—helps you to let go of attitudes and expectations. The benefit of accepting whatever you experience in meditation, whether thoughts, physical sensations, or emotions, is that you are no longer consumed by unnecessary judgments about yourself or your practice. When you allow yourself to surrender to whatever shows up, it becomes easier to shrug off anything that isn't serving you.

6. Feel into Your Emotions

Fair warning: A consistent meditation practice opens you up to your unconscious mind and this can be challenging for some. The unconscious mind is where we store all our core values, memories, emotions, and beliefs. It is not uncommon to experience various emotions during meditation. This is a natural progression and isn't anything to be feared.

Simply put, whatever emotions need to arise during meditation are because the unconscious mind is ready to bring them to the surface for resolution. In some cases, you may just need to breathe through whatever you are feeling in the moment. In other instances, you may receive some insight into how you need to resolve an issue that's been creating conflict. Meditation often brings clarity, insight and solutions to problems you have been dealing with.

7. Create Your Sadhana

Sadhana is a Sanskrit word that means “a spiritual exertion toward an intended goal.” To create your Sadhana, consider what practices you would like to include in your daily routine that will support your meditation practice and write them down. Then, your duty is to perform them each day. Having a Sadhana will help you stay focused on your intention and purpose while honoring your commitment to be steadfast in achieving your ultimate spiritual, mental, emotional, and physical goals.

It's worth mentioning that your Sadhana is sacred and should be treated as such. It is also your own and needn't be compared to the practices of others. What works and feels meaningful to you is all that matters. Most spiritual teachings recommend that you nurture your practice by keeping both your progress and your practice to yourself. We have a tendency to compare and compete in today's age so this is an opportunity for you to hold something close to your heart and soul, and to cherish it as being your own.

There are many paths, teachers, and techniques that all lead to the same place. At the end of the day, it's up to you to find the right ones for you. If you're new to meditation, you may want to start by exploring different meditation styles. Another thing to consider is that it can be of great value to learn meditation by a seasoned instructor with whom you resonate. Take your time in settling into your meditation mindset and your practice, carefully selecting the ingredients that ultimately set you up for success.

Reference: Tris Thorpe from the Chopra Center



Types of Meditation for Beginners

Beginning a meditation practice can be both exciting and intimidating. If you asked 10 different people what style of meditation they practice, you might get 10 different answers. It's common to feel overwhelmed and uncertain as to where or how to get started.

The best way to begin is to familiarize yourself with some of the different types of meditation to see what resonates with you. Here are a few of the more common styles that are great for beginners.

Guided Meditation

Guided meditations have become increasingly popular in the past few years. A guided meditation is led by someone else, either in person or via a recording, that will usually (although, not always) have a theme and relaxing music playing in the background. Guided meditations generally last anywhere from 10 to 15 minutes, depending on the purpose or theme, and they come in all styles—including healing, manifesting, and going within to find your purpose. Because guided meditations are led by another person, this style of meditation is great for beginners and those who may struggle with sitting still for more than just a few minutes at a time. They are also beneficial if you would like to enhance your existing practice or focus your energy and attention on a specific outcome.

If you are interested in this type of meditation, check out Deepak and Oprah's 21-Day Meditation Experience, an online program where participants are sent a new recording of a guided meditation each day. This program is offered several times each year, and is free and easily accessible to everyone. You can also download a guided meditation app on your smartphone, like Insight Timer or the Chopra Center's Ananda app. Bonus: There's even a guided meditation app for kids, called Ananda Kids, created by the Chopra Center!

Another option is to see if there are any guided meditations being offered in your community where you can go to meditate with like-minded individuals. Many yoga studios and wellness centers offer daily guided meditations, which can be a great way to ease into your meditation practice.

Visualization Meditation

Visualization meditation is a powerful way to use the mind to influence the body and can also be an empowering way to manifest desired outcomes in your life. Deepak Chopra teaches that what we place our attention on grows stronger and what we take our attention away from will begin to diminish. The unconscious mind is extremely powerful and it works very well with imagery.

One common visualization practice is centered around health. By visualizing your body-mind as being healthy, vibrant, and energized—or grounded, peaceful, and calm—you can begin to elicit these things both mentally and physically. Another approach is using visual imagery for creative purposes. By constructing an image in your mind of what your life might look like after having accomplished a goal and really seeing yourself having already achieved it is a way to begin living in ways that support the manifestation of your desired outcome.

To meditate using visual imagery, practice the following:

1. Identify your desired outcome. For example, do you wish to feel more grounded and at peace in your mind and emotions? Or would you like to envision your physical body as being healthy, vibrant, and strong? Or are you longing to create art, write poetry, be in a new relationship, or travel abroad?
2. Create an internal representation of what this looks, sounds, and feels like. Make it as real and as compelling as possible.
3. Enter into a meditative state by relaxing and taking some deep breaths and then bring the image into your awareness. Associate yourself into the picture by stepping inside it and feeling as if it has already happened.
4. When it's time to come out of meditation, simply allow the image to fade off into the distance and relinquish any attachment to outcome.
5. Meditate in this fashion anywhere from 10 to 15 minutes each day.

Japa or Mantra-Based Meditation

Japa meditation is a mantra-based meditation path that is one of the oldest, most revered classical techniques known today. The word “mantra” translates to mind vehicle or mind instrument. Japa meditation has the practitioner repeating a word or phrase for the duration of the meditation, with the mantra being the focal point throughout.

During the practice, whenever you drift away from the mantra to other thoughts, sounds, or physical sensations, you simply guide your attention back to the repetition of the mantra. Think of it as a dance back and forth between mantra and thought. Some mantras have a specific meaning and it's said that by repeating the mantra, you are connecting to the energetic essence of its intention. Other mantras purposely have no meaning and are designed to help access deeper levels of silence. In this approach, eventually the mantra and thoughts will cancel one another out. When this happens, your conscious awareness transcends the busyness of the mind and reaches higher states of consciousness.

Popular styles of mantra-based meditation are Primordial Sound Meditation as taught by Deepak Chopra and the age-old practice of the So Hum meditation.

Loving-Kindness or Metta Meditation

Metta meditation, also known as Loving-Kindness meditation, is designed to cultivate four qualities of love: friendliness (Metta), compassion (Karuna), appreciative joy (Mudita), and equanimity (Upekkha). The quality of Metta, or friendliness, is expressed as a genuine compassion sent out with the intention of surrounding ourselves and others with loving kindness. With all that is going on in the world today, Metta meditation is a worthwhile practice for each of us to spend some time in each day. This style of meditation also works well as an entrance point for the practice of forgiveness and can be a powerful tool for lessening the charge of negative emotions we have toward those who have wronged us.

While there are various approaches to Metta meditation, this audio clip on Loving Kindness Meditation is a thorough and well-spoken version <https://www.youtube.com/watch?v=sz7cpV7ERsM>.

Another variation will have you think silently to yourself, “May I be filled with loving kindness. May I be well. May I be peaceful and at ease. May I be truly happy.” You would then bring someone else into your mind (someone you love and/or someone who you are feeling challenged by) and say silently, “May you be filled with loving kindness. May you be well. May you be peaceful and at ease. May you be truly happy.” You may then bring all of humanity into your awareness and send the same intention out to the collective—to all sentient beings, “May we be filled with loving kindness. May we be well. May we be peaceful and at ease. May we be truly happy.”

Once you have done this meditation a few times and you remember the process, you can begin to do the meditation on your own without listening to the audio file. Choose whatever language you prefer to use and practice this meditation for a period of time to see how it resonates with you.

Breath-Awareness Meditation

Breath-awareness meditation is a simple practice of finding a comfortable seat, closing your eyes, and placing your attention in the inhalation and exhalation of your breath. Breath awareness is an effective way to establish greater mind-body connection and to reduce stress. This type of meditation can be your preferred meditation practice each day and it is also highly useful during moments of tension in the workplace and at home.

Once you’ve tried a few different types of meditation, you will have a better idea of what resonates with you and what doesn’t. The most important thing to remember is that there is no right or wrong meditation; there are many paths that all lead to the same destination, and the beauty of life is that we get to choose our own path.

Keep it simple at the beginning and just feel out some different techniques. When you find one that you enjoy, the next step is to set aside 15 to 20 minutes each day to cultivate your meditation practice. From there, tend to your practice each day and you will experience a number of life-changing benefits.

By Tris Thorpe from the Chopra Center



Self-Love Practices

There is plenty of research indicating that self-kindness is a main ingredient for not just overall well-being, but also for following through with your intentions.

And that makes sense. If you're kind and encouraging to yourself when you mess up, you don't feel as badly. You can more easily motivate yourself to start again. On the other hand, if you berate and belittle yourself each time you fail, you can feel even worse about yourself. It is a lot more difficult to re-tackle goals when you're feeling down.

It's time to silence the inner critic. Here are five simple ways to infuse some self-love into your life:

I. Try a Self-Compassion Meditation

According to leading self-compassion researcher Kristin Neff, Ph.D., self-compassion has three key components: mindfulness, common humanity, and self-kindness. She created the brief Self-Compassion Break meditation, which accesses all three parts of self-compassion. Here's a modified version you can try:

- Begin by finding a comfortable position that allows you to be relaxed, yet alert. Close your eyes and take a few deep and cleansing breaths.
- Identify what is troubling you without bringing harsh judgment or ridicule into the equation. Bring up your unmet goal with non-judgmental curiosity and without self-criticism.
- Next, remember that you are not alone. Find comfort in knowing that many others have been unable to stick to their intentions.
- Finally, offer yourself kind words. What would you say to your friend who has fallen off track? What words comfort you? It may help to give yourself a squeeze or to place your hands on your heart during this part of the meditation. Soothing touch promotes the release of oxytocin, even when it is your own touch.
- Close by taking a few more breaths, paying attention to any positive feelings you may notice.
- Open your eyes, and congratulate yourself for taking time to tend to yourself.

2. Create Affirmations

Research indicates that you need a ratio of roughly three positive emotions to every negative emotion in order to be happy and flourish. In order to create more positive emotions, repeat affirmations that generate joy. Write down a few affirmations that resonate with you, and repeat them each day. Some examples include:

- “I am enough”
- “I am full of peace and love”
- “I am leading a purposeful life”

3. Make a Date with Yourself

Think about the last time you did something you truly enjoyed. Do you love dancing? Drop in on a local dance class. Or maybe a cooking class would light your inner fire.

Author Christine Carter, Ph.D. stresses the importance of downtime in her book, *The Sweet Spot*. She reminds you that happy people are successful people, and that you are your best, most creative, and most connected self when you create space for play.

4. Flip Your Inner Voice

Take a moment and pay attention to your inner voice. Chances are, you are your harshest critic. What would happen if you spoke to your friends with that same tone of voice? You would most likely be friendless. See if you can begin to catch yourself when your inner critic speaks up. Instead, try to offer the same words of encouragement and kindness you would offer your friends or loved ones. This one simple mindset shift can profoundly change your life.

Need a reminder to be kind to yourself? Try incorporating one or more of these practices:

- Write a message of encouragement on your bathroom mirror.
- Leave an inspirational quote on your dashboard.
- Wear a self-compassion wristband that reminds you to be your own friend.
- Keep a self-kindness journal by your bed.

5. Reframe Your Intentions

According to Kelly McGonigal, Ph.D., author of *The Willpower Instinct*, you will have an easier time attaining goals if your intention aligns with your values.

For example, if you'd like to lose 20 pounds this year, saying that you want to be skinny may not motivate you to stick to your guns. Take time to truly contemplate, “Why do I want to lose weight?” Your answer may be that you want to live a long life. Then ask, “Why do I want to live a long life?” Perhaps you want to witness your grandchildren's lives. As your motivation shifts to align with your values, you are better positioned to stay connected with your intention.

By Sara Schairer from the Chopra Center



How to Manage Restlessness and Impatience During Meditation

“Too many thoughts”, “Can’t sit still”, “When will it be over?”, “Am I doing it correctly?”, “Nothing’s happening”. Have you ever had those thoughts during your meditation?

Well, you’re not alone; these are by far the biggest complaints people make about their meditation practice. As new meditators, we all had these concerns, and even after many years, they still pop up from time to time. But please don’t give up, these are, in fact, good experiences.

Understanding Restlessness and Impatience

The first step to managing restlessness and impatience is to understand the feelings. There are three basic types of experiences you can have during meditation:

- Falling asleep
- Having thoughts and feeling restless
- Slipping into the field of silence and infinite possibilities in the spaces between thoughts

While we all would prefer for our meditations to be silent, all these experiences are correct. Meditation is a process of purification. The mind and body gain deep levels of rest, which allow stresses, fatigues, and toxins to be released. This release increases the activity of the mind and body, causing you to have thoughts and perhaps feel restless.

Your essence, who you really are, has been covered over by layer upon layer of the nonsense life has sent your way. Meditation is a process of peeling off these layers to reveal the magnificence that lies within. So, even though you may complain about these disturbances, they are the indication that something good is happening. As Mother Teresa said, “Restlessness is only the surface level of a beautiful wellspring of energy within.”

Also remember that you can think thoughts at the superficial, surface level of the mind and also at deeper, more refined levels. Just because you are having thoughts in meditation doesn't mean that you aren't in a very restful state. What is important is when you realize that you're thinking thoughts, you turn your attention back to the object of your meditation, such as your mantra or breath. This is correct meditation. To choose to continue thinking the thoughts would, in the context of meditation, be a waste of time.

Mediation as a Reflection of Your Life

Your meditation experience is often a reflection of your life. If you are overly tired or not getting enough good quality rest at night, you may fall asleep during your meditation. If your life is very busy and chaotic, your meditations may be restless and troubled. Meditation helps you create a happier and more harmonious life; however, consciously taking steps to balance your lifestyle will also support your meditation experience.

Remember the story of the tortoise and the hare? Most of us live our lives like a hare, dashing off in all directions, multi-tasking, or lost in the haze of our own confusion—while it was the tortoise's measured consistency that won the race. Even though you may feel as though you are “running out of time,” you actually have the whole of eternity before you. Slow down!

Try the following eight tips to manage restlessness and impatience during your meditations.

1. Don't Waste Time Analyzing Your Meditation Experiences

As mentioned before, meditation is a purification process. The thoughts, feelings, and emotions you may have during your meditation are the garbage being thrown out. So, unless you're the sort of person who looks through the trash to see what you've thrown out before the garbage truck arrives, don't waste time analyzing your meditation experiences. Whether you are having mundane thoughts about your daily activities, seeing beautiful images and hearing celestial singing, or you are listening to Deepak talking about non-local reality, they are not important. The purpose of meditation is to enrich your life. The experiences during meditation will be what they will be; what is important is the shift in awareness you begin to enjoy in your everyday lives as a result of your meditation experiences.

2. Take a Few Minutes to Prepare Before You Begin Your Meditation Session

This may help minimize any disturbances. You can meditate anywhere but finding a quiet place is preferable. If you're at home, switch off the phone, put the children and pets in another room, and let other members of your household know not to bother you.

3. Before Your Morning Meditation, Avoid the Temptation to Look at Your Computer and Smartphone

Let the activity of the day wait a little longer or your meditation will be filled with mentally composing answers to emails and texts.

4. Try Preceding Your Meditation with Gentle Yogic Stretching Exercises

This allows you to get the kinks out and sit more comfortably.

5. Take a Few Deep Breaths

As you inhale, be aware of how your body feels as well as what's going on with your thoughts and emotions. As you exhale, have the intention of letting go of anything that doesn't concern you in that moment. You can come back and address it after the meditation but try to put aside any unnecessary distractions.

6. Align Your Physical Body with Your Energetic Field with a Simple Centering Exercise

- Either sitting or standing, place one hand level over your navel, fingers pointing upward, palm toward the center.
- Raise the other arm straight up over your head, again with fingers extended upward and palm toward the center.
- Take a full breath in and, as you release it, bring your palms together at your heart center.
- Repeat this three times, alternating the hands if you wish.

7. Prepare for Meditation with Alternative Nostril Breathing

In the afternoon, after a day's activity, it's often beneficial to take a few extra minutes to settle your mind and body before beginning your meditation. A little stretching, if possible, and even a 10 to 15 minute nap (napping is one of the lost joys of modern society) or 2 to 3 minutes of alternative nostril breathing is a great way to settle in preparation for meditation.

- Using your right hand, close your right nostril with your thumb.
- Exhale slowly through your left nostril.
- Inhale through your left nostril. Use your right ring finger and little finger to close off your left nostril.
- Release your thumb and slowly exhale through your right nostril.
- Inhale through your right nostril.
- Again, place your thumb back over your right nostril, release your ring finger and little finger, and continue breathing and alternating as before. This is an effortless, continuous flow of the breath with no controlled pauses, allowing the breath to flow at its own speed and rhythm.

8. Commit to a Routine

Although the process of meditation itself should be effortless, a little discipline regarding the practice can be helpful. Before starting your session, decide how long you intend to meditate for and commit to sticking with that time no matter what your experiences.

When you first leaned to meditate, you did so for a reason. Meditation will eventually fulfill this and unfold other treasures beyond your wildest dreams. Learn to accept your experiences as part of the plan. Don't sacrifice what you really want for what you think you should have right now. All traditions tell us that patience is a virtue and ultimately, the reward of patience is patience.

By Roger Gabriel from the Chopra Center



How Meditation Can Help with Anxiety

Fear is a negative emotion, unless you're facing an actual threat and need to fight or flee. And the usefulness of fear is minimal in daily life, particularly in the form of anxiety. Stressful events can produce short-term anxiety in almost everyone, which disappears after the event. But for an estimated 6.8 million Americans with Generalized Anxiety Disorder (GAD), anxiety is a chronic condition they can't shut off. All of us know people we accept as "born worriers," but their reality is much more debilitating than that title describes. Being in a state of chronic anxiety can severely limit their daily activity.

You probably know already if you worry excessively. In fact, if you have chronic anxiety, even the smallest thing can trigger it. You find yourself with fearful thoughts about finances, family, your health, and what's happening at work. Some days you'd rather hide under the covers.

Why You Worry

The first thing to realize is that reality isn't what's actually worrying you, but it's your fixed habit of mind that's causing you to respond to everything with anxiety. Second, you need to look rationally at the anxiety response and concede that you're not improving it by feeling anxious. This seems obvious to non-worriers, but somewhere inside, many "born worriers" believe they are taking care of situations that others are overlooking, like whether they remembered to lock up the house or turn off the gas stove. Any trigger can provoke worry, so the question is how to prevent this from happening.

The Toll it Takes

Because of the mind-body connection, you should also consider the physical side of anxiety. Even if you have accepted worry as a tolerable trait, it exacts a price in the form of insomnia, easy startle response, fatigue, irritability, muscle tension, headaches, inability to relax, trembling, twitching, feeling out of breath, and various stomach and digestive problems. If these persist for more than six months after something bad has happened to you, a diagnosis of GAD may be appropriate. Even if your symptoms are manageable, you shouldn't have to live this way. Anticipating the worst, which has become a habit even when no threat is in sight, distorts how you approach work, family, and the world in general.

There are many theories about what causes chronic anxiety, but they are as diverse as explanations for depression. It's more useful to consider how to retrain your mind so that your worry subsides and is replaced by a normal undisturbed mood. The standard medical advice is to take medication (usually some form of tranquilizer), augmented by talking to a therapist. However, self-care has other tools, such as meditation, diet, sleep, massage, and exercise that you can pursue on your own.

Meditation

One aspect of anxiety is racing thoughts that won't go away. Meditation helps with this part of the problem by quieting the overactive mind. Instead of buying into your fearful thoughts, you can start identifying with the silence that exists between every mental action. Through regular practice, you experience that you're not simply your thoughts and feelings. You can detach yourself from these to rest in your own being. This involves remaining centered, and if a thought or outside trigger pulls you out of your center, your meditation practice allows you to return there again.

Being able to center yourself is a skill that anyone can learn, once they have the intention and the experience of what it feels like. Anxious people often shy away from meditation for various reasons. "I can't meditate" is code for feeling too restless to sit still or having too many thoughts while trying to meditate. With a patient teacher, these objections can be overcome. Anyone can meditate, even if the first sessions are short and need to be guided. Being on tranquilizers, which for some anxious people is the only way they can cope, isn't a block to meditation.

Numerous scientific studies have found meditation to be effective for treating anxiety. One study, published in the *Psychological Bulletin*, combined the findings of 163 different studies. The overall conclusion was that practicing mindfulness or meditation produced beneficial results, with a substantial improvement in areas like negative personality traits, anxiety, and stress. Another study focused on a wide range of anxiety, from cancer patients to those with social anxiety disorder, and found mindfulness to be an effective management tool.

The researchers analyzed 39 studies totaling 1,140 participants and discovered that the anxiety-reducing benefits from mindfulness might be enjoyed across such a wide range of conditions because when someone learns mindfulness, they learn how to work with difficult and stressful situations.

All mental activity has to have a physical correlation in the brain, and this aspect has been studied in relation to anxiety. Chronic worriers often display increased reactivity in the amygdala, the area of the brain associated with regulating emotions, including fear. Neuroscientists at Stanford University found that people who practiced mindfulness meditation for eight weeks were more able to turn down the reactivity of this area. Other researchers from Harvard found that mindfulness can physically reduce the number of neurons in this fear-triggering part of the brain.

Here are three simple, practical ways to take advantage of all this knowledge:

- Regular meditation allows your brain to develop new pathways besides the old worry grooves. The mind begins to experience itself without being overshadowed by anxious thoughts.
- Exercise puts the body in an active state. High-intensity aerobic exercise is more effective than anaerobic, and a 12- to 15-week program is better than a short routine.
- A diet of natural organic foods without additives, along with avoidance of refined sugar, evens out the metabolism. Meals should be regular and satisfying.

By Deepak Chopra from the Chopra Center

99 Reasons to Start Meditation

There's big buzz around meditation, and for good reason. Research points to this once fringe practice as a highly effective technique for improving your life overall. With benefits ranging from physiological to psychological to spiritual, and scientific research to back its validity, there's really no reason anyone shouldn't be meditating at this point. Corporations, professional sports teams, school systems, and celebrities all recognize the value of adopting mindfulness-based lifestyle practices as part of their daily routine.

If you're still not convinced, here are 99 reasons to start meditating, from the light-hearted to the scientific, and everything in between.

1. Helps you better manage stress
2. Boosts your social life
3. Helps you accomplish more by doing less
4. Cultivates compassion
5. Enables you to become present in the moment
6. Leads you to, and connects you with, your purpose
7. Lowers your blood pressure
8. Gives you laser focus
9. Heightens your intuition
10. Improves your memory
11. Makes you a nicer person
12. Broadens your perspective
13. Gives you Jedi-like skills
14. Reduces irrational reactivity
15. Increases your immunity
16. Cultivates more loving relationships
17. Helps you let go of defensiveness
18. Lowers your heart rate
19. Enhances sensory perception
20. Helps you achieve better grades and/or higher test scores
21. Decreases inflammation
22. Taps your creativity
23. Improves problem-solving abilities
24. Lands you cooler friends
25. Makes you more giving
26. Boosts your happiness
27. Deepens your connection to the Self and others
28. Increases your emotional intelligence
29. Accesses higher states of consciousness
30. Improves your sex life (yes!)
31. Leads to self-discovery
32. Decreases anxiety and depression
33. Makes you resilient in tough times
34. Expands your awareness
35. Opens you to greater possibilities
36. Helps you let go of baggage
37. Gives you a richer life experience
38. Hones mental strength
39. Helps you discover who you really are
40. Encourages peace of mind
41. Reduces impulsive behavior
42. Teaches you about forgiveness
43. Promotes more restful sleep
44. Evokes feelings of lightness
45. Discourages the victim mentality
46. Allows you to step into your power

47. Guides you to make more conscious choices
48. Helps you to get out of your mind and into your heart
49. Leads to cultivation of a spiritual practice
50. It's easier than you think
51. Helps you get to know your thoughts (so you can change them)
52. Improves metabolism
53. Improves exercise
54. Makes you less judgmental
55. Alters the genetic expression of your DNA
56. Increases your energy
57. Enhances your connection with nature
58. Makes you more fun to be around
59. Helps you connect more deeply with your children
60. Improves your ability to communicate effectively
61. Reduces signs of aging
62. Improves your listening skills
63. Generates helpfulness
64. Helps you fight diseases
65. Improves heart rate and respiration
66. Promotes cellular regeneration
67. Enhances gratitude
68. Makes you more successful
69. Helps you become more proactive
70. You can do it anywhere—no studios, gyms, or props needed
71. Improves functioning of your brain
72. Improves conflict resolution
73. Strengthens bonds with your pets
74. Makes you fall in love with Apple products
75. Lessens your desire to control other people
76. Reduces negative emotions
77. Improves overall athletic performance
78. Helps you roll with the punches
79. Improves digestion
80. Makes you want to do nice things for the planet
81. Enhances collaboration
82. Enables you to find the silver lining in challenging scenarios
83. Builds self-confidence
84. Increases job satisfaction
85. Provides greater levels of tolerance
86. Reduces road rage
87. Balances mind, body, and spirit
88. Activates the parasympathetic nervous system
89. Deepens your capacity for love
90. Develops greater will power
91. Makes you more outgoing and fun
92. Enhances dream recollection
93. Helps you develop patience
94. Helps with headaches and migraines
95. Decreases muscle tension
96. Slows aging of the mind
97. Enhances your memory
98. Everyone else is doing it
99. It's free!

Just as the phrase implies, “the answers are within.” A daily meditation practice will teach you about yourself, others, and the world you live in. You will tap into your own truth without the influence of society or the validation of others. And, the level of insight and clarity you glean from within is the catalyst for unparalleled personal development and self-evolution. This is how you become the best version of yourself. This is how you create personal transformation, and it's how you effect global change.

By Tris Thorp from the Chopra Center

The Neuroscience of Mindfulness Meditation

Devotees of mindfulness meditation—often described as non-judgemental attention to present moment experiences—will be well-versed in the many benefits of their practice. Benefits include the following:

- More focused attention
- Relaxation
- Positive shifts in mood
- Enhanced self-awareness
- Improved health and well-being

The Positive Health Benefits of Mindfulness Meditation

The strongest scientific evidence to date that meditation has positive health benefits comes from two meta-analyses (analyses of data pooled from multiple studies) of meditation research. The first meta-analysis of 47 trials with 3,515 participants found that people participating in mindfulness meditation programs experienced less anxiety, depression, and pain.

The second meta-analysis of 163 studies found evidence that meditation practice is associated with reduced negative emotions and neuroticism, and the impact of meditation was comparable to the impact of behavioural treatments and psychotherapy on patients.

Because of the increasing popularity of mindfulness meditation, and mounting evidence that meditation has wide-ranging and measurable effects on many aspects of health, neuroscientists too are becoming interested in understanding the biological mechanisms that underlie these effects in the brain.

Evidence that Mindfulness Meditation Affects the Brain

Last year an extensive review was published in the top-flight journal *Nature Reviews Neuroscience*. The review, “The Neuroscience of Mindfulness Meditation,” took a look at the current state of neuroscience research on mindfulness meditation. The authors included Yi-Yuan Tang, a mind-body medicine researcher at the Department of Psychological Sciences, Texas Tech University, who also practices Chinese medicine; Britta Holzel, a neuroscientist and yoga teacher at the Department of Neuroradiology, Technical University of Munich; and Michael Posner, a psychologist at the University of Oregon.

“Although meditation research is still in its infancy, a number of studies have investigated changes in brain activation at rest and during specific tasks that are associated with the practice of, or that follow, training in mindfulness meditation,” write the authors. “There is emerging evidence that mindfulness meditation might cause neuroplastic changes in the structure and function of brain regions involved in regulation of attention, emotion and self-awareness.”

Mindfulness Meditation Changes Brain Structure

Over the past decade, numerous neuroimaging studies have investigated changes in brain morphology related to mindfulness meditation. In an attempt to consolidate the findings, one meta-analysis pooled data from 21 neuroimaging studies examining the brains of about 300 experienced meditation practitioners. The study found that eight brain regions were consistently altered in the experienced meditators.

The eight brain regions included the following:

- Rostrolateral prefrontal cortex: A region associated with meta-awareness (awareness of how you think), introspection, and processing of complex, abstract information.
- Sensory cortices and insular cortex: The main cortical hubs for processing of tactile information such touch, pain, conscious proprioception, and body awareness.
- Hippocampus: A pair of subcortical structures involved in memory formation and facilitating emotional responses.
- Anterior cingulate cortex and mid-cingulate cortex: Cortical regions involved in self-regulation, emotional regulation, attention, and self-control.
- Superior longitudinal fasciculus and corpus callosum: Subcortical white matter tracts that communicate within and between brain hemispheres.

The specific ways in which the brain regions changed varied by study (different studies used different neuroimaging measurements), but changes were seen in density of brain tissue, thickness of brain tissue (indicating greater number of neurons, glia, or fibres in a given region), cortical surface area, and white matter fibre density.

The effect of meditation on these particular brain structures appeared to be about “medium” in magnitude—effect sizes that are comparable to the roughly “medium” effects of many other behavioural, educational, and psychological interventions.

Because so many regions were found to be involved in mindfulness meditation, including cerebral cortex, subcortical white and grey matter, brain stem, and cerebellum, Tang, Holzel, and Posner suggested in their review that the effects of meditation might involve large-scale brain networks and multiple aspects of brain function.

Mindfulness Meditation Alters Patterns of Brain Activity

Brain-imaging studies can reveal not only changes in brain structure, but also changes in brain activation patterns. In their review, Tang, Holzel, and Posner also investigated whether mindfulness meditation exerts its effects via altered activation of brain regions involved with emotional regulation, attention, and self-awareness.

One hypothesis driving emotion regulation is that mindfulness meditation strengthens prefrontal higher order cognitive (thinking) processes that in turn modulate activity in brain regions relevant to emotion processing, such as the amygdala. A number of brain-imaging studies appeared to support this hypothesis.

Buddhist philosophy teaches that identification with the static concept of “self” causes psychological distress. Studies of mindfulness meditators have shown training to be associated with more positive self-representation, higher self-esteem, and higher acceptance of oneself. Such concepts are not easy to capture in neuroscientific studies. However, multiple studies show the insular is strongly activated during meditation. This is thought to represent amplified awareness of the present moment experience. “This shift in self-awareness is one of the major active mechanisms of the beneficial effects of mindfulness meditation,” write Tang, Holzel, and Posner.

Future Questions for Mindfulness Meditation Research

Despite the enthusiastic reporting of positive findings on the effects of meditation on the brain, it should be pointed out that mindfulness meditation research is a young field, and many studies are yet to be replicated.

Nonetheless, Tang, Holzel, and Posner concluded, “. . . the practice of mindfulness meditation might be promising for the treatment of clinical disorders and might facilitate the cultivation of a healthy mind and increased well-being.”

By Sara McKay from the Chopra Center



Mindfulness Meditation

Mindfulness Meditation Instructions:

1. Sit in a comfortable position. Try to sit in the same place each day. Avoid positions that you might fall asleep in.
 - a. The back is long and supports itself.
 - b. Shoulders are relaxed downward, the neck is long, and the chin is pointing neither up nor down.
 - c. The face is relaxed.
2. Begin to breathe (preferably through the nostrils). Feel the belly rise, the ribs expand, and the slight movement in the collarbones and shoulders as the breath moves upward. Feel the exhalation.
3. Focus on one aspect of the breath:
 - a. The movement of air in and out of the nostrils
 - b. Or the lifting and falling of the belly
4. Watch that one aspect of the breath.
 - a. When the mind wanders, gently bring it back to the breath and the aspect you have chosen to watch.
 - b. Do this as many times as you need to.
 - c. There is no such thing as a good or bad meditation. (Good and bad are judgments, events in the mind—just note them and go back to the breathing.)
5. Start with 5–10 minutes and then increase the time until you can sit for 30 minutes.