



Prevent and Reverse the Full Spectrum of  
Inflammatory Symptoms and Diseases

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The

**AUTOIMMUNE**

Protocol



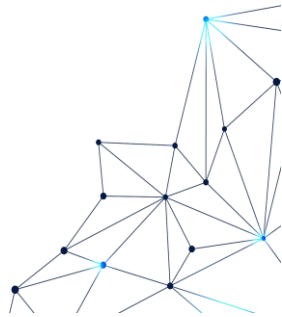
Frank Newman

The Autoimmune Protocol

# The Autoimmune Protocol

**By Frank Newman**

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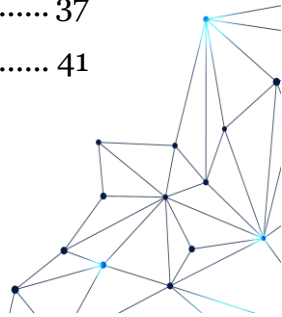
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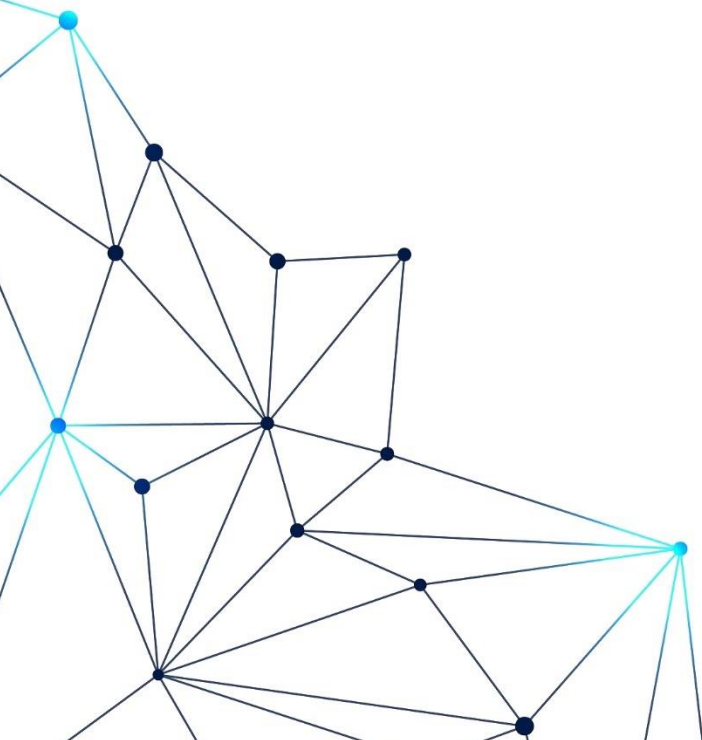
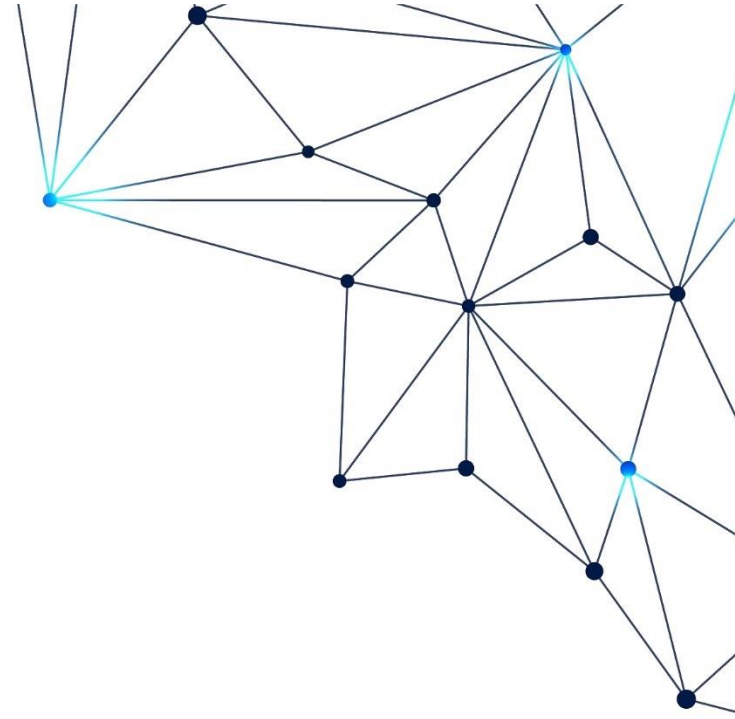
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# About the Immune System

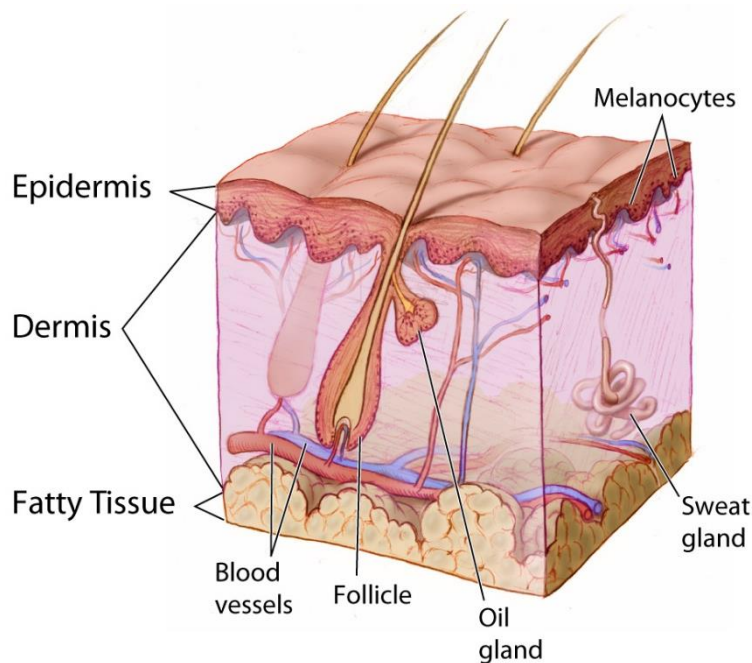
## The Autoimmune Protocol

Our immune system is an intriguing and amazing aspect of our body. Every day, we come into contact with unwelcome substances that invade our bodies. Our bodies respond by triggering our immune system to attack, like soldiers on the battlefield.

Most of us only notice the effects of our immune system when it has been compromised. That is, we run a fever, experience inflammation, or notice the development of pus around a wound. We may recognize these things as bad, but the reality is that all these things are the result of a healthy immune system doing its job. Microbes, viruses, bacteria, toxins and parasites attempt to enter our bodies on a minute-by-minute basis. Our immune system is constantly working hard to keep these harmful invaders out and prevent them from causing issues.

### Skin and Mucus Membranes: Amazing Barriers

One of the largest components of our immune system is the skin. This is our foremost barrier against pathogens that would try and enter. The skin contains harmless bacteria that work for us by protecting our bodies from invaders. Mucus membranes also contain this beneficial bacteria.



In the mouth, saliva contains an enzyme that destroys the cell walls of certain bacteria. This enzyme can also be found in our tears and airways. The nature of mucus itself works to trap microorganisms as well.

There are other effective ways our body works to expel potentially harmful substances from the mucus membranes. The sneeze reflex is a powerful reflex that occurs when the body is exposed to a foreign substance.

This spasmodic and forceful reaction causes an ejection of air from the lungs to exit the mouth and nose. Coughing does a very similar job. When we cough, we are forcefully releasing air from the lungs and through the airways to help rid the body of excess mucus that may contain a foreign substance.

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If any pathogen gets past the enzymes in the mucus membranes and makes it to the stomach, they are in for another obstacle. Volatile and acidic stomach acid is waiting to greet the invader. Stomach acid also contains enzymes and other substances that help to destroy pathogens that enter. Pathogens that make it past the mucus membranes and into the bronchial areas are also not in the clear. Cilia, located in the bronchi, are hair-like structures that work to move the invaders out of the airways.

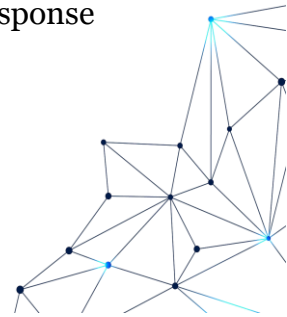
Sometimes, pathogens make their way past the mucus membranes and into the body. They may cause issues like a cold or virus. All is not lost when you begin to feel the effects of a virus in your body. At the first sign of a virus, begin to take action. There are steps you can take to help your body fight the invader. High doses of vitamin C-rich plants like violet leaves, persimmon leaves, rose hips, chili peppers, kale, and citrus fruits can help naturally boost your immune system and help you get over a cold or virus faster. Immunostimulant plants like elderberry, astragalus, and Echinacea may also give your immune-system what it needs to better do its job in the event of a virus.

If foreign substances make their way past the skin's protective bacterial barriers, there are other ways the body can fight. The epithelial layer of our skin contains a substance called keratin. This substance makes it hard for germs or other substances to penetrate further. The epithelial layer of our skin also contains cells that can kill microbes and other bacteria. The skin naturally produces two other substances that can act as a defense. One is sebum.

Sebum is a naturally oil the skin creates. Sebum can actually keep the pH of the skin at a range where germs cannot live. Sweat is another substance our skin produces naturally that helps to create a problem for microorganisms. When sweat dries, it leaves behind salts that destroy foreign pathogens. Most people know that their skin is constantly shedding dead skin cells. One amazing biological reason for this is to rid the skin of bacteria that may be clinging to these cells.

Imagine an object, like a large splinter, getting past the epidermal layer and down into deeper layers of the skin. The splinter itself is a foreign substance, as are all the microbes on the splinter. Now that the splinter has made it past several lines of defense, what is the body to do? The body will soon be aware of the invaders because mast cells become activated.

These cells release tiny molecules called histamines. Histamines are often regarded as a negative thing (allergies), but when they are properly doing their job, they are a good thing. Histamines work in several ways to help rid the body of the invaders. First, they cause blood vessels in the affected area to swell. Second, they cause the area to turn red as blood makes its way to the scene. In short, histamines create an inflammatory response to the invader, encouraging the flow of blood to the area and swelling.







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The swelling in the area around the splinter may also work to help push it out of the body. Many people think that they need to immediately get a splinter out of the body when they get one, but you may be surprised how fast the body works on its own to push it out. Nevertheless, it is always a good idea to remove a foreign object if you can to help remove the bacteria that may be on it. If a bacteria-laden splinter remains lodged in the skin and the histamine response doesn't work as well as it should to eliminate invaders, the body has other means of dealing with the problem.

Phagocytes come to the rescue. Phagocytes are cells in our bodies that work to ingest foreign substances. In addition to phagocytes, B and T cells can help as well. These amazing cells have specialized jobs in response to specific bacteria or viruses that are encountered. Certain B and T cells are triggered, and then begin to multiply to fight the bacteria or virus. Another amazing aspect of these cells is that they actually remember the invaders in the future, and will be more ready if exposed to them a second time, providing the body with immunity!

The results of the body working to fight the invaders in the skin may be noticed by the evidence of pus around an affected area. Pus is a white, yellow, or brownish (sometimes green if the infection is bad) substance that collects around an infected area. It is comprised of dead white blood cells that worked to kill the infection. When infection becomes advanced, the pus may be accompanied by a foul odor. Sometimes, pus can be contained in very small, isolated areas like pimples. These are usually easily managed at home by keeping the area clean and the application of antimicrobial or antibiotic substances.

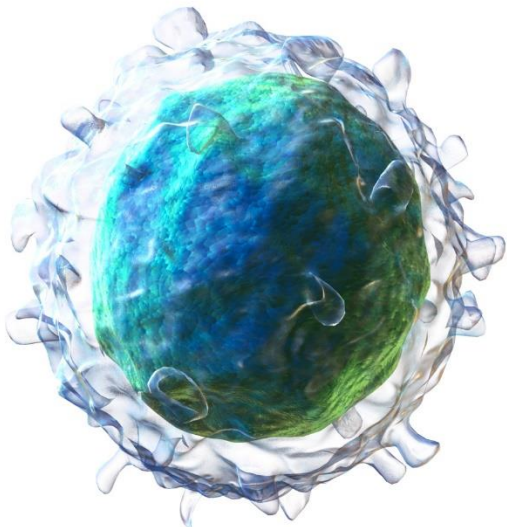
However, some infections can become abscesses. Abscesses are deeper in the skin, and may only be noticed by a sore, red bump on the surface. Under the surface, however, a pocket of pus has collected and an infection is raging. If noticed early on, abscesses can also be treated at home with cleaning and antibiotic substances. If they are not caught early on, they may require medical attention like lancing to drain the fluid and prevent further issues.

If your skin is breached by a foreign object, it is important to understand the biology of what will happen so you can help to treat the problem before any serious issues arise. First, remove the object if it is still in the skin to prevent the spread of bacteria from the object. Second, kill any bacteria that may have been present on the object by using alcohol or peroxide.

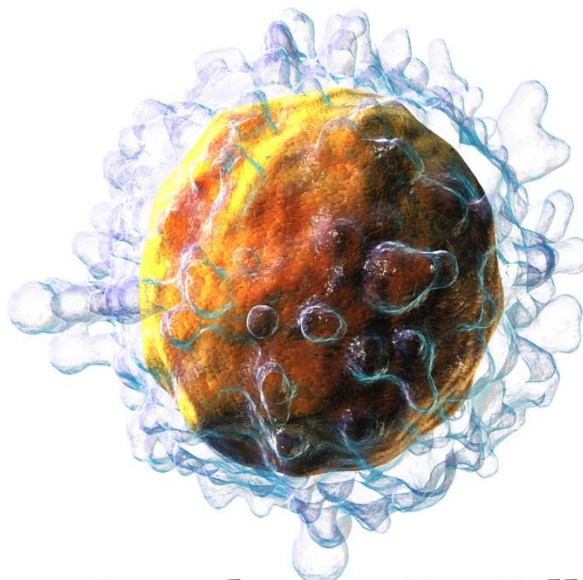
For mild to moderate wounds, you may also want to treat the area with a wound-healing and antimicrobial poultice of lavender, plantain, or yarrow several times daily. For more serious wounds, keeping the area clean is a must, and they also may need stitches to close the skin back together and prevent the open wound from amassing more bacteria that could lead to infection.

## The Autoimmune Protocol

### Lymphocytes: Producing Killers



**Lymphocyte T - Cell**



**Lymphocyte B - Cell**

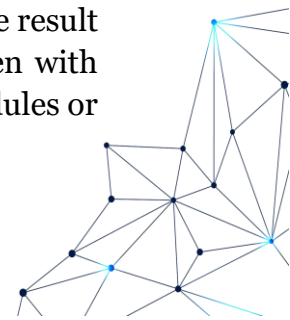
*Medical gallery of Blausen Medical, 2014, CC. 3.0*

Lymphocytes are another component of our immune system. They are a type of white blood cell that includes natural killer cells, as well as T and B cells. Each type of lymphocyte has its own, specialized job to help fight invaders. Natural killer cells are a component of the innate immune system. These cells target tumors and cells infected by viruses. They respond to the affected cells in the body by releasing a substance that kills the cell. T cells originate in the thymus. They activate phagocytes, cytotoxic T-lymphocytes, and cytokines. B cells originate in the bone marrow. These cells are responsible for the production of antibodies, which work to counteract the invader.

The substance our bodies produce called lymph fluid mostly contains these types of cells. Lymph is a type of fluid that flows throughout the lymphatic system and works to flush invaders to the lymph nodes where they are then destroyed.

### The Lymphatic System

As previously mentioned, lymphocytes a component of the lymphatic system. The lymphatic system is a crucial part of the immune system. This network of vessels carries lymph throughout the body. This open system is comprised of several areas called lymph nodes where large amounts of lymphocytes can be found. Lymph nodes are located in our chest, neck, armpits, groin, and pelvis. Lymph will pass through these regions on its way back to the blood. Sometimes, lymph nodes can become enlarged. This is often the result of a reaction in response to an infection. Other times, areas can become swollen with lymph, which may be a sign of damage to the lymphatic system. In rare cases, nodules or



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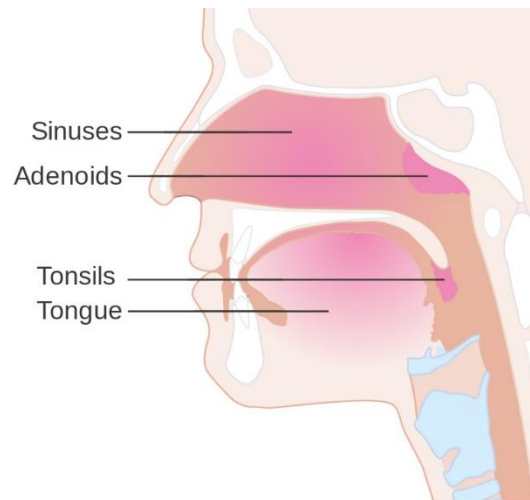
tumors protruding from the lymph node areas can be the result of cancer such as Hodgkin lymphoma or non-Hodgkin lymphoma.

The spleen plays a major role in the lymphatic system by producing immune cells that fight antigens. It also removes old blood cells and works to produce blood cells during fetal development. The spleen creates immunoglobulin whose job is to remove bacteria and blood cells that are coated in antibodies. The thymus and bone marrow are organs that help make up the lymphatic system. These lymphoid organs produce the lymphocytes known as T cells and B cells. As previously discussed, these cells play an integral role in the destruction of invading substances by producing antibodies. When the thymus or bone marrow becomes compromised, the immune system goes with it, exposing the body to a multitude of pathogens.

Vessels that help make up the lymphatic system are widespread and intricate. They are responsible for bringing lymph fluid to different areas of the body. These vessels include small capillaries and larger ducts. The capillaries absorb fluid from the tissues, whereas the larger vessels bring the fluid to ducts where it is returned to the blood stream. Complex valve systems keep the fluid going in the right direction.

### Tonsils and Adenoids

The tonsils are another component of the immune system. Tonsils are responsible for activating an immune response. Tonsils are located in the throat, and are often the first tissue to come into contact with a foreign substance. They can alert the body that there is trouble, and get the immune system ready to start fighting. Tonsils are comprised mostly of lymphocytes. The adenoids are located at the roof of the throat. These are also comprised of lymphatic tissue. In addition to the tonsils and adenoids, other tissues like the lingual tonsil and the tissues on the sides of the throat can function in much the same way.



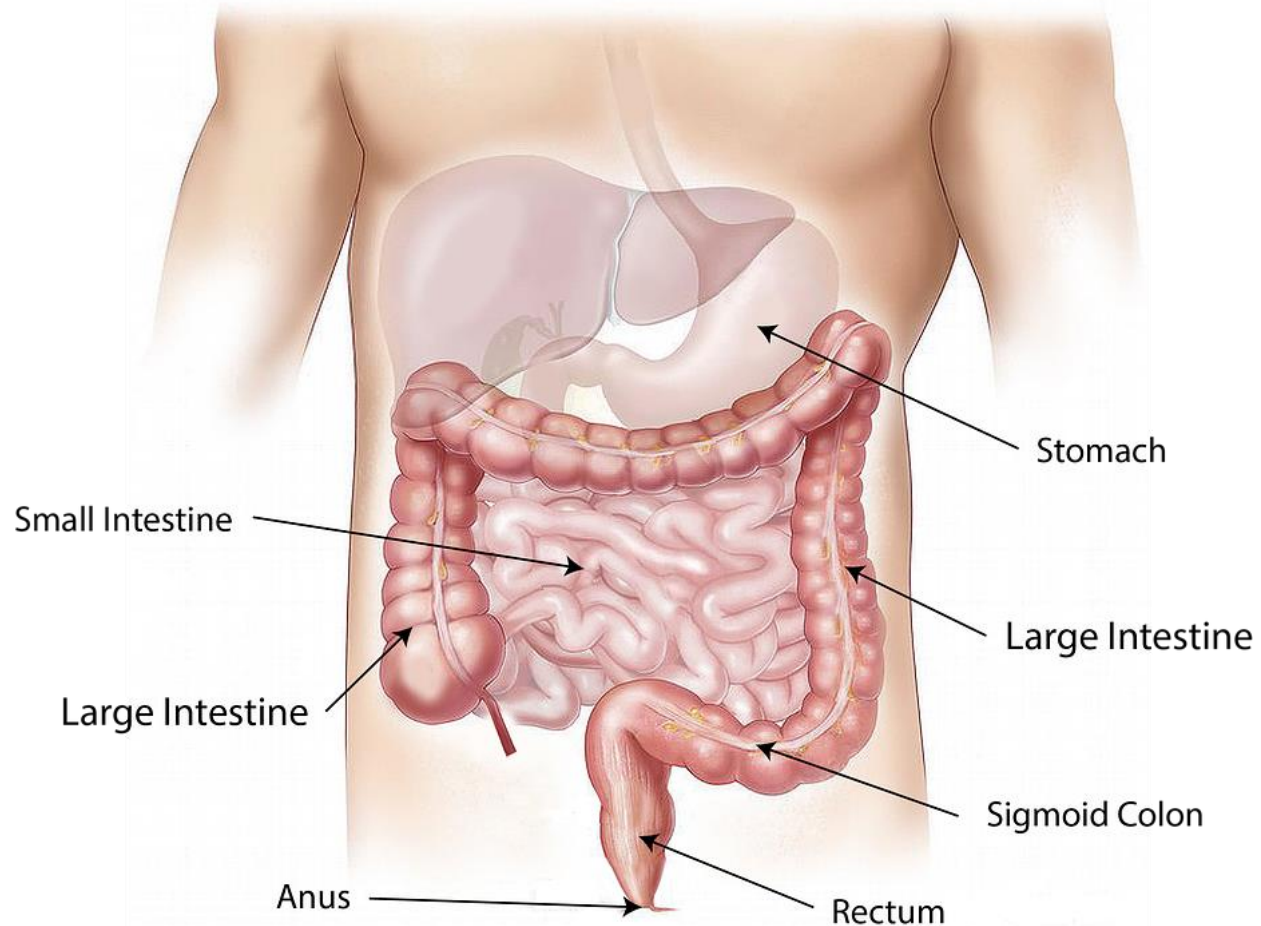
The removal of tonsils and adenoids is a common practice for those suffering from chronic infections in this area. However, it is important to keep in mind that these tissues are an important first line of defense when the body comes into contact with pathogens. Removal of these could negatively impact the immune system, although there are few long-term studies to confirm this theory.

It is thought that when the tonsils or adenoids are removed, the tissues on the sides of the throat, as well as the lingual tonsil, may take over.

# The Autoimmune Protocol

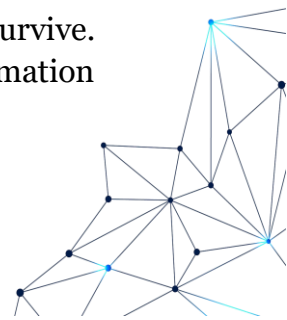
## The Gut: A Critical Component

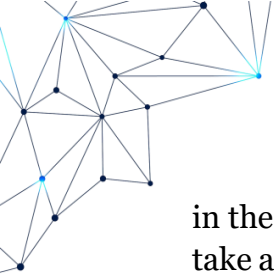
The bowels are often overlooked as a crucial part of the immune system, but make no mistake – they are of extreme importance when it comes to immune system health! It is estimated that over half of the cells responsible for producing antibodies are located in the bowel wall. The cells in bowel walls actually target and destroy various pathogens that enter the body. And just like B and T cells, they remember past invaders and can work to destroy them faster when they encounter them again.



Gut flora is another significant aspect of the immune system. This beneficial bacteria located in the large intestine inhibit harmful bacteria from further entering the body. Due to the fascinating balance in the gut, the beneficial gut flora is allowed to thrive in the bowel without the body destroying it. This is referred to as a microbiome.

Gut flora impacts the pH of the environment inside the bowels and make the area more inhospitable for pathogens. Some gut flora actually fight specific types of bacteria like E. coli and salmonella, which are known as gram-negative bacteria. When gut flora is able to thrive in the gut, there is nothing to feed the bad bacteria, thus it cannot survive. Another amazing job performed by gut flora is the regulation and balance of inflammation





## The Autoimmune Protocol

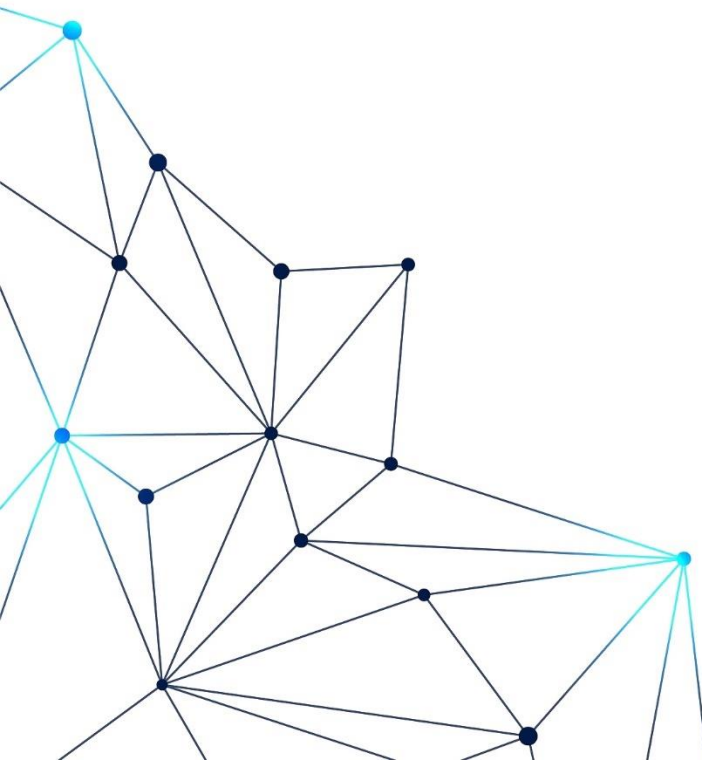
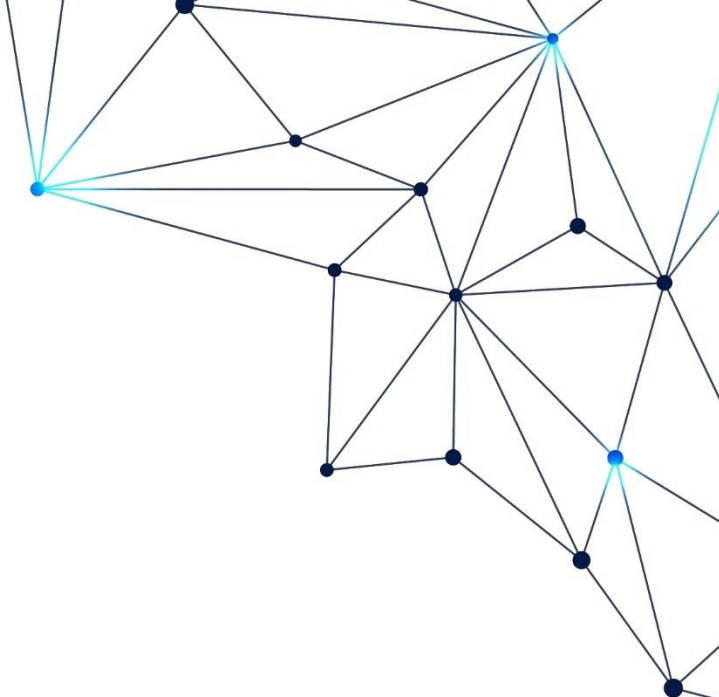
in the body. When the gut flora in the body are diminished (which can happen when you take antibiotics or eat processed foods), the door is wide open for bad bacteria to flourish, bodily inflammation to flare up, and the immune system to fail.

Sugar is not good for the body, and it is certainly not good for the promotion of healthy gut flora balance. This is because sugar feeds the bad bacteria in the gut, thus offsetting the balance and creating more bad bacteria than good. As already mentioned, artificial sweeteners are not a good way to avoid sugar, nor are they good for gut flora. This is because they may affect the way our bodies process sugar. Because artificial sweeteners contain no calories, they get to travel right through the gut and right into the path of gut flora. While there, they may negatively impact the balance. While it may not be realistic to completely cut all kinds of sugars from the diet, you can start promoting a healthy balance of gut flora by simply watching what you eat and trying to limit sweets.

Antibiotics and a diet rich in over-processed foods are two major ways the gut flora in the body can be killed off. Other ways include exposure to pesticides, MSG, meat and dairy treated with antibiotics, and drugs for acid reflux. It is critical when taking antibiotics to also help replenish your compromised gut flora with probiotics. Some ways to do this are through leading a healthy lifestyle by exercising regularly and eating a balanced diet.

Probiotics are often touted as a great way to replenish good bacteria in the gut. While some probiotics are indeed beneficial, there are other ways to promote gut health as well. One way is by eating more fermented foods. Sauerkraut is one of the most popular fermented foods. It is made by fermenting cabbage. It contains beneficial probiotics. You can easily ferment your own, or purchase it from the refrigerated section in the grocery store. The canned versions of this will contain significantly less probiotics. Another effective way to positively impact gut health is to drink kombucha. This is a type of fermented tea that can have a tangy taste. It may contain a very small amount of alcohol due to the fermentation process, but usually not enough to cause any issues. Another popular food for replenishing gut flora is yogurt. This is made from fermented milk. Look for yogurt brands that advertise “live and active cultures” on the label.

In summary, the immune system is composed of a network of organs, vessels, mucus membranes, skin layers, lymphocytes, and gut flora specifically designed to help your body keep out foreign substances that could cause harm. Like a well-oiled machine, these components work together to provide multiple lines of defense against pathogens. Unfortunately, not everyone’s immune system works this way. More and more people are being affected by autoimmune diseases that make the immune system mistakenly react and attack the body. Instead of the body being able to recognize a foreign substance, the body may attack its own healthy cells, organs, or tissues, thinking they are foreign. Autoimmune diseases are on the rise, and have been steadily rising for several decades.

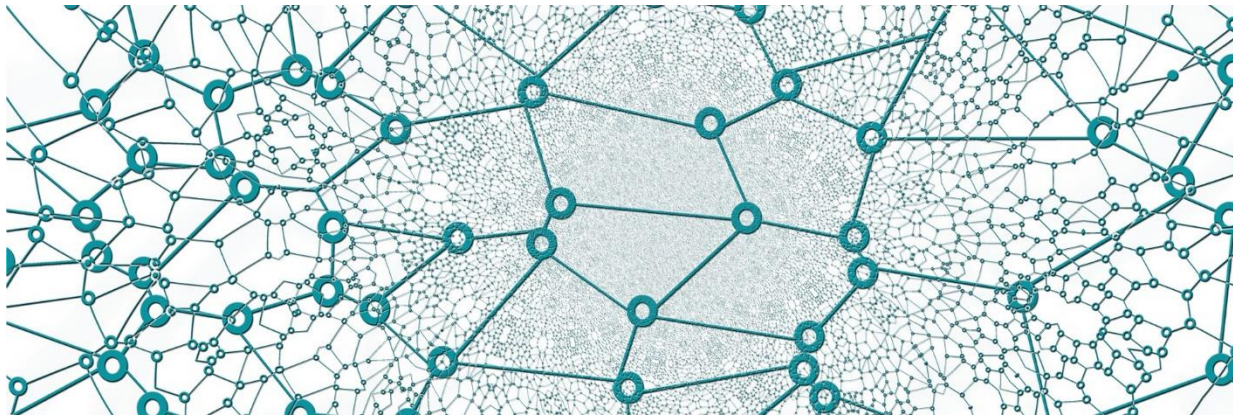


# What is an Autoimmune Disease?

## The Autoimmune Protocol

**W**hen the body thinks it detects a foreign substance, it will send the immune system to attack, as discussed in the previous chapter. When someone has an autoimmune disease, their body attacks itself thinking it has encountered a foreign substance that needs to be eliminated. The result is a wide range of unpleasant side-effects ranging from anaphylaxis to organ failure, depending on the specific autoimmune disease.

Although doctors are not quite sure what has been causing the rise in autoimmune diseases over the past decades, they have been able to discover certain trends concerning autoimmune disease. For instance, twice as many women are affected than men. In addition, ethnicity may play a role in the incidence of certain autoimmune diseases. An autoimmune disease called Lupus affects more Hispanic and African Americans than other ethnic groups.



Heredity also plays a role in the incidence of autoimmune disease. We all have certain genetic markers, and scientists have discovered that some people are more likely to be susceptible to certain autoimmune diseases than others, because other family members had the disease.

Exposure to bacteria and germs is crucial to the building of a healthy immune system. Some theories suggest that modern children are not exposed to as many germs as past generations have been. With all the antiseptics used in soaps, sanitizers, and related products, children are being shielded from contact with substances that may help to build their immune systems. The advent of vaccines also means no exposure to viruses that could help build a strong immunity, as well as a medical intervention that affects a complex and intricate immune system.

While many theories continue to circulate about why autoimmune diseases are on the rise over the past several decades, there is no concrete evidence pointing researchers to one specific cause or trigger. Other theories include poor diet and constant exposure to chemicals in our everyday lives.

# The Autoimmune Protocol

At present, there are at least eighty known autoimmune diseases, with some being more common than others. **Each autoimmune disease has its own specific set of symptoms, but there are some general signs that one might be suffering from an autoimmune disease:**

- Recurring, low grade fevers
- Swollen lymph nodes
- Chronic tiredness/fatigue
- Skin issues like eczema or psoriasis
- Bowel Issues
- Pain or inflammation in the joints
- Sudden onset of any of these symptoms when previously healthy

Don't dismiss any of these symptoms, especially if they become chronic. These are indicators that a larger issue may be going on in the body. Although there are no known cures for most autoimmune diseases, many can be managed with the right diet and treatments. There are many natural ways to help treat and manage the symptoms of autoimmune diseases. In addition, there are ways to avoid triggers that can set off an immune disease. This book aims to address ways to manage autoimmune disease naturally, while providing a deeper understanding of several common autoimmune diseases.

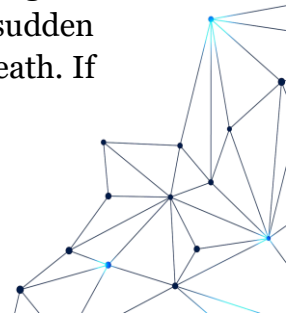
## Autoimmune Diseases

Of the many types of autoimmune disorders, some are more common than others. One of the most common types of negative autoimmune responses is an allergy. Allergies are significantly on the rise, especially in Westernized countries.

## Allergies

An allergy is an overreaction of the immune system to something that is usually harmless. Some of the most common airborne allergies include mold, pollen, dust mites, and pet dander. Food allergies are just as common. Some common foods that incite allergic reactions include peanuts, shellfish, dairy, eggs, soy, and fish. The results of exposure to these airborne and food allergies vary. Symptoms of an allergy to common substances like pollen might include a runny nose, sneezing, watery eyes, and even hives if the allergy is severe enough. Food allergies seem to cause more severe allergic reactions in most people. Someone with a food allergy that accidentally ingests a food containing the substance they are allergic to may develop hives or a deadly reaction known as anaphylaxis.

The truth is that allergies are not harmless and can frequently result in severe damage or death. Anaphylaxis is a rapidly developing reaction that is characterized by sudden swelling of the throat or tongue, itchy hives, lightheadedness, and shortness of breath. If







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these symptoms are not treated immediately, they could result in the throat swelling shut, making it impossible to breathe. The most common treatment for anaphylactic episodes is the injection of epinephrine into the body. Epinephrine acts to relax the muscles around the airways and allow a person to breathe. It also inhibits the release of more histamine that might cause further issues. Sadly, instances of anaphylaxis are rising around the world.

Hives are a common allergic reaction. In fact, they are so common that an estimated twenty percent of the population have or will experience them at some point in their lifetime. Hives consist of a red, raised itchy rash on the skin. These areas are the result of histamines that release and cause capillaries to break, releasing fluid. The fluid then builds up in an area, resulting in a hive. Hives can spread to all parts of the body during an allergic reaction.

There are some common triggers of hives. These include exposure to substances like latex, allergy-triggering foods, skin-irritating plants, chemicals, medications, and insect stings. Stings from insects like bees and wasps account for a large amount of allergic reactions. Although these insects inject the body with a tiny amount of venom, many people react severely. Even those with no allergies will have a histamine reaction to an insect sting, even if it is just pain, redness, and swelling around the affected area. For those who are more allergic to insect venom, the results of a sting could be hives, severe bodily swelling, or anaphylaxis.

Sometimes the cause of hives is less obvious, like stress. If you find yourself with hives and cannot determine the cause, ask yourself if you have been stressed or experiencing chronic anxiety recently. There are times when the cause of hives is simply unknown. For many who suffer with occasional hives, they are never able to figure out the exact cause.

Although there is no evidence to provide scientists with a surefire way to prevent allergies from developing in people, there are theories on the subject. Some theories suggest that the instances of allergies may lessen if a child is exposed to possible triggers early in life. Other theories suggest that fish oil and probiotics taken during pregnancy may lower the risk of allergy development in children.

### Asthma

Asthma is an allergic disease that causes inflammation of the airways. This dangerous condition may come on suddenly, and without warning. Common allergens like pollen and certain medications may trigger an asthmatic episode, and the condition is often genetic as well. There are different levels of severity when it comes to this condition. Unfortunately, like so many other autoimmune diseases, instances of asthma have increased exponentially in the past decades.

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Symptoms of an asthmatic episode include coughing, chest-tightness, shortness of breath, and wheezing. These symptoms may become worse in the evenings or early morning. They may be brought on by exposure to an allergen, or by an unknown trigger. In the event of an asthmatic episode, most people will need to seek help from a medication that helps to dilate the bronchi and bronchioles, or a corticosteroid.

For those suffering with asthma, avoiding possible triggers is the first step to managing their asthma. For others who are not able to pinpoint triggers, making sure they always have quick access to life-saving medications is a must.

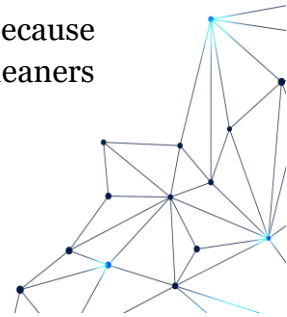
### Contact Dermatitis

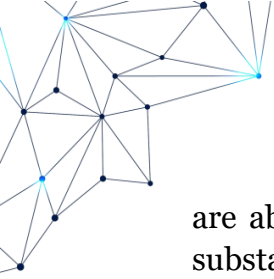
Contact dermatitis is an allergic reaction of the skin resulting in swollen, itchy, red skin. This common reaction is usually triggered by contact with a substance that incites a histamine reaction in the skin. Substances that trigger contact dermatitis may be allergens or irritants like chemicals. Although contact dermatitis is an allergic reaction of the skin, it is not the same as hives. Those with contact dermatitis will exhibit symptoms that last longer than hives, which usually go away within a day or two. A contact dermatitis rash often looks differently than hives as well.

The itchy and persistent nature of a contact dermatitis rash can result in more unwelcome issues. A person with this rash may want to scratch it continuously (due to the histamine reaction), but this usually results in more skin irritation, wounds, scabs, and damage.

Some common causes of contact dermatitis include metals like nickel. Nickel allergies may be noticed in those who wear jewelry made with nickel. They might notice that the areas where they wore the jewelry become itchy, red, and irritated. Another very common cause of contact dermatitis is toxic plants like poison ivy, poison sumac, or poison oak. The majority of people who come into contact with these plants suffer from extremely painful, red, itchy rashes that ooze and weep. This is because these plants excrete an oil called urushiol. The best way to avoid a rash when you know you have come into contact with one of these plants is to immediately shower and scrub the area with soap (dish soap works amazing) and a wash cloth to remove traces of this potent oil from the skin. This will greatly lessen the likelihood of a severe allergic reaction of the skin. The longer the dangerous oil is allowed to sit on your skin, the higher the likelihood it will result in a rash.

If you discover a rash you believe to be contact dermatitis, take a moment to think about what you may have been exposed to. Did you recently change laundry detergents? Perhaps you wore jewelry that was made of nickel or another metal you may be allergic to. Did you come into contact with a chemical or substance that might cause irritation to the skin? Oftentimes, synthetic fragrances and perfumes can cause an allergic rash. This is because they contain chemicals that are bad for our bodies. Cleaners like bleach and drain cleaners





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are abrasive to the skin and can cause a rash. Additionally, synthetic dyes in various substances can trigger a reaction.

Allergies are a very common, and disturbingly increasing, condition. Although many allergies have no known cures, understanding how the body responds to triggers can help you better understand how to manage symptoms and avoid possible reactions. There are natural ways you can help block the production of histamine in the body to help treat the symptoms of allergies. Some of these include consumption of local, raw honey and/or propolis, plants like stinging nettle, purple deadnettle, and butterbur. If you suffer from seasonal allergies, try drinking several cups daily of tea infused with the plants listed above. If you suffer from food allergies, allergies that typically result in anaphylaxis, or asthma, make sure you always have access to medications that can save your life. If you deal with contact dermatitis, try avoiding common allergic triggers and opt for more natural-sourced cleaners, detergents, soaps, and cosmetics. For those who deal with chronic inflammation of the skin and mucus membranes due to allergies, try taking supplements that help curb inflammation in the body, such as turmeric or ginger.

### Celiac Disease

An increasingly common autoimmune disease is celiac disease. This disease is characterized by gastrointestinal issues such as diarrhea, bloating, malabsorption, and loss of appetite. All of these symptoms are the body's way of overreacting to a common substance found in many foods. This substance is called gluten. Gluten is a group of proteins found in grains like wheat, rye, and barley.



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The results of a reaction to gluten for those with celiac disease primarily affect the small intestine. Over time, with consistent exposure and reactions to gluten in the body, the small intestine can become damaged.

One way the small intestine becomes damaged is in the lining, called villi. The villi in the small intestine are responsible for helping the body absorb the proper nutrients. When the villi are destroyed, this could cause a person to improperly absorb nutrients, leading to anemia.

Anemia is the loss of red blood cells and hemoglobin. When the body does not have an adequate amount of these substances, it can also fail to properly carry oxygen throughout the body. Symptoms of anemia include chronic weakness and fatigue, trouble concentrating or focusing, shortness of breath, feelings of dizziness, paleness, and fainting. Oftentimes, it may come on slowly, making it confusing to detect what is happening.

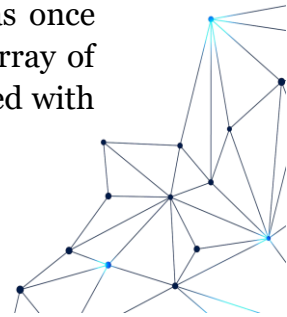
It is important to pay attention to what is happening in your body and to be mindful when things seem different. Failure to detect anemia from celiac disease over time could have serious and negative consequences. For instance, when the body is constantly in a state of anemia, it may cause the heart to work harder. If the heart must work harder to compensate for the things happening in the body, it could become damaged. Heart failure, angina, and palpitations could occur when anemia is untreated over a period of time.

The easiest way to manage celiac disease is to avoid gluten. This may seem like a simple solution, but unfortunately, gluten is in many foods.

The easiest way to manage celiac disease is to avoid gluten. This may seem like a simple solution, but unfortunately, gluten is in many foods. Many foods have been processed in a plant that also processes food containing gluten, so for those who are especially sensitive, these foods may also trigger a reaction. Pay close attention to labels, and avoid foods with wheat, barley, and rye. Other common ingredients that contain gluten include brewer's yeast, malt, breadings, kamut, matzo, semolina, triticale, farina, and fu. Some popular foods and beverages that often contain gluten include beer, ale, lager, cereals, breads, crackers, chocolate bars, salad dressings, deli meats, sauces, seasonings, marinades, pasta, and a variety of processed foods. One of the major keys to successfully avoiding gluten is to choose minimally processed, whole foods with simple ingredients.

### Gluten or Glyphosate?

There are some theories that suggest gluten is not entirely to blame for the complications celiac disease can have. Some suggest that the popular herbicide ingredient glyphosate is responsible for the allergic reactions thought to be from gluten. Glyphosate was once thought to be perfectly safe, but recent research is showing it to cause a wide array of health problems, especially cancer. This is unfortunate, as many crops are sprayed with





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it. Suspicion that glyphosate is the real culprit came about when those with celiac began to notice that they would not have a reaction to foods eaten in other countries that contain gluten. Unlike many American foods, these international foods were not sprayed with this dangerous herbicide. Sadly, many foods, pharmaceuticals, and other substances have been found to contain detectable amounts of glyphosate. Recently, there was a multi-million dollar judgement against the company that manufactures this toxic herbicide. If you suspect glyphosate is the problem, the best thing you can do is avoid processed foods, and any foods that are not organic.

### **GMOs: Gluten Then and Now**

Today's gluten is not the same as the gluten found in wheat, barley, and rye from fifty years ago. This is because of the advent of genetic modification. Genetic modification is the practice of altering an organism's genetic material through genetic engineering. The practice of genetic engineering when it comes to our food supply is hailed as life-changing because foods can be engineered to be hardier and produce greater yields. However, this practice does not come without skepticism from a variety of critics that question the safety and long-term results of genetically engineered crops.

Grains are commonly genetically engineered. This has resulted in grains that contain higher amounts of gluten. With the staggering increase in celiac disease diagnoses, paralleled with the increase in genetic modification of crops, it is not hard to make the correlation that genetically engineered crops may be responsible for the rise in reactions to once common foods.

### **Graves' disease**

Graves' disease is another common autoimmune disease. It is estimated that around 136 thousand people each year are diagnosed with this disease. Graves' disease specifically targets the thyroid. Oftentimes, this autoimmune disease is the most common cause of hyperthyroidism. Hyperthyroidism is the result of the thyroid producing too much thyroid hormone. Results of this disease include an enlarged thyroid, weight loss, diarrhea, heart issues, irritability, and muscle weakness. Heart issues occur when the thyroid overstimulates the metabolism, making the heart work harder. Bulging eyes is another indicator of this disease.

Our thyroids produce a hormone called the Thyroid Stimulating Immunoglobulin. This is actually an immune system antibody that triggers the production of thyroid hormones. It is unclear exactly why those with Graves' disease produce excess thyroid hormones. The causes are thought to be both genetic and environmental.

### **Genetic Indicators**

Clear patterns that point to a possible genetic correlation with Graves' disease include the fact that those with family members that have this disease are more likely to develop the

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disease themselves. In addition, those with a twin that has the disease may have a much more increased likelihood of developing the disease as well.

### Environmental Indicators

Over the past century, the development of a wide range of toxins used in every day substances may be contributing to the rise in autoimmune diseases. Iodine intake, radiation exposure, stress, medications, smoking, certain infections, and exposure to chemicals/toxins are all thought to be responsible for the rise in thyroid diseases like Graves' disease.

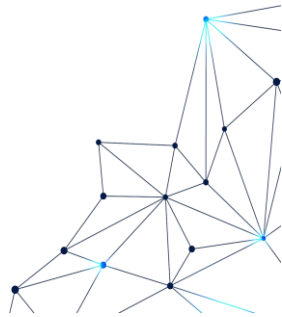
Many companies use toxic chemicals when manufacturing products we use every day. For instance, flame retardants can be found in mattresses, clothing, carpets, strollers, furniture, electronics, and even some foods. These dangerous substances are thought to be "safe," but have also been shown to increase the risk for thyroid diseases in some studies. Many antibacterial soaps contained a substance called triclosan. This is a substance once thought to be safe, but was recently discontinued.

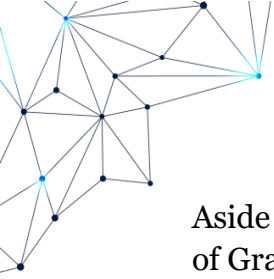
Triclosan has been shown to reduce thyroxine and disrupt the development of amphibians in studies. Soy products are widespread, and although many people believe them to be safe or even healthy, the truth is quite the opposite. Soy is one of the most heavily sprayed crops. It also contains phytoestrogens that can disrupt hormone production. These properties in soy have been shown to inhibit thyroid peroxidase activity, thus increasing the likelihood of thyroid disease. It is best to avoid soy altogether.

Bisphenol-A (BPA) is a substance used in the production of plastics. As you are probably aware, many things we use on a daily basis are made of plastic. BPA has been shown to possibly antagonize our thyroid hormone receptors, increasing the likelihood of issues. Many plastic water bottles contain this dangerous chemical, and it can leach into the water you drink. Leaving water bottles in a hot environment, like your car, and drinking the water may be especially harmful when it comes to ingesting this substance.

Pesticides are used in the production of a staggering amount of the food we eat. Organochlorine pesticides have been shown to negatively affect thyroid function in several ways. Another every day toxic exposure includes cigarettes, which contain a chemical called thiocyanate that may inhibit iodine intake. Perchlorate can be found in some fertilizers, and may also inhibit iodine uptake.

Exposure to one of these things may not have negative results. However, the problem is that many people are exposed to many of these substances on a daily basis. Chronic, long term exposure can significantly impact thyroid function, as well as many other aspects of our health.





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Aside from genetic and environmental factors, sex plays a significant role in the instance of Graves' disease.

Females are much more likely to be diagnosed. In fact, females are over seven times more likely to have Graves' disease than males. Stress, certain infections, and even giving birth can increase the likelihood of developing an autoimmune disease like Graves' disease. If you already have an autoimmune disease, you are also at an increased risk for developing Graves' disease.

Some common symptoms of Graves' disease include weight loss (despite increased appetite), hyperactivity, hair loss, heat intolerance, excessive sweating, frequent bowel movements, and insomnia. Other physical signs to look for include a goiter (swollen neck due to enlarged thyroid), and bulging eyes. If this disease is left untreated, the consequences can be deadly. This is because the body has to work harder, putting more stress on the heart. Abnormal heart rhythm and high blood pressure can result from this disease.

Treatment for this condition ranges from drugs to help lower the amount of thyroid hormone produced to surgery.

Surgery to remove part of the thyroid gland may result in the patient having to take medication to help regulate their metabolism for the rest of their lives. Another treatment includes radioiodine. This substance may be effective at treating the issue, but has been found to cause the opposite effect (hypothyroidism) in some patients.

### Crohn's Disease

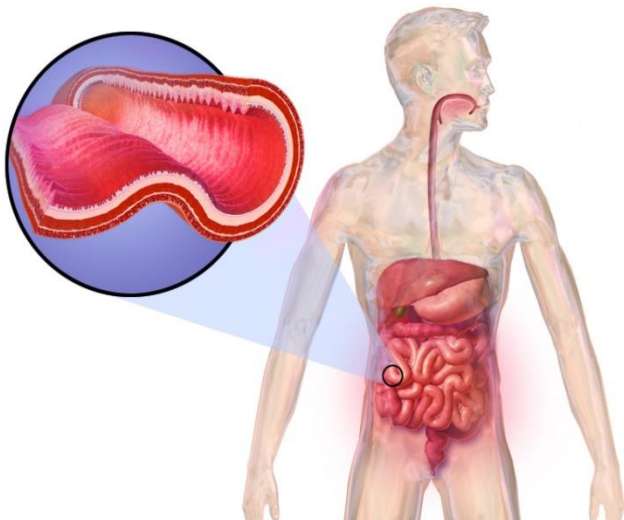
Like celiac disease, Crohn's disease is a bowel disease. Unlike celiac, Crohn's disease affects many areas of the bowels, and not just the small intestine. With Crohn's disease, the body's immune system attacks the gastrointestinal tract, causing a variety of issues ranging from severe inflammation in the bowels, diarrhea, abdominal pain, weight loss, and fever.

There is some debate as to whether Crohn's disease is a true autoimmune disease or a disease caused by an immunodeficiency.

The autoimmune debate surrounding Crohn's disease is whether or not it is a T cell autoimmune disorder or the result of impaired innate immunity. Other theories about this disease argue that an overactive cytokine response is to blame for the inflammation.

An interesting theory that aligns with several other autoimmune theories states that modern humans are not exposed to enough beneficial bacteria, and thus the body does not learn how to effectively combat common parasites.

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Those with Crohn's are at a higher risk of developing bowel cancer at some point. In addition, those with this disease are at an increased risk for bowel obstructions. This is because the disease causes chronic inflammation in the bowels. Symptoms of a bowel obstruction include persistent nausea and vomiting, as well as abdominal pain. Seek immediate help if you believe you have a bowel obstruction.

A common issue for those with Crohn's is perianal pain, skin tags, and itchiness. This is usually caused by the inflammation resulting from the disease. Sores of the mouth can also develop in those affected by Crohn's disease.

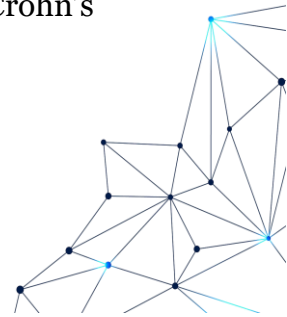
Other symptoms of Crohn's disease include tiredness, rashes, arthritis, flatulence, bloating, bloody stools, and anemia. Abdominal pain is one of the most common symptoms of Crohn's, especially in the right, lower portion of the abdomen. Oftentimes, the symptoms of Crohn's may come and go.

### Hormonal Birth Control and Crohn's Disease: A Disturbing Connection

Like many other autoimmune diseases, there is some debate as to whether the causes are environmental or genetic. It would seem as if the causes of Crohn's are predominately environmental, since so many more people in the developed world are diagnosed with it. However, there has been a large increase in the diagnosis of Crohn's disease that seems to directly align with the introduction of hormonal contraception as well.

It's time to re-think the effects of substances once regarded as safe and effective: Hormonal contraception is not unquestionably safe for women. Harvard researchers found that women who used hormonal birth control for more than five years had triple the risk of being diagnosed with Crohn's disease.

Hormones like estrogen have been shown to affect the permeability and inflammation of the gut. It is no wonder hormonal contraceptives, hormone replacement therapy, and other treatments involving hormones often cause bowel issues. In fact, the effects of soy have already been mentioned above in relation to Grave's disease. Since soy is a natural source of phytoestrogens, it may also be a factor in autoimmune diseases like Crohn's disease.







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Because Crohn's disease affects absorption, it can make hormonal birth control less effective. As a "solution" to this, some doctors actually increase the dosage of the hormones. As you may have already suspected, this can lead to a worsening of Crohn's symptoms.

### Crohn's and Fluoride

You may know fluoride as a substance important for the health of teeth. This is because fluoride has been aggressively touted as a beneficial substance for years. Cities across the nation fluoridate the water supply, but this practice is under increasing scrutiny. Although fluoride is naturally occurring in some areas, the fluoride added to most water supplies is in fact a substance known as fluorosilicic acid. Fluorosilicic acid is obtained through air pollution control devices in the phosphate fertilizer industry.

Fluoride can result in fluorosis, which is a condition that affects tooth enamel. It is often noticed by discoloration on the teeth. If fluoride is doing this to children (and adults) teeth, think of what it is doing in the rest of the body: Some side-effects resulting from too much fluoride include thyroid disease, cell death, dementia, infertility, muscle disorders, harmful blood sugar levels, pineal gland damage, brain damage/lowered IQ, and increased lead absorption.

This leads to the connection between fluoride and Crohn's disease. Because fluoride affects absorption of substances, as well a myriad of other bodily systems, it is no wonder that long term exposure to fluoride has been blamed for Crohn's flare ups. Some people suffering from Crohn's disease claim that when they accidentally consume fluoride, they immediately notice symptoms flare up.

What's more, according to the World Health Organization (WHO), there is no notable difference in tooth decay between countries that fluoridate their water and those that do not.

### Crohn's Mystery

Crohn's disease is a gastrointestinal disease under much debate when it comes to exactly what immune aspects are responsible. What is known for sure is that more and more people in the developed world are developing this disease, as well as a slew of other autoimmune diseases. One cannot help but wonder what is triggering this crisis, as well as whether or not we are silently being exposed to substances being publicized as "safe" when in reality, their harmful effects go deeper than we realize.

### Lupus

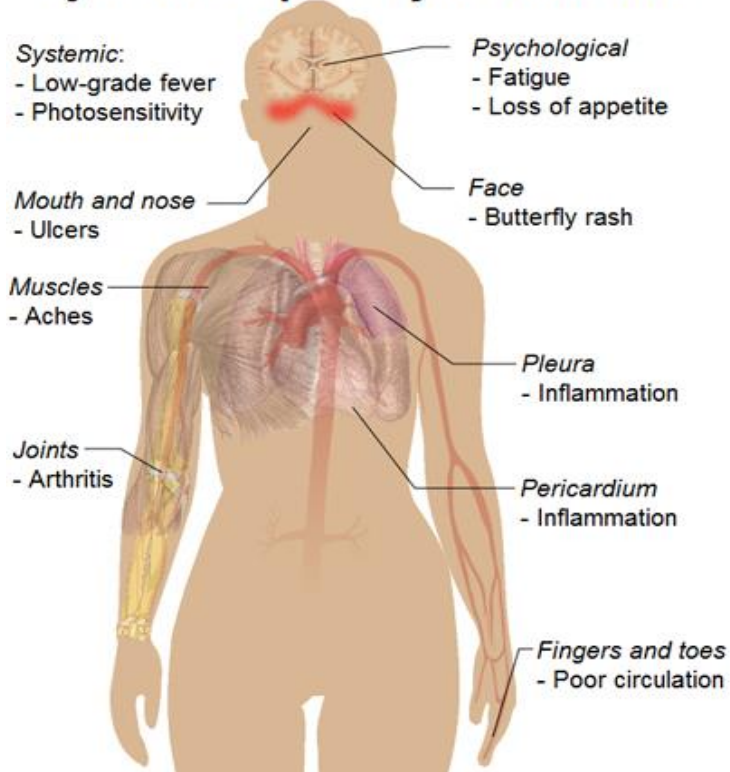
Lupus is an autoimmune disease in which the body's immune system attacks various tissues and organs. The inflammation that results from this disease can affect the joints, skin, blood cells, brain, kidneys, lungs, and heart. Lupus can be hard to diagnose because

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no two cases are quite alike. One symptom that can make diagnosis easier is the presence of a rash on the face, below the cheeks. This rash is called a “butterfly-shaped” rash because of the way it spreads across the face. However, not all people with Lupus will have this rash.

Symptoms of Lupus include persistent fatigue, a butterfly-shaped rash, fevers, skin lesions that appear after sun exposure, joint pain and stiffness, chest pain, confusion, headaches, shortness of breath, and fingers and toes that turn white or blue when exposed to stress or cold.

### Most common symptoms of **Systemic lupus erythematosus**



### Lupus Triggers

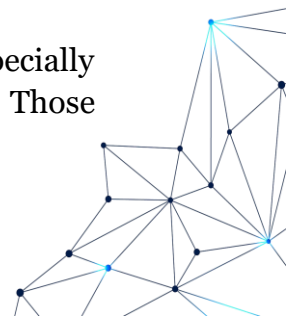
Although the exact causes of this autoimmune disease are unknown, various triggers have been experienced by those with the disease. One common trigger is sunlight. It seems that exposure to sunlight may actually trigger an autoimmune response in those with this condition. This in turn may bring about skin lesions and flare ups. Another trigger is a recent infection. When someone with an autoimmune disease contracts an infection, their immune system becomes active. This may trigger a flare up. Some medications can cause flare ups for those with Lupus. Medications like antibiotics, blood pressure medications, and anti-seizure medications all may cause flare ups. The only good thing is that most people with Lupus experience relief from medicine-induced flare ups when they stop taking it.

### Risk Factors

There are several specific risk factors for Lupus. One risk factor is sex. As with so many autoimmune diseases, women are more affected than men. Another risk factor is race. Lupus seems to be more prevalent in women who are African-American, Asian, or Hispanic. Age is another risk factor. Most cases of Lupus are diagnosed when the patient is between the ages of fifteen and forty-five.

### Reducing Inflammation

Because inflammation causes so many issues with autoimmune diseases, and especially Lupus, one way many people deal with it is to treat the inflammatory reaction. Those





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wishing to eliminate the triggers that cause inflammation start with a diet that eliminates foods like grain, legumes, dairy, and other processed foods. These foods contain all kinds of inflammatory triggers that can make Lupus, or any autoimmune disease, worse.

Everyone knows that stress is not good for our health, but it can also be a major trigger for those with autoimmune disease. Stress can contribute to flare ups and inflammation for those with Lupus. Therefore, reducing stress may reduce inflammation. Meditation, yoga, and nervine herbs may help relax the body and mind, as well as ease symptoms.

### Managing Lupus with Chiropractic Care

Because Lupus comes with pain and stiffness in the joints caused by inflammation, chiropractic care may be an effective treatment. Sometimes, the pain can be caused by nerve interference due to inflammation. A chiropractor can help to restore proper nerve pathways through spinal and joint manipulation. Restored pathways in the body can also open up the body to better release toxins, thus promoting healing. Patients with Lupus who visit the chiropractor report less pain and less reliance on over-the-counter pain medication.

When coupling chiropractic care with the proper diet, mental health routine, and exercise routine, those with Lupus may notice a significant decrease in flare-ups, inflammation, and pain.

### Multiple Sclerosis

In patients with Multiple Sclerosis (MS), the body's immune system attacks a substance called myelin. Myelin is a coating that surrounds nerve cells in the body. This results in lesions, as well as damage to nerve fibers and myelin-producing cells called Oligodendrocytes. Researchers are still not sure what exactly triggers the immune system to attack the myelin coating and nerve cells in the body.

What is known is that when the lymphocytes attack these areas, T cells in the body also attack proteins in the central nervous system, causing even more damage and inflammation.

### Types of Multiple Sclerosis

There are four basic types of Multiple Sclerosis, with some causing more damage than others. The first type is called Clinically Isolated Syndrome (CIS) MS. This is a single episode of symptoms associated with demyelination of the central nervous system. This episode should last for at least twenty-four hours to qualify as Clinically Isolated Syndrome. Those who experience CIS may not go on to be diagnosed with MS because they may not ever have another episode. If a scan of the brain shows lesions similar to those in individuals with diagnosed MS, an individual with CIS is likely to have another episode.

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Another type of MS is called Relapsing-Remitting Multiple Sclerosis (RRMS). This type is the most common form of MS. With this form, individuals will experience clearly defined attacks, or relapses. Afterward, they will seem to recover, which is referred to as remission. Each person with RRMS experiences a different pattern of relapse and recovery, with some experiencing extended periods in remission, and others experiencing worsening attacks.

Secondary Progressive Multiple Sclerosis (SPMS) is often diagnosed when their RRMS begins to worsen over time. With SPMS, there may be periods of active relapses, as well as periods of non-activity. Likewise, there may be evidence of progression or no progression, depending on evidence of the disease worsening or not over time. Over time, the disability usually increases.

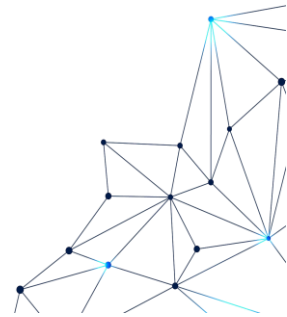
The final type of MS is referred to as Primary Progressive Multiple Sclerosis, or PPMS. With this type of MS, patients experience worsening of neurologic function, with an accumulation of disability as disease progresses. There are usually no early relapses or remissions with this type of MS. Just like with SPMS, PPMS may demonstrate evidence of active episodes, non-active episodes, progression, or no progression.

### Triggers

Although researchers haven't been able to discover the exact causes of Multiple Sclerosis, they have been able to identify some triggers that many MS patients have in common. One trigger is lack of sleep. Sleep is important for everyone and helps the body with tissue repair, muscle growth, hormonal regulation, and the production of stem and immune cells to keep immune function healthy. For someone with MS, sleep is even more important. Those with MS may have a lower energy reserve to begin with, so coupling that with a lack of sleep can trigger a flare up.

Another trigger is body heat. When the body gets too hot, someone with MS may experience an increase in symptoms. During the summer months, those with MS should try to stay as cool as possible and avoid prolonged exposure to heat. If you have MS and are experiencing issues in the heat, try taking a cool shower or going indoors (into an air-conditioned room) as soon as possible.

Infections are another common trigger for MS flare ups. This is because infections tend to weaken the immune system, making people much more susceptible to potential attacks. A common infection for those with MS is a urinary tract infection. MS can result in bladder function issues for some, so the risk for an infection is present. Staying hydrated, eating healthy, avoiding sick people, and washing your hands regularly can help to prevent infections.





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### Symptoms of MS

According to the National Multiple Sclerosis Society, common symptoms of MS include fatigue, numbness or tingling sensations in the face, body or extremities, spasticity, walking difficulties, weakness, dizziness or vertigo, bladder issues, depression, cognitive issues, pain and itching, bowel problems like constipation, sexual issues, and vision problems.

Vision problems are one of the first symptoms people with MS experience. Be sure to seek help if you notice vision problems like blurred vision, poor contrast/color vision, and pain upon movement of an eye. Other less common symptoms of MS include trouble swallowing, seizures, tremors, speech issues, hearing loss, and difficulty breathing.

### Hashimoto's Disease

Hashimoto's disease is another type of autoimmune disease that affects the thyroid. Unlike Grave's disease, Hashimoto's disease causes reduced thyroid function, and a slowing of the metabolism. Like Grave's disease, those with Hashimoto's disease may also exhibit an enlarged thyroid called a goiter. With this disease, the body's immune system attacks thyroid and in return, produces elevated amounts of Thyroid Stimulating Hormone (TSH). Eventually, high TSH levels will fail to produce adequate T4 levels. When this happens, symptoms begin to present themselves in what is diagnosed as hypothyroidism, or an underactive thyroid.

### Symptoms of an Underactive Thyroid

With an underactive thyroid, the body is not able to produce adequate amounts of the thyroid hormone. Sometimes, the symptoms of this disease are mild and hard to detect. It can take some people years to detect an issue. Be mindful of your body, how it should function, and when something is not quite right.

Look for the following signs and symptoms that point to an underactive thyroid: extreme fatigue, weight gain, constipation, hair loss/thinning hair, irregular or heavy menstrual periods, infertility, puffiness of the face, slower heart rate, inability to warm up, joint and/or muscle pain, and depression.

The most common indicators of an issue are weight gain and fatigue, especially if you begin to notice these things come on in a relatively short period of time. It may seem like you are eating normal, or even less than average, but still gaining weight. In addition, if you feel unexplainably tired on a continual basis, you may want to consider having your thyroid hormone levels checked.

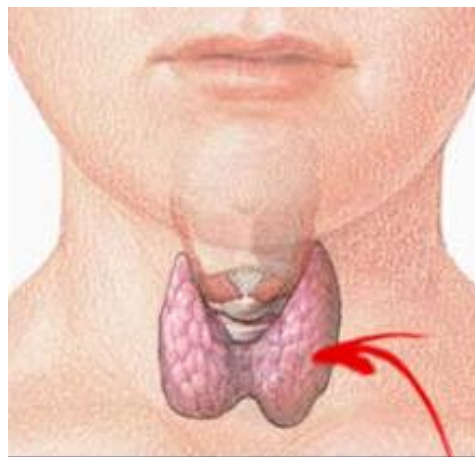
### Function of the Thyroid

The thyroid is a part of the body many people do not fully understand until they are experiencing issues with hyperthyroidism or hypothyroidism. The thyroid is a gland

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located in the neck. It is comprised of two lobes that are connected by an isthmus. It is an important part of our endocrine system. It is primarily responsible for the production of hormones that help to regulate the metabolism.

Our metabolism is a very important component of how our bodies function. It controls the conversion of the food we eat into energy, as well as the conversion of food to vital proteins, lipids, carbohydrates, and nucleic acids. It is also responsible for how our bodies eliminate nitrogenous wastes. Our metabolism can control everything from digestion and heart rate to how we grow and reproduce. For this reason, the significance of this bodily function being regulated in the thyroid should never be underestimated.



**Thyroid Gland**

### The Thyroid and Iodine

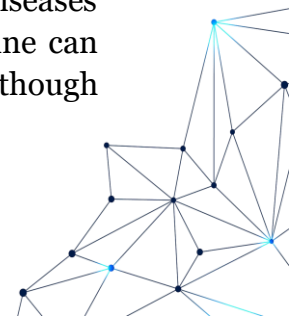
In order for the thyroid to properly function, it relies on an element called iodine. Our bodies do not naturally produce this element, so we solely rely on our diet to obtain it. Interestingly enough, we need the correct balance of iodine in order for our thyroid to function properly. This means that too much, as well as too little, could cause an issue. When we eat foods with iodine, the element enters the bloodstream and cells in the thyroid capture it. These cells use the iodine to create thyroid hormones that go on to regulate the metabolism, as well as many other vital systems in the body.

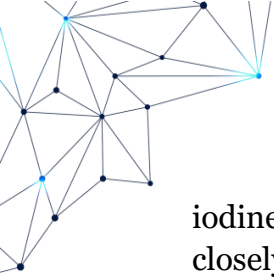
Depending on a person's age, around 90-150 micrograms of iodine each day is required for proper thyroid function. Thankfully, it is relatively easy to get this amount because many foods contain commendable amounts of this element. Pregnant and lactating women need considerably more iodine (around 220-290 micrograms) in order for their thyroid to function. However, it is important to stay within these recommended amounts. Too much iodine during pregnancy and lactation is also unsafe.

Healthy ways to make sure you are consuming the proper amounts of iodine include eating wild caught fish and seafood, free-range eggs, and organic yogurt. Seaweed is an excellent source of iodine. It contains over 40 micrograms of iodine per sheet. If you know you have an iodine deficiency that is causing issues with the thyroid, you might consider adding kelp to your diet.

### Iodine and Hashimoto's Disease

Occasionally, high doses of iodine have been prescribed for those with thyroid diseases like Hashimoto's disease. However, studies are showing that high doses of iodine can actually make the disease worse and lead to issues with thyroid abnormalities. Although





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iodine should not be altogether avoided by those with Hashimoto's, intake should be closely watched and limited.

While high doses of iodine have been shown to cause more issues for those with Hashimoto's, low doses of iodine have been shown to help. Staying well under 200 micrograms daily seems to be the key in finding a perfect balance when you are suffering from this autoimmune disease.

### Causes

Although doctors have not been able to find the exact cause(s) of Hashimoto's disease, there are some things to consider. First, exposure to radiation has been shown to specifically affect the thyroid. After the atomic bomb was dropped in Japan, as well as the Chernobyl incident in Russia, there were increases in thyroid diseases reported. Exposure to radiation may not seem like something we would need to worry about, but we are exposed more than we think.

For instance, radon is a natural and very dangerous gas that is sometimes found in people's homes. It can cause serious issues in the human body. Kits can be purchased to test your home for radon. Cell phones and towers also emit radiation. Some people claim that these levels are nothing to worry about, but keep in mind there have been no long term studies on this particular subject whatsoever. Other sources of radiation include airplane travel, smoking, X-rays, television, and the water we drink.

Another possible cause is too much iodine. As previously mentioned, iodine is a necessary element for thyroid function. However, too much iodine can lead to thyroid issues. Because iodine is so easy to obtain from eating normally, it can be easy to get too much. Hormones may also play a role in the formation of Hashimoto's disease. This is because far more women have been diagnosed compared to men. Many women also report issues with their thyroids after giving birth.

These things have led researchers to question hormones and their role in thyroid disease. Hormonal birth control has already been mentioned as a possible catalyst for other autoimmune disease in this book, and could be responsible for triggering or aggravating thyroid issues for those with Hashimoto's.

### Psoriasis

The presence of abnormal patches of skin on the body caused by the body's immune system reacting to skin cells is referred to as psoriasis. This is one autoimmune disease in which men and women are equally affected. There are several different types of psoriasis. These include plaque, guttate, inverse, pustular, and erythrodermic psoriasis.

In a person with psoriasis, the skin experiences extreme rapid growth in the epidermal layer due to an autoimmune reaction. The result of this abnormal and extreme growth of

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skin cells in certain areas on the body creates inflamed areas with patchy rashes consistent with psoriasis.

### Types of Psoriasis

Plaque psoriasis is one of the most common types of psoriasis. It is characterized by patches of red, inflamed skin with white or silvery scales on top. Areas commonly affected by plaque psoriasis include the elbows, knees, back, and scalp. However, it can occur in other areas on the body as well.

Guttate psoriasis looks different than plaque psoriasis, and usually consists of small papules in groups. These papules appear small, red to pink in color, and can be scaly. One big indicator that a rash is indeed guttate psoriasis is the appearance of the rash around the time of a strep throat infection.

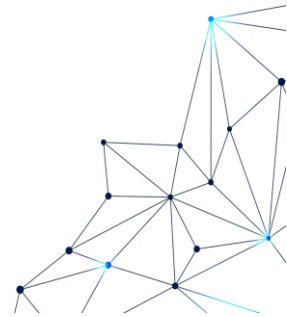
Inverse psoriasis is usually found in areas of the body where the skin folds. These areas include between the finger and toes, ears, axillae, groin folds, inframammary folds, lips, naval, intergluteal cleft, and penis. Pustular psoriasis is characterized by raised bumps on the skin that are filled with pus. Skin surrounding these areas is usually inflamed, red, and sore. Erythrodermic psoriasis refers to psoriasis that affects all areas of the body.

### Triggers

Because psoriasis is a type of autoimmune disease, certain triggers could be causing flare ups. Common inflammatory foods that might cause an autoimmune reaction should be avoided by those with this condition. Foods like dairy, anything containing gluten, and processed foods may trigger a flare up. Because this disease affects the skin, anything that harms the skin may trigger a flare up. Trauma to a certain area, as well as a sunburn, could be problematic.

As with so many autoimmune diseases, stress seems to be a possible trigger for psoriasis flare ups. This is because stress affects the body in many ways, including weakening the immune system. As previously mentioned, infections like strep throat can trigger psoriasis. Other upper respiratory infections, as well as thrush, can lead to a flare up. Those who smoke are at a greater risk for psoriasis. Smoking can also make the symptoms of psoriasis even worse. Alcohol is also linked with psoriasis. Studies have shown an increase in psoriasis flare ups for those who had two to three drinks each week.

Those with psoriasis already deal with dry patches on the skin. When the weather is cold and dry, this can make things much worse. In the winter time, those with psoriasis may suffer if they live in a cold, dry climate. In addition, sitting in front of a heater during these winter months may further aggravate things. Keeping the air moist in your home during dry months can help with managing psoriasis.





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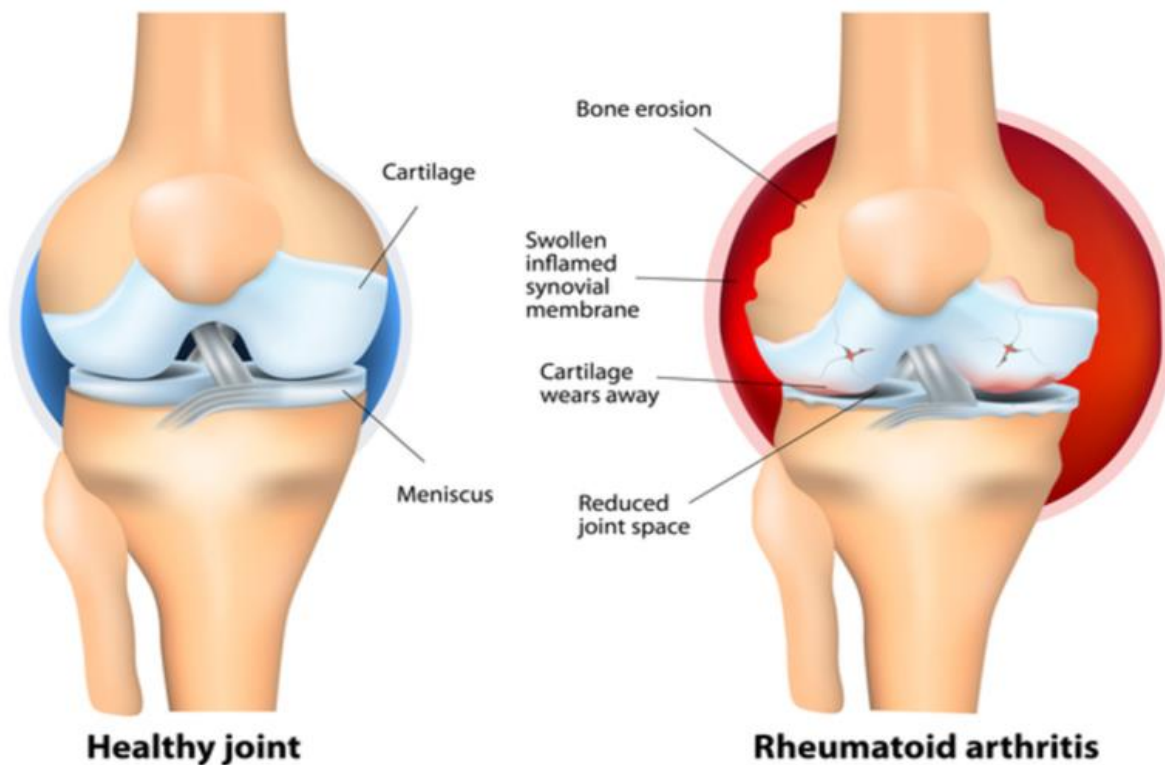
### Psoriasis and Sunlight: The Ultimate Natural Remedy

Some people suffering from psoriasis claim that time in the sun helps treat the symptoms of psoriasis. This is because the UVB rays from the sun can slow the skin's growth and shedding. Sunlight has been demonized in recent years because overexposure can cause serious skin issues like melanoma. However, time in the sun is crucial to our health. When our skin is exposed to sunlight, it prompts the creation of vitamin D. This vitamin is important for our immune system function, as well as the absorption of calcium and phosphorous.

Spending even ten minutes in the sun during the middle of the day can be beneficial. Expose as much skin as possible for maximum absorption. Start with ten minutes of time in the sun, and gradually work your way up to twenty, depending on how your skin reacts. Do not let your skin burn or become irritated, and adjust your time as needed. Everybody is different in how their body responds to time in the sun, so make sure you do not overdo it or a reaction could be triggered. Try to find that healthy balance between protecting your skin from harm and allowing it to soak up some sun every now and then.

### Rheumatoid Arthritis

Rheumatoid arthritis (RA) is a painful condition in which the immune system attacks the joints. When the immune system attacks the joints, it causes inflammation and a thickening of the joint capsule.



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As the disease progresses, it may also affect underlying bone and cartilage. The most common areas affected include the wrists and hands.

When the synovial membrane of the joint becomes inflamed as a result of an autoimmune dysfunction, the joints in that area can become tender, swollen, and warm to the touch. Because of this, a person with rheumatoid arthritis may experience a stiffness in the joints that makes it hard to function normally.

Over time, this disease may cause enough damage to create loss of function in the joint and erosion on the surface of the joint. As a result, deformities may occur.

Rheumatoid arthritis may affect other areas of the body besides the joints. The heart and blood vessels, skin, lung, blood, liver, kidneys, bones, and eyes may also become damaged as a result of this autoimmune disease, especially over time. Those with this condition are also at an increased risk for cancers like lymphoma because of the chronic inflammation present with the disease.

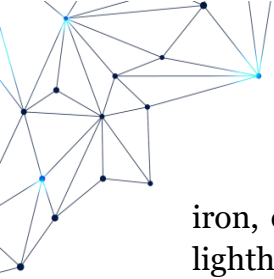
### Symptoms

One common symptom those with rheumatoid arthritis have is stiffness in the joints upon waking. When stiffness lasts for more than thirty minutes each morning, it is a strong indicator of rheumatoid arthritis. Another symptom of this condition is pain, swelling, redness, heat, and tenderness in the joints. Experiencing these symptoms for more than six weeks in a row is a strong indicator. Oftentimes, more than one joint is affected by the pain and inflammation. Experiencing trouble with multiple joints, as well as the same joint on either side of the body, is a symptom of rheumatoid arthritis. Pay close attention to changes in the small joints of the body. The small joints most commonly affected by RA include the wrists, joints in the hands, and joints in the feet. Other symptoms include a low-grade fever, fatigue, and loss of appetite.

A person with RA may experience what is referred to as a “flare” in symptoms. The symptoms of RA may come and go, but sometimes they worsen and stay this way for some time. This constitutes a flare. A flare can last anywhere from a few days to months. Throughout the course of time, those suffering from this autoimmune condition may experience other issues as a result of ongoing inflammation in the body. Symptoms may present themselves in other areas of the body like the lungs. Shortness of breath may be an indicator of inflammation and scarring in the lungs. The eyes may be affected by this condition as well. Symptoms of eye issues as a result of RA include sensitivity to light, dryness, impaired vision, pain, and redness. Like the eyes, the mouth may experience dryness and become more prone to infection and gum issues.

Anemia is a very common result of RA. Constant inflammation can lead to higher than normal levels of hepcidin in the body. Heparidin helps regulate the entry of iron in the body. When this hormone is affected, iron may not be absorbed properly by the body. Low





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iron, or anemia, can trigger symptoms like chronic fatigue and weakness, dizziness or lightheadedness, shortness of breath, heart issues, headaches, and cold hands/feet.

Damage to the blood vessels may also occur with RA. Chronic inflammation causes this damage, which in turn can damage other areas of the body like the skin, other organs, and the nerves. Other cardiovascular complications that may arise as a result of inflammation include issues with the heart and blood pressure.

### Controlling the Inflammation

Because chronic inflammation can lead to so many other negative side effects in the body, it is important for those suffering with this condition to do what they can do control the inflammation. Although many medical professionals prescribe anti-inflammatory or immune-suppressant medications, these are not getting to the root of the issue, but rather slapping a temporary “bandage” on the problem. One way people with RA can help control the inflammation is their diet. There are anti-inflammatory diets one can follow to help manage dietary triggers that may be contributing to inflammation. The recommendations below are not only great for RA inflammation, they can help with inflammation caused by a wide variety of autoimmune diseases.

### RA and Omega 3 Fatty Acids

For those with RA, a diet rich in omega 3 fatty acids is crucial. Omega 3 fatty acids have been shown to lower the body’s production of inflammatory chemicals. This may result in less pain and stiffness in the joints, as well as protect the joints from further damage. These acids may also work to help regulate the immune response, thus alleviating symptoms caused by this autoimmune disease. Omega 3 fatty acids have also been shown to benefit heart health, making them extra beneficial for those with RA.

There are several ways you can make sure you are adding omega 3 fatty acids to your diet. One way is to eat more fish like salmon, mackerel, tuna, and herring. Try to opt for wild caught fish. Fish oil supplements are also available and may be very beneficial to ensuring you are getting enough of this amazing substance.

Eating more nuts may also help you add more omega 3 to your diet. Nuts like almonds and walnuts contain these acids, as well as protein, to keep you healthy. Seeds like chia and flax seeds are another excellent source of omega 3 fatty acids. Use them as much as you can, whether in recipes, cereals, or salads, to benefit.

### Fiber and RA

Fiber intake plays a role in reducing inflammation for those with RA. A consistent diet of foods high in fiber may reduce certain proteins in the blood that can trigger inflammation. One healthy and beneficial food for reducing this protein is strawberries. Try eating these as much as possible for RA management.

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Other foods to consider adding to your diet include nuts, beans, pears, apples, avocados, raspberries, broccoli, beets, carrots, bananas, kale, lentils, oats, Brussels sprouts, and split peas. Artichokes are also very high in fiber and contain many other beneficial nutrients.

Almonds and chia seeds are also very high in fiber, as are pumpkin seeds, pistachios, popcorn, and even dark chocolate! Not only is dark chocolate a good source of fiber, it is full of nutrients and antioxidants. Just make sure to get dark chocolate low in sugar and high in cocoa.

### Antioxidants and RA

Antioxidants work to destroy harmful free radicals in the body. Free radicals can cause all kinds of problems in the body, including cell damage, illness, and accelerated aging. Eating foods high in antioxidants may help to reduce inflammation as well. This can be great for those wishing to control inflammation caused by RA.

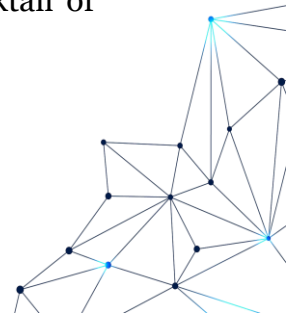
There are some foods that have more antioxidants than others. Consider adding foods high in antioxidants to your diet. These foods include blueberries, cranberries, red kidney beans, strawberries, apples, cherries, artichoke hearts, blackberries, prunes, raspberries, plums, black beans, pinto beans, pecans, and russet potatoes.

### Adding Spice to Combat RA

While some spices may make inflammation worse, there are a few spices that have been shown to help reduce inflammation. For instance, cayenne peppers contain a compound called capsaicin. This amazing compound has been shown to not only reduce inflammation, but pain as well. Add cayenne to foods on a regular basis to not only spice up your dishes, but help manage symptoms of RA. You may also opt to drink tea made with dried cayenne peppers. Another spice that can significantly reduce inflammation is turmeric. Turmeric reduces inflammation due to a compound called curcumin. This compound works to reduce the production of neurotransmitter histamine, as well as prolong the anti-inflammatory action of cortisol. Turmeric is a popular spice in India, and is used in many dishes, with the most common being curry. However, turmeric can be consumed when drank in tea, or even make into an extract to take daily for inflammation.

### Flavonoids

A diet rich in flavonoids may help reduce inflammation, pain, and swelling caused by RA. Flavonoids are compounds created by plants. A great way to get flavonoids in your diet is to make sure you are eating plenty of fruits and vegetables. Fruits like grapes and berries contain flavonoids. Vegetables like broccoli, spinach, and Brussels sprouts are a great way to get your daily intake of flavonoids. Other foods high in flavonoids include tree nuts, garlic, and citrus fruits. Green tea is another way to consume a beneficial cocktail of nutrients, antioxidants, and flavonoids.



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## Foods that Trigger RA Symptoms

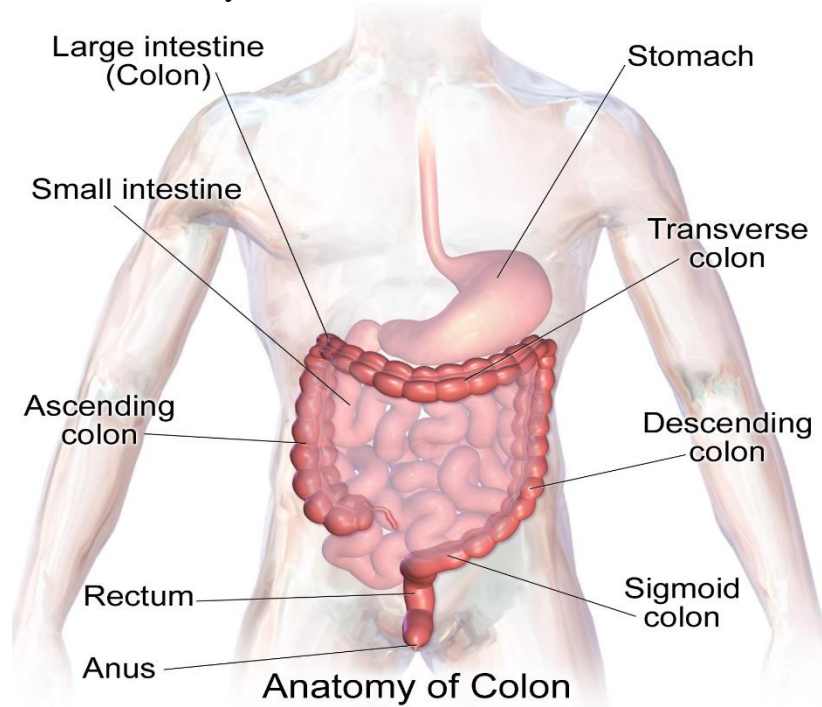
Just like some foods help reduce inflammation, other foods can have the opposite effect and actually make inflammation in the body worse. Avoid processed foods as much as possible, especially foods that contain processed flour and carbohydrates. Processed white sugar is generally understood as being unhealthy for the diet, but it does much more harm than people realize. White sugar and high fructose corn syrup can trigger an inflammatory response in the body. Also try avoiding foods containing high amounts of saturated and trans fats.

Rheumatoid arthritis, like so many other autoimmune diseases, has no known cure. However, learning to manage triggers and eat healthy can greatly reduce the inflammation in the body that leads to so many other issues over time.

## Ulcerative Colitis

Inflammatory Bowel Disease (IBD) is an autoimmune disease characterized by an immune response that attacks the digestive tract, causing inflammation.

One type of inflammatory bowel disease called Crohn's disease has already been discussed. However, there is another type of IBD called ulcerative colitis (UC) that affects the lining of the large intestine, specifically the rectum and colon, by causing sores to develop.



This chronic condition is more common in North America, leading some to suggest that a Western Diet may be to blame. A Western Diet could be defined as a diet high in sugars, red meat, and processed foods. However, at this time, researchers can point to no specific cause in particular. Like many autoimmune diseases, ulcerative colitis is likely the result of a combination of genetic and environmental factors.

## Symptoms of UC

Oftentimes, symptoms of UC present themselves gradually. This may begin with diarrhea mixed with blood and mucus. Because of the inflammation in the colon and rectal area associated with this disease, bleeding may occur on a regular basis. This bleeding may

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eventually result in anemia, which is the improper absorption of iron in the body. This in turn may lead to weight loss and fatigue. Symptoms of UC may come and go over the years.

Other symptoms include pain and cramping in the abdominal area. The cramping and pain usually occur before or during a bowel movement, but not always. Constant diarrhea and blood loss may result in anemia, as well as dehydration, loss of sleep, chronic fatigue, decreased appetite, and weight loss. Some people with UC experience a fever.

Those with this autoimmune disease also say that they feel a sudden, intense need to have a bowel movement. This can make life with UC difficult, as it may be hard to find a restroom quickly when out and about. The sudden or constant feeling to have a bowel movement is referred to as Tenesmus.

If you suspect you may have UC, watch for how frequently you are having bowel movements, as well as whether they are loose stools or not. Mild UC is usually consistent with up to four loose stools a day and mild abdominal pain. The stools may or may not be bloody. Moderate UC is characterized by anywhere from four to six loose stools daily with moderate abdominal pain and anemia. Severe UC is defined as over six bloody stools daily, combined with anemia, fevers, and a rapid heart rate. The worst kind of UC is referred to as very severe UC, with symptoms coming on very quickly and very severely. These symptoms include over ten loose stools daily, abdominal pain/tenderness and swelling, continuous blood in stools, and the possible need for a blood transfusion. Without help, this level of UC may have life-threatening or fatal results.

### Problems Resulting from UC

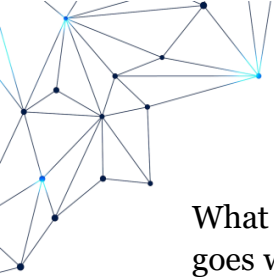
In severe cases of UC, serious problems may arise such as rupture of the bowel and severe bleeding. Constant inflammation in the bowel may also result in complications such as inflammation in the joints, eyes, and skin. Because those with UC may have a harder time absorbing vital nutrients like vitamin D, the bones may also be affected. What's more, many doctors prescribe corticosteroids to help with inflammation. These medications could accelerate bone loss.

### UC and Cancer

Chronic inflammation in the bowel may lead to certain cancers. Not only UC, but other inflammatory bowel diseases as well, put people at a higher risk for cancer. Around five percent of those diagnosed with UC will develop colorectal cancer.

Because those with inflammatory bowel conditions already experience a wide range of bowel issues, it can be difficult to detect any issues related to cancer in that area. For example, one of the most common warning signs of colorectal cancer is blood in the stool, but this is also common with UC.





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What is known about the link between colorectal cancer and UC is that the longer one goes with inflammation in the bowels, the higher the chances of developing cancer. This is why it is important to do what you can to manage inflammation from the time you are diagnosed. In addition, if your whole colon is affected by UC, you are at an increased risk for developing cancer.

There are ways to manage inflammation and reduce your risk of developing any serious complications from this disease. One major way is through diet. A diet rich in antioxidants, flavonoids, omega 3 fatty acids, and fiber may help to curb inflammation. Avoiding inflammatory foods like processed foods, white sugar, and processed flour may help further your anti-inflammatory goals.

Another important step in making sure you are on top of any issues includes regular colon cancer screenings. If you have been suffering from an inflammatory bowel disease like UC for more than eight years, you should make sure and schedule yearly screenings. A colonoscopy is a good way to screen for any issues.

A good offense is the best prevention when it comes to ensuring symptoms of UC do not develop into life-threatening complications like cancer and severe blood loss. Managing your diet at the earliest signs of the disease, as well as consistent cancer screenings, significantly lower your risk of cancer progressing in the digestive tract.

### Managing UC

There are natural ways one can help manage their UC by reducing inflammation and promoting a healthy immune system. Exercise is one way that you can positively affect your body. Yoga in particular can be beneficial for those with inflammatory bowel conditions because it can promote relaxation and digestive health.

Exercising three to four days per week can result in increased muscle and bone strength, a healthier immune system, and lowered stress levels. Stress in particular can wreak havoc on many areas of the body, and the immune system is one of them. In addition, higher levels of stress can trigger an inflammatory response in the body, leading to UC flare ups. Besides exercise, consider lowering your stress levels with regular massages, deep breathing techniques, and meditation.

Like stress, those with chronic anxiety can experience a flare up of symptoms when it comes to autoimmune disease. It is normal to experience stress or anxiety from time to time, but the key is not letting it get the best of you and affect you on an hourly or daily basis. If you are experiencing anxiety to the point where it is affecting your life each day, you may want to consider finding an outlet, such as therapy, to provide you with the tools you need to tackle anxiety.

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Getting a good night's sleep is essential for everyone, but much more so for those with autoimmune conditions like UC. Oftentimes, those with UC are already fatigued and tired, but may find it hard to fall asleep due to frequent trips to the bathroom and abdominal pain. There are things you can do to help create a more relaxed environment, conducive to sleep. For starters, begin a bedtime routine that helps you wind down.

This may include a warm herbal bath before bed or quiet time while sipping herbal tea or golden milk. Turmeric is the main ingredient in golden milk. It is great for reducing inflammation, as well as relaxation and stress relief.

### Environmental Causes of UC Flares

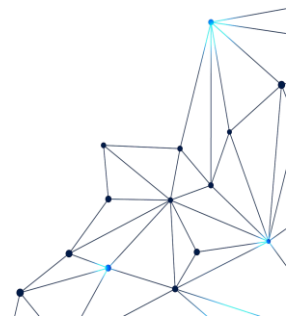
Although UC is thought to be the result of a combination of environmental and genetic factors, it has been discovered that this autoimmune disease doesn't seem to be passed down from one generation to the next in families very often. However, there have been many genes identified that possibly play a role in susceptibility to the disease. It is thought that perhaps those who are more genetically predisposed to the disease may trigger it when exposed to a number of environmental factors.

Environmental factors that seem to be connected to UC flare ups include the use of Nonsteroidal Anti-Inflammatory Drugs (NSAIDs), extended antibiotic use, smoking, hormonal contraception, and bacteria/viruses that may trigger an immune reaction.

NSAIDs include many popular over-the-counter pain relievers and fever reducers. Overuse of these drugs can result in digestive issues for people who don't even have an inflammatory bowel disease, so it makes sense that taking too many NSAIDs would greatly affect someone with UC.

Antibiotics have their place in Western medicine, but some have argued that doctors are overprescribing them, which is leading to an increase in autoimmune diseases like UC. Antibiotics can harm beneficial bacteria in the gut that help with immune function, as well as bowel health. It is no surprise that regular or extended antibiotic use might trigger a flare up in someone with UC, or perhaps trigger the onset of the disease in those genetically susceptible.

Everyone knows that smoking is not good for health in general. It puts people at a much higher risk of developing a large number of diseases. However, with UC, one of the strangest anomalies has been discovered: For some unknown reason, UC seems to affect nonsmokers more than those who smoke. This doesn't mean that smoking is good for you in any way, but rather that researchers may need to look into the correlation between nicotine and UC in terms of treatment. The risks of smoking cigarettes far outweigh any possible (and unlikely) benefits one might receive from smoking.







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Hormonal contraception has already been mentioned as a possible trigger for other autoimmune diseases due to estrogen being a major culprit in inflammatory bowel disease. Women are far more likely to be diagnosed with an inflammatory bowel disease as well. Estrogen has been linked with T cell immune response in autoimmune-induced inflammation. Because women secrete more of the hormone, it is thought that hormonal contraception messes with this balance in some way, triggering an autoimmune reaction.

As with other autoimmune diseases, when the body comes into contact with bacteria or a virus that makes it past the protective barriers, this may also trigger an autoimmune disease like UC. When someone has a bacterial infection and must take antibiotics, this could put them at an even greater chance of experiencing a flare up.

### Addison's Disease

Unlike other autoimmune diseases that target the bowels, thyroid, or joints, Addison's disease targets the adrenal glands, making them unable to produce sufficient steroid hormones for the body. The steroid hormone called cortisol is one hormone affected by the disease. This hormone is sometimes referred to as the "stress hormone" and is vital for our body's fight or flight response, as well as keeping inflammation down, regulating blood pressure, increasing blood sugar, boosting energy when we need it, helping with sleep and waking up, and managing how the body uses fats, proteins, and carbohydrates.

Needless to say, when the adrenal glands of someone with Addison's disease produces too little of this hormone, the side effects can range from distressing to deadly. A normal body produces just the right amount of cortisol. Just like in cases where the body produces too little cortisol, too much cortisol can have negative effects as well.

There are two types of Addison's disease. One type is referred to as Primary Adrenal Insufficiency. This is characterized by such severe damage to the adrenal glands that they can no longer function properly. This specific type is usually (around 70-90 percent of the time) caused by an autoimmune reaction that targets the glands and destroys them. Primary Adrenal Insufficiency may also be caused by other factors, such as certain cancers, overuse of prednisone, specific blood thinning medications, and bodily infections.

Another type of Addison's disease is called Secondary Adrenal Insufficiency. In this type of disease, the pituitary gland is mostly responsible for the issues. The pituitary gland is another part of the endocrine system, and is responsible for a wide variety of bodily functions, including growth, prolactin production, and the production of a hormone called adrenocorticotropic hormone (ACTH). This hormone tells the adrenal glands when to produce the necessary hormones. When it fails to tell the adrenal glands to produce hormones, adrenal insufficiency can develop.

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## Symptoms of Addison's Disease

Chronic weakness and fatigue are classic signs that the adrenal glands are not functioning properly. Vomiting, diarrhea, headaches, dizziness, fever, sweating, weight loss, low blood pressure, muscle weakness, mood changes, and anxiety are also symptoms of Addison's disease. Another common and noticeable symptom in some people with the disease is the darkening of the skin, even in areas not exposed to the sun. This hyperpigmentation of the skin is due to the pituitary's response to the drop in cortisol levels. It responds to this drop by trying to compensate by producing another hormone that acts as a precursor for a beta endorphin called melanocyte stimulating hormone, or MSH. MSH stimulates the body's production of melanin, which is what gives skin a bronze-colored tan when exposed to the sun. However, in the case of someone with Addison's disease, MSH isn't just being produced when out in the sun.

Addison's disease can result in more serious, life-threatening symptoms like adrenal crisis. This is when the body is experiencing serious adrenal insufficiency. Some indicators of an adrenal crisis include vomiting, diarrhea, pain in the lower back/legs/abdomen, lethargy, fever, convulsions, fainting, low blood glucose, low sodium levels, elevated calcium levels, and elevated potassium levels. These symptoms require immediate medical attention because they may result in fatal complications.

## Triggers

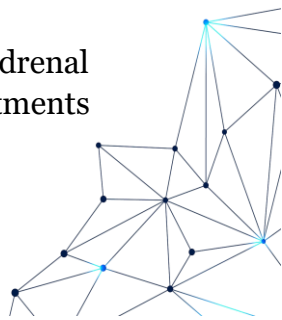
Addison's disease is sometimes described as an autoimmune disease that is often associated with the onset of other autoimmune diseases like Hashimoto's and Celiac disease.

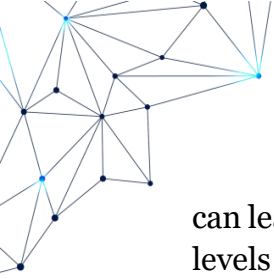
In fact, Addison's can be a manifestation of undiagnosed celiac disease. Addison's disease is thought to be a higher risk for those with certain cancers, those who take blood thinning medications, those who have had surgery to remove parts of the adrenal glands, those who have chronic infections, and those with other autoimmune diseases. In short, stressors can trigger Addison's disease in susceptible persons.

Genetics play a small role when it comes to the causes of Addison's disease. There have been links discovered between the development of this disease and other issues like hypothyroidism, vitiligo, and type one diabetes.

Worldwide, one of the most common infections to trigger Addison's disease is tuberculosis. Tuberculosis is a bacterial infection that affects the lungs, but infection can spread to other areas of the body as well. If the tuberculosis infection spreads to the adrenal glands, Addison's disease can develop. Other infections may also trigger the disease.

Diseases like adrenoleukodystrophy or amyloidosis can lead to damage to the adrenal glands, and in turn, cause Addison's disease to develop. Cushing's syndrome treatments





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can lead to adrenal gland damage. Cushing's syndrome is characterized by extremely high levels of cortisol in the body, so medications that lower cortisol, may create the opposite problem.

### Addison's and Stress

Although some have argued that chronic stress and anxiety are the cause of Addison's disease, this is not necessarily true. However, stress does nothing good for the body, and especially not for the adrenal glands. For someone with Addison's disease, chronic stress may worsen their condition. Negative emotions that result from stress and anxiety can weaken the body's ability to deal with diseases like Addison's. Some patients with this disease claim that they notice a great reduction in their symptoms when they pray, meditate, and practice controlled breathing techniques.

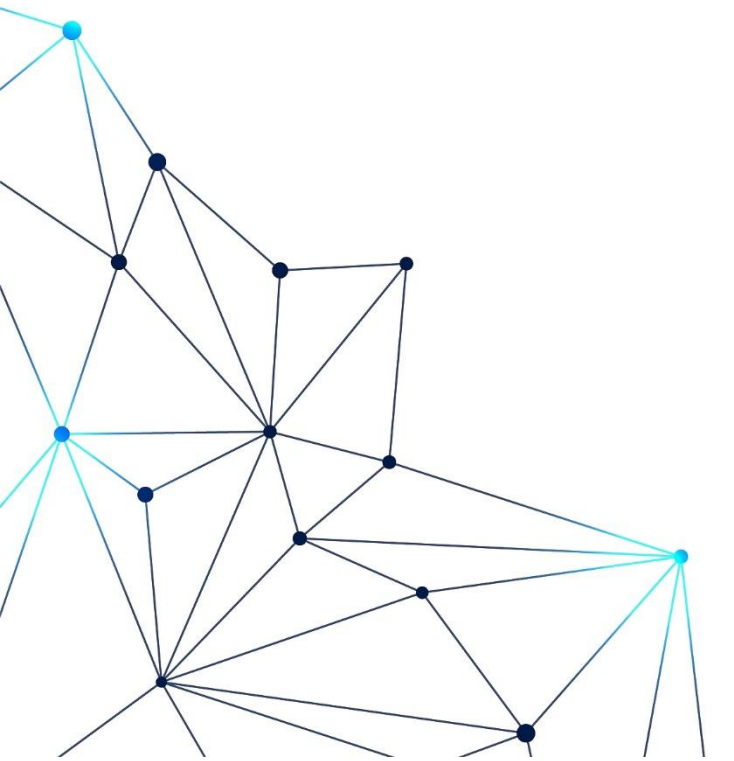
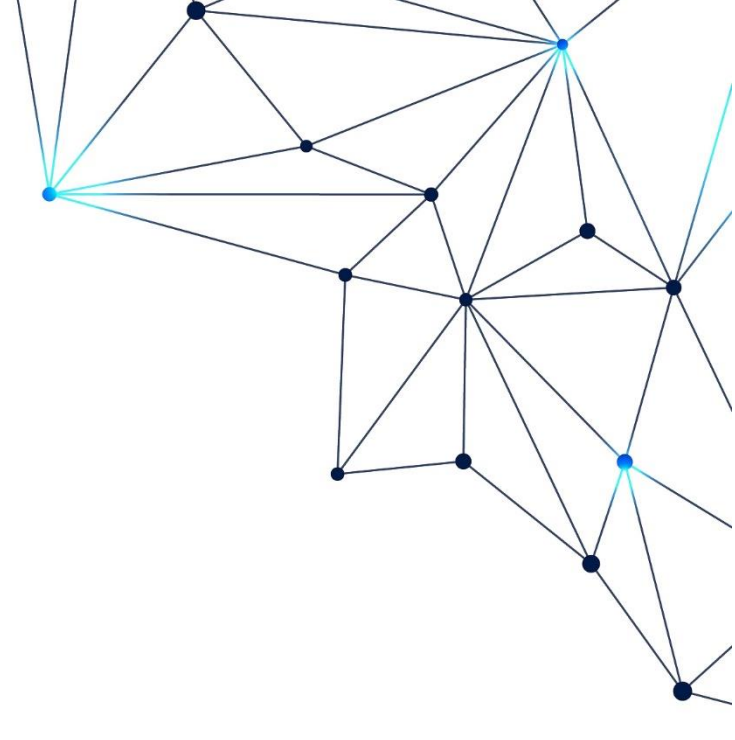
Those dealing with Addison's disease may have a harder time coping with stress because their body is already not making enough cortisol, a hormone responsible for helping the body cope with stress. Therefore, it is vitally important that those with this autoimmune disease learn to manage stress, as too much could create an adrenal crisis. If you have Addison's disease and are going through periods of physical, mental, or emotional stress, it is important to pay attention to your body and watch for signs of adrenal crisis. These signs include vomiting, sudden low blood pressure, muscle pain, or a loss of consciousness.

### Treatments

Frequently, the treatment for Addison's disease involves medication. Hormone replacement therapy may also be used to improve the levels of cortisol and other hormones in the body. An oral medication to replace cortisol may be prescribed, as well as a medication to replace the hormone aldosterone.

Due to the potential serious nature of this disease, patients should keep extra medication on hand. Even missing a day of medication can have a negative impact. For those at high risk of developing life-threatening complications from Addison's disease, an injectable may be needed in case of emergencies.

There is no known cure for Addison's disease, but early diagnosis and treatment can go a long way in improving the quality of life for those with this condition. When a person with Addison's disease receives proper care and treatment, combined with stress management techniques and a healthy lifestyle, the outlook for this autoimmune disease can be good.



# Hope in Managing Autoimmune Diseases



## The Autoimmune Protocol

It's no secret that an astounding number of people are being diagnosed with autoimmune diseases each year. Currently, it is estimated that between 23.5 and 50 million Americans suffer from autoimmune disease. Between 80-100 different autoimmune diseases have been discovered so far, with more likely to come. Women seem to suffer from autoimmune disease on a greater scale than men, which is leading to serious issues. For women in all age groups up to the age of 64, autoimmune disease is actually one of the top ten leading causes of death. Furthermore, since autoimmune disease is a fairly new subject to the medical world, doctors are likely not receiving much medical education on the subject. However, the dots are being connected slowly, and links have been found between autoimmune diseases and other factors. There is hope for the future in terms of treating autoimmune disease, but this may require mainstream medical professionals to completely reframe the way they once thought about environmental triggers, western medical practices, and popular medications.

As this unsettling trend continues to grow, questions are being raised as to what genetic and environmental factors are contributing to this progression. It is important to start seeking and addressing the root cause of these conditions. When doctors continue to treat autoimmune disease with temporary solutions that help manage symptoms, more harm may be done in the long run. For instance, it is commonplace to treat autoimmune disease with immunosuppressant drugs. This practice has been shown to lead to serious long-term issues.

A holistic approach to autoimmune disease involves looking at the bigger picture: It means looking at the whole person and seeking to detect the root cause. Most often, the causes of autoimmune diseases are a combination of genetic and environmental factors. Someone who is genetically predisposed to develop an autoimmune disease may end up triggering it by certain foods, issues with bacterial growth, stress, hormones, heavy metal exposure, and exposure to chemicals found in many things we use on a daily basis. We are all surrounded by triggers. In some cases, they are right in front of us and we do not realize it.

The remainder of this book will delve deeper into potential causes and triggers of autoimmune disease, as well as address dietary protocols, natural remedies to help provide balance, and surprising everyday triggers we come into contact with that may have dangerous long-term effects. The goal of this protocol is to raise awareness of the many inadvertent ways we open the door to autoimmune disease, so we can begin tackling the root cause, managing current symptoms, and living our best life.

### **Diet: Your First Defense**

When it comes to managing autoimmune disease, as well as fighting inflammation that results from such diseases, your diet is your first defense. As mentioned earlier in this

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book, there is a strong symbiotic relationship between our gut and immune health. Seventy percent of the cells that comprise our immune systems live in our gut walls!

### The Microbiome

Our microbiome consists of trillions of bacteria living in our gut, and specifically the cecum of the large intestine. It is estimated that there is around five hundred species of bacteria living in our gut, weighing up to three pounds. This bacteria consists of a delicate balance of good and bad bacteria. When this balance is thrown off and there is too much bad bacteria left to flourish, our health can become compromised.

How is this balance affected? The bacteria in our gut live off of what we feed them. Some of the foods we eat contribute to the good bacteria, and some help the bad bacteria thrive. Think of your gut as a garden. You need to give it water, fertilizer, it and sow good seeds to keep the weeds and other unwanted plants out. All is not lost if you are one of those people who do not eat healthy, whole foods. It is never too late to start healthy eating habits. Our microbiome changes daily with every piece of food we eat!

The bacteria in our gut interact with our immune system and help our bodies distinguish between good and bad pathogens. In a healthy gut-immune relationship, the immune system can detect and destroy pathogens that may potentially harm us and leave the ones that help our microbiome alone. The more diverse our microbiome is, the better our health. When we do not have a diverse microbiome, we are more prone to develop issues like inflammatory bowel diseases.

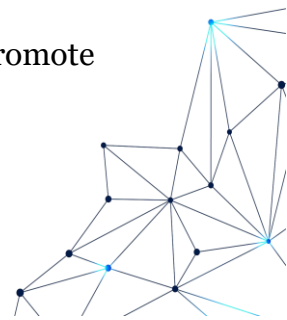
### Our Microbiome as we Grow

Our microbiome begins developing the moment we are born. Newborns have a very new and very sterile microbiome. Breastfeeding helps to nourish this microbiome and promote the proliferation of good bacteria in the gut. Breastmilk is the biologically perfect first food for giving an infant the perfect head start in life.

When a baby begins solid food, a change starts to take place in the microbiome. More bacteria are introduced, good and bad, through these new foods. It is just as important to introduce a variety of healthy, unprocessed foods to a toddler during this time of microbiome evolution. By the time a child is three years old, they have a microbiome similar to most adults.

Choosing to breastfeed, as well as providing a toddler with healthy solids, can do so much more than previously thought. These early choices can help set a child up for a lifetime of health, a properly functioning immune-system, and less of a chance of developing an autoimmune disease.

In addition, keeping up with these healthy habits throughout a child's life can promote healthy habits that stay with a person for the rest of their lives.





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Pregnant women can also take steps to ensure their baby has a healthy microbiome. Babies can be exposed to their mother's bacteria through the placenta. A connection between prenatal oral health and a developing fetus' microbiome has been shown because some of the microbes in the placenta have their origins in the mouth.

In addition to staying healthy while pregnant, a new microbiome can be affected during delivery. A baby can pick up bacteria in the vaginal canal during birth. This bacteria is actually very good and can set the stage for the baby's future microbiome health. There is a difference in the microbiomes of babies born via C-section, as opposed to those born vaginally. Babies born vaginally have much more beneficial bacterial colonies. It is for this reason that a practice called "vaginal seeding" is growing in popularity. This is when the mother applies vaginal fluids to a newborn baby after a C-section. This can help promote a healthy microbiome for the baby.

As soon as a baby is born, it is exposed to all kinds of bacteria. Another way to ensure the baby is getting the best possible start for its new microbiome is to get as much skin-to-skin contact with it as possible in the first hour after birth. The bacteria on mom's skin can help transfer to the baby and build the microbiome. Putting a newborn against the skin and to the breast as soon as it emerges can also help it get colostrum. Colostrum is perhaps one of the most beneficial fluids a baby can have. This precursor to breastmilk is full of good bacteria, as well as crucial nutrients and vitamins.

Many people, especially westerners, are exposed to a very unhealthy diet full of processed foods, sugar, and enriched grains. Even if a person got the very best start early in life, their microbiome can change drastically after too many unhealthy dietary choices. There are many foods that can feed the bad bacteria and get the microbiome out of balance. These foods include sugars, gluten, dairy, fried foods, processed foods, red meat, soy, eggs that are not from free-range chickens, and genetically modified foods.

### Foods That Harm the Microbiome

Sugar feeds the bad bacteria in your microbiome. When you eat too much, you can actually help the bad bacteria grow. When this bacteria begins to grow, it can crowd out the good bacteria and kill it off.

This leaves room for digestive issues, as well as immune-system malfunctions. Sugars to avoid include white sugar, brown sugar, high fructose corn syrup, and even



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artificial sweeteners. Artificial sweeteners are just as bad, if not worse, than sugar. Not only have they been shown to cause inflammation in the lining of the gut, they feed the bad bacteria.

A little sugar here and there may not do much harm, but never underestimate the importance of moderation in a diet. Natural sugars like raw honey and maple syrup are favorable alternatives, but they also contain sugar and should be used in moderation.

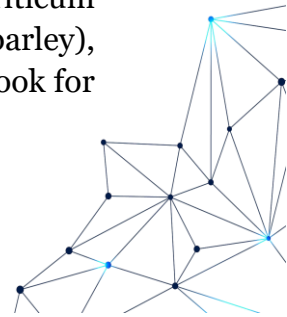
Gluten is another harmful substance for gut health. It is a protein found in grains. Gluten is practically everywhere, so it can be hard to avoid. The gluten we eat today is different than the gluten our ancestors may have consumed due to the emergence of genetically modified grains. These grains may have much higher amounts of gluten, making our bodies more prone to a possible reaction.

When the body encounters gluten, an enzyme in the intestinal wall begins to break it down into substances called gliadin and glutenin. When gliadin and glutenin make their way through the rest of the digestive tract, the gut-associated lymphoid tissue checks may identify it as dangerous and begin an attack. The gut-associated lymphoid tissue is basically our gut's immune system. It is responsible for reviewing everything we eat and deciding whether it is bad or not. If it is safe, the body absorbs it. If it is perceived as harmful by this lymphoid tissue, an immune assault will take place, leading to unwanted and unpleasant side-effects.

When an attack takes place in the gut due to gluten, the body attempts to fight the gliadin and glutenin, but also attacks the enzyme responsible for breaking gluten down into gliadin and glutenin. This enzyme plays an important role in the holding together of microvilli in the gut. Microvilli are small hair-like appendages inside the intestine that help the body absorb vital nutrients to stay healthy. When the enzyme that helps maintain microvilli is harmed, microvilli are also harmed. Over time, this results in the body having a hard time absorbing nutrients, which may lead to malnutrition and anemia.

Sometimes the autoimmune reaction resulting from an encounter with gluten can harm more than just the microvilli, resulting in an attack on other substances throughout the body. Many people with inflammatory bowel conditions like celiac disease are at a higher risk for an additional autoimmune disease.

Not everyone is sensitive or allergic to gluten, but the fact that this substance is found everywhere, paired with the fact that it is now stronger, can lead to harm. If you are someone who is already suffering from an autoimmune disease, it may be best to begin reading labels carefully and start avoiding gluten in your diet to prevent any further complications. Gluten may be tricky to identify on labels. Look for terms like *Triticum vulgare* (wheat), *Triticale* (cross between wheat and rye), *Hordeum vulgare* (barley), *Secale cereale* (rye), and *Triticum spelta* (spelt, a form of wheat). Other terms to look for







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that indicate the presence of gluten include wheat protein/hydrolyzed wheat protein, wheat starch/hydrolyzed wheat starch, wheat flour/bread flour/bleached flour, bulgur, malt, couscous, farina, pasta, seitan, wheat or barley grass, and wheat germ oil or extract. Beer and other forms of alcohol usually contain gluten as well.

There are alternatives when looking to avoid gluten. Almond, rice, millet, sorghum, amaranth, quinoa, and coconut flour can be used for baking and do not contain gluten. Not only that, but many of these flour choices are very nutritious. Arrowroot flour is also a good choice, and makes an excellent thickener in recipes.

Dairy is a major culprit when it comes to food allergies. Research has shown a strong connection between a diet high in dairy and a negative impact on the microbiome. When dairy is consumed by those who are sensitive or allergic, their body recognizes the broken-down dairy proteins casein and whey as harmful and sends the immune system to attack. This can result in hives or even a life-threatening allergic reaction like anaphylaxis. For those who are lactose intolerant, their body is unable to digest a sugar component in dairy products called lactose. This reaction is somewhat different than an immune system reaction, and can result in diarrhea, bloating, and abdominal cramping.

Milk allergies are among the most common, especially in children. With so many people allergic to dairy, one cannot help but wonder why there has been such a large increase over the decades. One theory is that milk has changed over the years. Today's milk may have higher than normal amounts of antibiotics. Some dairy cows are given antibiotics to treat infections. These can make their way into the milk we drink. Although the amounts may be considered low, we come into contact with antibiotics on a daily basis through other avenues as well. This constant barrage of antibiotic exposure can cause significant damage to the microbiome. Antibiotics kill all bacteria in the gut, and are unable to differentiate between good and bad bacteria. While antibiotics definitely have their place for helping heal infections in the body, too much exposure to these can greatly affect the microbiome, opening us up to autoimmune issues.

Fried foods can harm the microbiome by feeding the bad bacteria. Researchers have also discovered that if you go a few days eating fried foods, the diversity of bacteria in your gut can die off by one third. Diversity in the microbiome is very important to a healthy immune system. In the same way fried foods harm beneficial bacteria in the microbiome, processed foods do as well.

Red meat can pose the same risks as dairy when it comes to the microbiome. Depending on the red meat you buy, it could contain antibiotics. Red meat has also been shown to feed the bad bacteria and decrease the good bacteria in the gut. However, eating this in moderation is probably fine. It is a diet high in red meat on a regular basis that may be harmful to your health.

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Soy has already been mentioned for its harmful phytoestrogen content. Many people are under the false assumption that soy is good for them. However, this could not be further from the truth. Soy is a rich source of phytoestrogens, which are plant-based estrogens that mimic human estrogen. Estrogen plays an important role in the immune system, so when substances that alter estrogen production are introduced to the body, the immune system could suffer. Not only this, but soy is one of the most heavily sprayed crops.

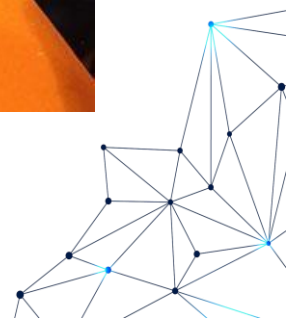
Eggs are not altogether bad, but it really depends on how the chickens are raised. Chickens that are allowed to free-range and maintain a diet that is comprised of plants and insects are much healthier. Therefore, the eggs they produce are much better for you. Free-ranged eggs actually have twice the omega-3 fatty acids, three times more vitamin E, up to one quarter less saturated fat, one third less cholesterol, and up to seven times more vitamin A compared to caged eggs. Caged chickens are fed a very unhealthy diet of chemicals and corn waste. They are kept in extremely tight conditions, with little room for movement. They often have no exposure to sunlight or other natural conditions. The chickens are treated poorly, and sometimes their beaks are cut off to help prevent them doing damage to other chickens nearby. Caged eggs contain higher amounts of unhealthy cholesterol and saturated fat, as well as the increased possibility of salmonella.

The potential inflammatory effects of Genetically Modified Organisms (GMOs) have already been discussed. Genetically modified plants have been engineered to be more pest and disease resistant. However, in doing so, nobody is completely sure what the long-term implications may be. For instance, pests and plant diseases are evolving to be stronger as well, and this could be the result of genetically modified plants. Not only are long-term implications to the environment unknown, but long-term implications to health are a big question. With more and more people developing gluten sensitivities and inflammatory bowel diseases, more research needs to be directed into the long-term consequences of man's meddling.

### Foods that Support the Microbiome

Just as there are foods that can damage the microbiome, there are foods that support a healthy gut, as well as help reduce inflammation that can cause issues with autoimmune diseases. Eating a diet rich in foods that support our gut health will in turn support our immune system health.

Prebiotic foods are foods that help support a healthy microbiome by feeding the good





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bacteria. Probiotic foods are foods that contain beneficial bacteria that can help maintain healthy gut diversity. Prebiotic foods are comprised of a variety of fruits, vegetables and legumes. Foods like dandelion leaves, artichokes, bananas, asparagus, beans, garlic, onion, and leeks all contain natural substances that feed beneficial bacteria.

Probiotic foods are a wonderful way for you to introduce good bacteria to your gut. Try opting for fermented foods, as they contain large amounts of beneficial bacteria. Probiotic foods include foods like non-pasteurized sauerkraut, low sugar yogurts, non-pasteurized pickles, cultured vegetables, miso, olives, tempeh, and fermented drinks like kefir, kombucha, and lassi.

Fermentation is the process of letting yeast and bacteria convert foods into something healthy and longer-lasting. Beneficial bacteria eat sugars and acids in foods you are attempting to ferment.

A by-product of this is the creation of natural preservatives. This is why fermented foods may last longer. Some foods are fermented using sugars and some are fermented using salt.

Try introducing probiotic and prebiotic foods into your diet each day for maximum gut health. Eating foods rich in beneficial bacteria, as well as substances that feed beneficial bacteria, can be more effective than taking a daily supplement when it comes to ensuring gut bacteria health and diversity.

However, there is nothing wrong with adding a probiotic supplement to your diet if you are seeking to nourish your gut's immune system.

### The Anti-Inflammatory Diet: A Colorful Cure

Did you know that the color of your food may be an indicator that it can help reduce inflammation?

Researchers have found that colorfully-pigmented foods like cherries and raspberries contain phytochemicals that are high in antioxidants.

These antioxidants have been shown to help reduce inflammation in a number of ways. Different colors have different beneficial properties.

Purple and red foods like blackberries, eggplant, and cranberries contain beneficial flavonoids called Anthocyanins that help reduce inflammation, as well as prevent tumor growth. Some anthocyanins may even have antiviral and antimicrobial properties. Red foods like watermelon and papaya contain a constituent called lycopene that can inhibit tumor growth and improve communication between cells. This powerful antioxidant can help rid the body of free-radicals that might lead to cell damage or cancer. Yellow and orange foods like carrots, sweet potatoes, and pumpkin contain a beta carotene. This

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amazing antioxidant is converted in the body to vitamin A. Vitamin A is essential for a healthy immune system and heart. Orange foods like papayas and oranges also contain vitamin C, which is great for supporting immune health.

Dark green foods are especially good for our bodies. Foods like kale, dandelion leaves, and spinach contain antioxidants and folate. Folate is the natural version of what most of us know as folic acid. The only problem is that folic acid is synthetically derived, whereas folate is naturally sourced and more easily absorbed by the body. Folate is responsible for the health of new cells, as well as the creation of DNA and RNA. The next time you reach for a supplement that contains folic acid, remember that the natural version of this can be obtained by eating plenty of dark green, leafy foods!



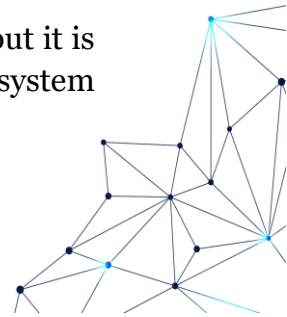
*Rob Bertholf, Own Work, 2016, CC. 2.0*

Choosing organic, unprocessed foods in a rainbow of colors can ensure you are receiving inflammation-reducing antioxidants that work to block the inflammation that is so common with many autoimmune diseases. When you opt for these foods, while avoiding foods that are harmful to your microbiome, you are giving your body a great edge in the fight against autoimmune disease.

### Other Important Substances to Include

Fruits and vegetables aren't the only foods that possess important inflammation-fighting properties. Several types of fish contain high amounts of omega-3 fatty acids that may help to reduce inflammation. Try eating salmon or Atlantic mackerel twice a week to ensure you are getting enough of this beneficial substance. Make sure the fish you purchase are low in mercury.

Vitamin C has been mentioned as an important vitamin for the immune system, but it is also great for reducing inflammation. Vitamin C may also help keep your immune system





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healthy by warding off free radicals that lead to inflammation. The body immediately uses what vitamin C it receives and excretes any excess. Because vitamin C can be hard for the body to absorb, eating foods high in this vitamin throughout the day is best to ensure you are getting healthy amounts. Taking a vitamin D3 supplement with vitamin C may aid in absorption.

Quercetin is another antioxidant found in foods like tomatoes, sage, and citrus fruits. This antioxidant can help reduce inflammation in several ways. First, it has antibacterial properties. These properties may help fight infection in the body that leads to inflammation. Second, it may help reduce the body's amount of tissue damaging enzymes. This antioxidant has been studied for its anti-inflammatory effects on the prostate, as well as the respiratory system.

Bromelain is another anti-inflammatory enzyme that can be found in the stem of the pineapple. Although the highest amounts are in the stem, the enzyme can be found in the fruit and juice of the pineapple as well. This compound has been studied for its ability to reduce swelling and inflammation, especially in the respiratory system. It also has blood-thinning abilities, making it helpful for those at a higher risk for blood clot formation. This enzyme can also be purchased in supplement form.

Luteolin is another flavonoid found in foods like kale, watercress, apples, oregano, peas, and fennel. Luteolin has antihistamine and anti-inflammatory properties that can work to reduce inflammation caused by autoimmune disease. This flavonoid has been studied for its ability to help with brain inflammation in particular, making it perfect if you are dealing with issues like brain fog.

Beta-carotene is a highly beneficial substance found in brightly colored, orange and yellow foods. It has already been discussed for its ability to help the body create vitamin A. Vitamin A has been shown to help fight inflammation and support the immune system. Try eating a half cup of carrots (or any other food high in beta-carotene) with each meal to ensure you are getting enough of this valuable compound.

Vitamin D is another important vitamin for your immune health. Many people are deficient in this vitamin. It can help to strengthen your innate immune system and turn on or off various genes and processes that your body needs to keep healthy. It also helps with autoimmune disease by promoting regulatory T cells that cause your immune system to work more efficiently. It may be one of the most underrated, yet vital substances for those with an autoimmune disease. Some foods are fortified with synthetic vitamin D. Avoid these foods and opt for natural sources of vitamin D in your diet, like free-range egg yolks, salmon, maitake mushrooms, fish liver oil, and organ meats. Try including these foods in your diet daily. Another way to get vitamin D is through sunlight exposure. Exposing your skin to the sun's rays for twenty minutes daily can help you absorb this

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necessary vitamin. Try combining sunlight exposure with vitamin D-rich foods each day for autoimmune support.

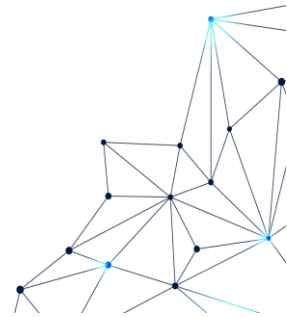
Broccoli is one of several cruciferous vegetables that contain a compound called glucosinolate. This compound has been shown to reduce inflammatory markers linked to cancer. Glucosinolate is converted to another compound in the body that helps decrease inflammatory mediators. Lightly cooking this vegetable and consuming it daily can be a great way to maintain a healthy immune system, while fighting inflammation.

Oleocanthal is a compound found exclusively in extra virgin olive oil. This amazing substance has been shown to reduce inflammation, specifically when it comes to the joints. It may help to reduce joint cartilage damage as well. In addition to containing Oleocanthal, olive oil also contains Polyphenol. Polyphenol may help increase good bacteria in the gut, as well as improve brain function! Using extra virgin olive oil to lightly stir fry vegetables, in addition to use in salad dressings, is a good way to include it in your diet.

Lycopene has already been mentioned as a beneficial antioxidant found in foods like tomatoes, watermelon, and papaya. Not only does it help to fight free-radicals in the body, but it may also help protect the brain from inflammation that often leads to depression. There is a higher lycopene content in the skin of tomatoes, so opt for a cup of cherry tomatoes drizzled with extra virgin olive oil for a healthy, inflammation-fighting, snack.

Alpha-tocopherol is a form of vitamin E found in foods like spinach, turnip greens, broccoli, asparagus, tomatoes, and almonds. This strong antioxidant has been shown to support the immune system, as well as support circulatory health. Adults are advised to consume around fifteen milligrams of alpha-tocopherol daily. One cup of spinach contains about four milligrams. Almonds are high in alpha-tocopherol, with one ounce of almonds containing more than seven milligrams. One tablespoon of oils like safflower or sunflower oil contains around five milligrams of alpha-tocopherol. When you add a little of these foods to your daily diet, you may find it isn't that difficult to obtain the daily recommended amount.

Pungent foods like garlic may turn some people off, but don't underestimate the power of this superfood. Garlic contains a compound called allicin, which may help the body fight infections. However, this strong-smelling food also contains organosulfur compounds that may help to reduce inflammation and protect the cardiovascular system. Aged garlic contains more of these beneficial compounds. Crushing garlic well before adding it to a variety of foods can help to activate the allicin and other beneficial compounds. Garlic makes an excellent addition to many meals, as it boosts the flavor, in addition to the nutrition content.





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Minerals like copper, zinc, and manganese are essential to our health. Many people are deficient in these essential minerals, and this can lead to a host of issues. For free-radical deactivation, our bodies rely on enzymes like superoxide dismutase. Copper, zinc, and manganese all needed in order to support this enzyme and help it do its job. Oysters contain all of these essential minerals, in addition to other beneficial compounds.

### The Gut-Brain Connection

Just like there is a connection between our microbiome and our immune system, there is also a connection between the gut and the brain. Many people experience diarrhea or an upset stomach when they are very nervous or stressed out. This is because the stress created a disruption in signals between their brain and gut.

The gut contains around 500 million neurons that are connected directly with the brain through the nervous system. The most prominent nerve in this system is the vagus nerve. It has been discovered that during times of stress, the signals sent through the vagus nerve are inhibited. This can result in gastrointestinal discomfort.

It has been proven that stress can affect the body negatively by weakening the immune system. Some of this may be due to the fact that stress inhibits important signals between the gut and brain, which in turn, send the body into chaos. This is why it is so important that those living with an autoimmune disease (especially an inflammatory bowel disease) do their best to reduce stress in their lives. If those with normally functioning immune systems can be compromised by stress, imagine the damage that could be done to those with autoimmune issues during times of stress. Not only can stress trigger a major flare-up and inflammation in the body, it may result in mental issues like depression.

Other chemicals that play a role in the gut-brain connection include neurotransmitters. Neurotransmitters help to regulate our emotions. One neurotransmitter, called serotonin, is responsible for feelings of happiness. Most of the body's serotonin is produced in the gut by the bacteria living there. It's no wonder an unhealthy diet can lead to depression! This is because unhealthy diets comprised of fried and processed foods can kill off the bacteria in your gut that help to produce serotonin. Stress may also result in a nervous system blockage that inhibits serotonin from doing its job in the body.

Just like serotonin can produce or control feelings of happiness, other neurotransmitters control different emotions. A neurotransmitter called gamma-aminobutyric acid is thought to control feelings of anxiety and fear. Not only do the bacteria in the gut help control emotions, they can help control how the brain functions. It is important to maintain a healthy gut-brain connection for so many reasons, but most people don't realize that their emotions can be affected severely by their diet and stress levels.

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## The Gut Brain and Inflammation

We already know that the gut and immune system are strongly connected. However, the brain is another important piece of this puzzle. The gut-brain axis is connected through the immune system. Inflammation in the body occurs when the immune system “switch” is turned on for too long. When inflammation is allowed to persist for too long in the body, disorders that affect the brain can arise. One example is Alzheimer’s disease.

There are bacteria in your gut that release a substance called Lipopolysaccharide. This substance is dangerous to the body, because it can lead to inflammation if too much of it gets into the bloodstream from the gut. How does too much lipopolysaccharide get into the blood stream? One way is through a leaky gut. When someone has a leaky gut, their gut is allowing too many harmful substances into the bloodstream. This in turn leads to inflammatory brain issues.

Many western doctors are quick to prescribe antidepressants and other drugs for people with depression, schizophrenia, and dementia before attempting to find the root cause of the problem. In some cases, the root cause of the problem may very well be an issue with gut bacteria or a leaky gut.

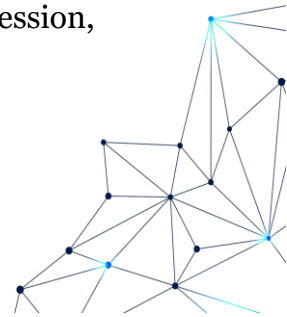
## Changing your Gut Bacteria: Hope for a Variety of Disorders

It can be very disconcerting when you discover that your diet affects so many aspect of your body. An unhealthy diet can trigger a number of autoimmune disease flare-ups, inflammation in the body, brain disorders, and a weakened immune system. However, there is hope for those looking for the root cause of their condition.

Just like an unhealthy diet can affect our body negatively, a healthy diet that incorporates the foods, nutrients, and antioxidants listed in this chapter can help to reverse a number of issues. Not long after you start to change your eating habits, replacing unhealthy choices with healthy choices, your gut bacteria will begin to change.

Additionally, we know that probiotics can help with healthy immune function, but certain probiotics can also help with healthy brain function. One probiotic called *Bifidobacterium longum* NCC3001 has been shown to help reduce symptoms of anxiety and depression. Similarly, certain prebiotics may help to reduce symptoms of stress and the amount of cortisol produced by the body. One prebiotic that has been shown to help with this is called galactooligosaccharides. A study found that after only three weeks of taking this prebiotic, patients experienced lowered amounts of cortisol.

As the bacteria begin to change in your microbiome from a healthy lifestyle and good nutrition, good bacteria begin to flourish. Soon, a wonderful diversity of bacteria can be found thriving in the gut. Over time, you may begin to notice anxiety, stress, depression, and inflammation disappear.





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Eating plenty of probiotic and prebiotic foods, along with fruits, vegetables, berries, nuts, and omega-3-rich fish is the best way to create balance between your gut, brain, and immune system. In addition to your diet, doing your best to reduce stress in your life is vital to your mental and physical health.

Our immune system functions in such a complex and sophisticated way, and so many bodily functions are affected by the trillions of tiny bacteria that live in our gut. Our diet is our first defense against the autoimmune inflammation that can affect our physical and mental health. The great news is that it's never too late to begin changing your lifestyle to support your overall health.

### Natural Remedies for Autoimmune Disease

There are many natural remedies that can work to fight inflammation, as well as support a healthy immune system. Not everyone with an autoimmune disease should pursue these remedies, as each case is different. However, many people have found that there are alternative options for their condition that do not have unwanted side effects and help them to manage their condition. In this chapter, you will learn about various alternative remedies that target inflammation and promote immune system health.

### Remedies that Target Inflammation, Blood, Pain, and Skin Care

Because inflammation is one of the most destructive and prominent results of most autoimmune diseases, remedies that target inflammation can be a game changer. Know that you have options when it comes to choosing what works best for your inflammatory condition! The remedies in this chapter will target bodily inflammation, as well as blood purification, pain, and skin care to provide a well-rounded remedy arsenal for autoimmune disease.

### Golden Milk

Golden milk, as it is called, is a tasty, orange-yellow drink. It has also been called haldi doodh, which is Hindi for turmeric milk. This ancient remedy uses turmeric as one of the main ingredients. Other ingredients includes milk (or a milk substitute like almond or coconut milk), one teaspoon of almond oil, ghee, olive oil, or coconut oil, one teaspoon of powdered turmeric or turmeric paste, and raw honey to taste. These are the basic ingredients, and many people add other ingredients (Ceylon cinnamon is great in this recipe) as they desire.



In a small pot, heat the milk, stirring continually. Next, add the turmeric powder and blend it well with a whisk. Add the oil and continue to stir. Heat everything to just before

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boiling and remove from heat. Add raw honey to taste. Adding cinnamon, nutmeg, clove, or star anise works well with this recipe and tastes great! If you don't have raw honey for sweetening, you can also use raw maple syrup.

Golden milk is drunk warm, like tea. It is perfect just before bedtime to help calm the body and mind. It can actually help you sleep better, in addition to its anti-inflammatory and pain relieving benefits. Drinking this once or twice daily is a tasty and beneficial way to help relieve or prevent inflammation in the body.

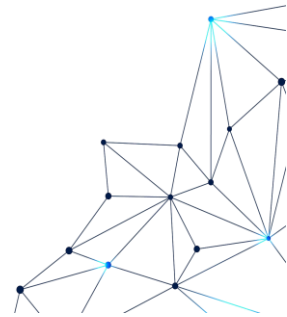
### Turmeric Tincture



*Simon A. Eugster, Own Work, 2014, CC. 3.0*

Turmeric can also be taken in a smaller dose, such as a liquid extract called a tincture. Tinctures have been used for many centuries as a natural type of folk medicine to treat a variety of ailments. This easy method of preparing plants for medicinal purposes involves infusing the plants in at least 80 proof alcohol.

Not only is this method a great way to make your own remedies, it helps to preserve the plant material, sometimes for more than seven years. To make your own turmeric tincture, finely chop organic turmeric roots and fill a glass bottle or jar with them. You may choose to peel the outside skin off the roots first, but this is not completely necessary. Add up to two tablespoons of black peppercorns to the jar as well. Black pepper has been shown to help the body better absorb the curcumin in turmeric. Next, pour at least 80 proof alcohol into the bottle, making sure to completely cover the chopped roots and peppercorns. Place the lid on firmly and set it in a cool, dark place. Shake the mixture daily to promote infusion. The mixture will be ready to strain out in four to six weeks. When you have strained it out through a cheesecloth (squeezing it well to get all of the liquid from the plant material), put the liquid extract in a dropper bottle. Take 15-30 drops, three to four times daily. Start with the lowest dosage twice a day, and go up from there as needed for pain and inflammation. For those wishing to avoid alcohol (although the actual alcohol content in your daily turmeric tincture serving would be miniscule), you can create a tincture using organic apple cider vinegar or non GMO vegetable glycerin as well.





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### **Turmeric: Anti-Inflammatory Powerhouse**

Turmeric is steadily increasing in popularity due to its effects on inflammation and pain in the body. Turmeric contains a constituent called curcumin that targets inflammation by helping the body reduce the number of neurotransmitter histamines, as well as helping cortisol prolong its anti-inflammatory activity. Many people who take turmeric claim that as a result of lowered inflammation, they also experience less pain. Turmeric has been described as having similar anti-inflammatory and pain-relieving effects as popular over-the-counter pain and inflammation medications.

There are a number of ways one can take turmeric. One way is including it in the diet as much as possible. This may be hard to do, as turmeric has a specific, somewhat spicy taste, and may not work well in every dish. Many people get their daily dose of turmeric in other ways as well. One way is through drinking golden milk.

### **More on Turmeric and Black Pepper**

Turmeric and black pepper are a wonderful match, as they complement each other perfectly. The curcumin in turmeric makes it an amazing source for inflammation relief, but the only drawback is that curcumin has poor bioavailability. Once the curcumin reaches the liver and intestinal walls, it is quickly metabolized. This means that only a small portion of this beneficial constituent is actually absorbed by the body through the bloodstream. Black pepper contains a constituent called piperine that has been shown to help improve the serum concentration and bioavailability of curcumin in the body! Studies have shown an astounding increase in curcumin absorption when black pepper is consumed with turmeric. Even though recipes for golden milk do not call for black pepper, you might try adding a small amount (less than 20 milligrams) of black pepper in supplement form for aiding in curcumin absorption when drinking golden milk or taking a turmeric supplement that does not contain black pepper.

### **Turmeric Supplements**

There is a wide variety of turmeric supplements on the market today. The issue with many supplements is that the industry is largely unregulated and sometimes it's hard to know the quality of the supplements you are taking. There are supplements that have processed the curcumin into something much more bioavailable, and these claim to be far superior to other types of turmeric. The best thing you can do is research a turmeric supplement before buying it. Make sure you know how bioavailable the turmeric is, whether or not it is organic, and whether or not the company producing it is reputable.

### **Ginger for Pain and Inflammation**

Ginger is another excellent plant remedy for fighting inflammation in the body. Like turmeric, ginger is a root that contains anti-inflammatory and analgesic properties. Ginger and turmeric are both somewhat spicy and used in a variety of exotic dishes. Both

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ginger and turmeric are related plants in the Zingiberaceae family. One of the great things about ginger is that it not only helps with pain and inflammation, it helps ease an upset stomach as well!

Those with inflammatory bowel diseases as a result of autoimmune dysfunction may especially benefit from ginger. Ginger can relax and comfort the intestinal tract, settle an upset stomach, relieve nausea, and soothe any intestinal discomfort. It also works to curb inflammation in a similar fashion that prescription COX-2 inhibitor drugs work.

Research suggests that ginger is also a very beneficial treatment for those with joint pain associated with osteoarthritis and rheumatoid arthritis. It may work similar to ibuprofen for joint pain. Other research shows ginger to be a promising treatment for joint recovery after surgery, as well as help with exercise-induced muscular injuries.



*Tiia Monto, Own Work, 2018, CC. 4.0*

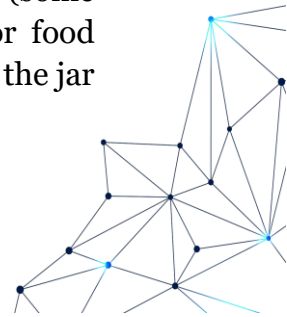
In addition to ginger's amazing anti-inflammatory, analgesic, and digestive properties, it also contains antioxidants. Antioxidants are great for anyone, but especially for those with autoimmune issues. Antioxidants can help to fight free-radicals that cause damage in the body. Ginger is often utilized in herbal remedies for colds and viruses because it has been shown to support the immune system.

### Ginger Tea Recipe for Inflammation and Pain

To create a helpful tea using ginger, simply boil one-and-a-half cups of water with six thin slices of fresh ginger root for ten to fifteen minutes. Squeeze one lemon and add the juice to the hot, ginger-infused water. Pour into a cup and enjoy with raw honey to taste. Do this once or twice daily to enjoy the therapeutic benefits ginger has to offer.

### Ginger Tincture

Ginger can also be enjoyed in tincture form. Infusing ginger to make a tincture can create a more potent extract than tea, as well as a great medicinal tool in your anti-inflammatory kit that will last for years. To create your own tincture using ginger, start by purchasing organic ginger roots. Scrub them with water to clean them before you begin processing the roots. Shave off the outside skin with a potato peeler or similar instrument (some people skip this step, and that is okay). Finely chop the roots with a knife or food processor. Put the chopped roots in a small jar. Pour at least 80 proof alcohol into the jar





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and make sure it completely covers the chopped ginger. Place the lid on the jar and let this infuse for four to six weeks in a cool, dark place. Shake this daily to promote further infusion. When four to six weeks have passed, strain the mixture out with a cheesecloth, making sure to tightly squeeze the cheesecloth to get all the liquid out of the ginger. Bottle the liquid in a dropper bottle.

Take one to three droppers-full, up to three times daily. Start with one dropper full three times daily, and slowly up this dosage if needed.

### Ginger and Turmeric Essential Oil

Ginger essential oil is another popular way to utilize ginger for its therapeutic qualities. Essential oils are the very concentrated product of steam distillation or CO<sub>2</sub> extraction. These oils are much more potent than any extract or tea. This is because it takes a great amount of plant material to create this small amount of concentrated plant material containing plant isolates (essential oil).

Although some suggest taking essential oils internally, this can result in serious complications, due to their potency. It is always best, and just as effective, if essential oils are used topically for their benefits. After all, the practice of using essential oils therapeutically is referred to as “aromatherapy” for a reason. Even the inhalation of these amazing oils can help provide relief from a variety of ailments. For example, the inhalation of ginger essential oil has been shown to effectively combat nausea.

To create an anti-inflammatory massage oil for sore, inflamed joints, simply add four drops of ginger essential oil to a glass roller bottle that holds fifteen milliliters. Fill the bottle up the rest of the way with a carrier oil like olive oil. Put the roller and cap back on the bottle and shake it well to mix the ginger and olive oils. Apply the roller bottle to joints and massage the oil blend into the skin well. This can help provide relief to joints at the source of the problem.

This oil blend can also be applied to the stomach during times of gastrointestinal discomfort to help settle the stomach and bowels. Rub the roller bottle onto the stomach and use your hand to massage the oil into the skin, allowing it to fully absorb for best results. Other oils that work great with ginger essential oil for pain and inflammation include peppermint, black pepper, eucalyptus, and spearmint.

Ginger essential oil is much easier to obtain, but there are a few companies that sell turmeric essential oil as well. You can use turmeric essential oil in much the same way as ginger essential oil in the recipes previously mentioned. Turmeric essential oil pairs great with black pepper essential oil, or even ginger essential oil, to further enhance the benefits of any oil blend you create for inflammation.

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### Cayenne

Cayenne may be famous for its spicy flavor, but this pepper also contains capsaicinoids. Capsaicinoids are compounds in cayenne that give it anti-inflammatory properties. Cayenne and other capsaicinoid-containing plants have been used for centuries to treat inflammatory conditions like arthritis and gout. The same compounds in the pepper that help fight inflammation also help combat pain. Not only does cayenne help provide relief from pain and inflammation, it has proven to help heal the lining of the stomach. Although it is a spicy pepper, it won't cause stomach irritation if taken as directed. There are many ways you can use this powerful remedy to help with your inflammatory condition.

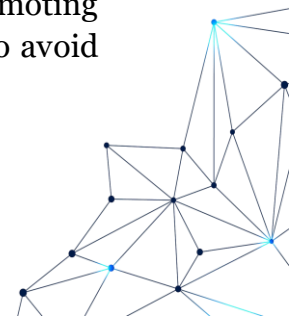


*André Karwath, Own Work, 2004, CC. 2.5*

### Cayenne Salve for Arthritic Pain and Inflammation

You can use cayenne to create a type of topical ointment called a “salve” for joint pain and inflammation. Salves have been used throughout history to treat a variety of conditions. They are made by infusing plant material into an oil base (like olive or coconut oil) and then adding beeswax to thicken it to an ointment-like consistency. To create your own helpful salve, you will need a double boiler (or large pot for boiling water and a smaller pot to fit inside this pot to gently melt the beeswax without damaging its medicinal properties). You will need small containers to put the finished product in. You will also need eight ounces of a carrier oil like olive or coconut oil, as well as one to two tablespoons of powdered cayenne pepper.

Essential oils like turmeric or ginger essential oil work well in this recipe, but are completely optional. Finally, you will need one ounce of beeswax. The beeswax is much easier to work with and melt if you purchase it in pellet form. First, gently infuse the powdered cayenne into the carrier oil on low heat for an hour. Keep an eye on this and try not to let the oil get too hot. Stir it occasionally. After you have given it some time to infuse, you can sit the pot of warm oil inside a larger pot of hot water (double boiler). Add the beeswax and let it melt. Stir it into the oil thoroughly. If you happen to have any ginger or turmeric essential oils, you might consider adding 10 drops to this salve before pouring it into containers. When the beeswax is completely melted and blended with the oils, pour it into containers to cool. This can help further increase the pain and inflammation-fighting properties of the salve. Apply this salve to achy, painful joints up to three times daily to help soothe and reduce inflammation. This salve is also great for promoting circulation in the body! After applying this salve, wash your hands thoroughly to avoid



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the chance of getting it in your eyes inadvertently. Getting this salve in the eyes or mucus membranes can cause irritation.

### Cayenne Tea

Cayenne can be ingested in tea to help combat pain and inflammation. To create tea using cayenne, measure one teaspoon of cayenne powder and put it in a teacup. Pour hot water into the teacup and stir everything together thoroughly until the cayenne is fully absorbed into the water. Adding some lemon juice can help make this tea tasty and add to its therapeutic benefits. Finally, add raw honey to taste. Drink this daily for help reducing bodily inflammation and pain.

### Cinnamon

Cinnamon is another spice with amazing medicinal properties. There are several types of cinnamon, but the best type for medicinal use is Ceylon cinnamon. Most types of cinnamon available are cassia cinnamon. Cassia cinnamon is a lower quality cinnamon that contains higher amounts of a compound called coumarin. Coumarin has been linked to liver and kidney damage. Ceylon cinnamon contains very tiny amounts of this compared to cassia.

Ceylon cinnamon contains a constituent called cinnamaldehyde. This beneficial constituent helps to reduce inflammation in the body by promoting blockage of arachidonic acid. This acid is linked to inflammation and can be the result of consuming too many omega 6 fatty acids. While omega 3 fatty acids are great for reducing inflammation, omega 6 fatty acids (found in unhealthy foods and oils like corn and canola oil) can have the opposite effect.



*Bertrand THIRY, Own Work, 1996, CC. 3.0*

Not only does cinnamon help reduce inflammation due to cinnamaldehyde, but it has also been shown to reduce inflammation by inhibiting the production of a substance in the body called cyclooxygenase-2. Cyclooxygenase-2 is an enzyme that is responsible for creating inflammation.

### Anti-Inflammatory “Shot”

Adding cinnamon to a variety of recipes and teas helps ensure you are getting this beneficial spice in your diet. You can also create a daily health drink using cinnamon, along with apple cider vinegar, lemon, and raw honey. All of these ingredients can help

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promote a healthy immune system. Add one tablespoon of lemon juice, one tablespoon of organic, unpasteurized apple cider vinegar, and one tablespoon of raw honey to a large shot glass. Stir in one teaspoon of cinnamon. Take a shot of this once daily to promote immune health and reduce inflammation.

### Cinnamon Essential Oil

Create an oil blend with cinnamon to stimulate circulation, boost the immune system, and reduce inflammation. In a small glass container (make sure it has a lid) add one ounce of olive oil, or the carrier oil of your choice. Add 6 drops of cinnamon essential oil and blend thoroughly. Massage this blend into areas that need increased circulation, or areas that are swollen due to an inflammatory condition. Rosemary essential oil pairs great with cinnamon for this purpose as well. Add 6 drops of rosemary oil to this blend to further enhance its healing properties. When purchasing cinnamon essential oil, look for cinnamon leaf rather than cinnamon bark. Unfortunately, many cinnamon essential oils are made with cassia cinnamon. If possible, you can also opt for cinnamon bark from Ceylon cinnamon.

### Star Anise

Star anise contains anti-inflammatory properties, along with many other therapeutic actions to help promote bodily health. Star anise contains many phytochemicals that act as powerful antioxidants. These phytochemicals are highly inflammatory, in addition to their antioxidant properties.

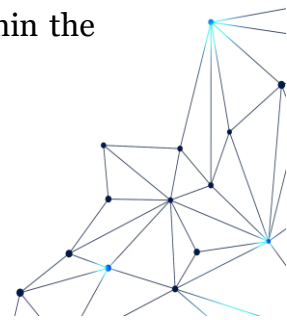
Star anise has been a coveted spice for centuries, and has been used for conditions ranging from digestive upset to boosting the immune system during a cold.



*Sanjay Acharya, Own Work, 2017, CC. 4.0*

### Star Anise, Cinnamon, and Clove Tincture

Create a powerful immune-strengthening and inflammation-fighting tincture using star anise, Ceylon cinnamon, and clove. In a small glass jar, add equal parts of each plant, chopped or in small fragments. Cover the plant material with at least 80 proof alcohol, making sure you completely cover everything well. Place a lid on the jar and store it in a cool, dark place for four to six weeks. After the allotted time has passed, strain it out through a cheesecloth and bottle the liquid in a dropper bottle. Take ten drops, up to three times daily. This mixture is also perfect for digestive issues. This tincture should be avoided by anyone taking blood thinners, as the ingredients in it may further thin the blood.





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## Green Tea for Autoimmune Disease

One of the simplest and most common natural remedies to help manage autoimmune disease is green tea. This is because green tea leaves contains powerful antioxidants called polyphenols. These polyphenols have been linked to a number of therapeutic effects including lowering inflammation, ridding the body of carcinogenic tumors, helping prevent atherosclerosis and coronary artery disease, protecting the heart, and reducing inflammation that leads to issues with liver and prostate disease. Drinking a cup of green tea up to three times daily can be a seriously rewarding way to nourish your body, especially if you are suffering from an autoimmune disease.

## Goldenrod for Autoimmune Disease

Many people know about the amazing antioxidant properties of green tea, but many people are unaware that goldenrod contains up to seven times more antioxidants than green tea! This makes goldenrod just as anti-inflammatory as green tea and a great remedy for help with autoimmune inflammation. Goldenrod is a common, yellow plant that is often noticed in the fall months. It has been blamed for fall allergies, but is usually not the cause.



Goldenrod gets blamed for allergies because it happens to bloom at the same time as ragweed, which certainly does cause allergies. There are many species of goldenrod that can be harvested in the wild across North America. Most species can be used interchangeably.

Goldenrod also has diuretic properties, making it effective at helping to flush out toxins and bacteria that are known to cause bodily issues such as urinary tract infections, kidney infections, and similar conditions.

## Goldenrod Tea

If you get the opportunity to harvest goldenrod in the fall, try to get enough to dry out and make tea throughout the year. Sometimes, goldenrod blooms will become fluffy after being dehydrated or laid out to dry, but this does not affect the medicinal properties. Harvest the aerial parts of the goldenrod plant when collecting to make tea. Fill a reusable tea bag or tea infusion ball with dried (or fresh) goldenrod. Infuse this in a cup of hot water for up to fifteen minutes (longer, if you wish). Add raw honey to taste and gently stir the tea. Enjoy this powerful, antioxidant-filled tea up to three times daily for inflammation management and toxin flushing.

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### Goldenrod Salve

Goldenrod can also be infused in oil to make a salve that can be applied topically to sore, inflamed joints or areas of the body suffering from autoimmune inflammation. To create a salve with goldenrod, simply fill a jar with dried goldenrod and cover the plant material completely with a carrier oil like olive oil. Let this sit in a cool, dark place for four to six weeks. Strain it out when the allotted time has passed and combine eight ounces of the goldenrod-infused oil with one ounce of beeswax in a double boiler. Let the beeswax melt completely and stir it well to blend the oils together. Pour this into containers to cool. Apply to problem areas as needed for relief from soreness and inflammation.

### Yarrow for Blood Purification and Healing

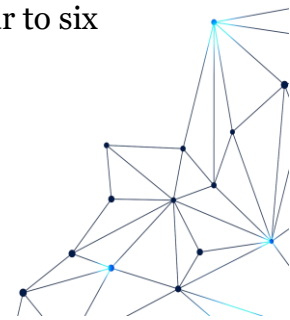
Yarrow is another ancient remedy used for a wide variety of conditions ranging from fevers and wounds, to menstrual bleeding and blood purification. The blood purification aspect of yarrow makes it helpful for those with autoimmune disease.

Another helpful therapeutic property of yarrow is that it has shown promise with relieving gastrointestinal issues. Gastrointestinal issues like and bloating are common symptoms of those suffering from inflammatory bowel diseases. Its ability to staunch bleeding (even internally) is especially helpful for those suffering from autoimmune diseases like ulcerative colitis. It may even help with pain and inflammation, which are common issues for those with autoimmune disease.

Yarrow is a common plant that can be found in many parts of North America from the spring through fall months. It has a distinct, herbaceous aroma, and fern-like leaves. The small flowers on top of the plant are white and clustered together. Harvest the aerial parts of yarrow and hang it or lay it flat to dry. Pregnant women should avoid yarrow, as it may stimulate the uterus. Yarrow can be utilized in several ways for those with autoimmune disease:

### Yarrow Tincture

For those who wish to benefit from yarrow's blood purification properties, as well as help with gastrointestinal discomfort and internal bleeding, a tincture made from yarrow might be an effective solution. To create a tincture from yarrow, fill a jar with the aerial parts of fresh or dried yarrow. Make sure the yarrow has been finely chopped before filing the jar. Next, cover the plant material with at least eighty proof alcohol. Put a lid on the jar and let this sit in a cool, dark place for four to six weeks. Shake the jar daily to help the plant material infuse in the liquid.



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Check the liquid levels often the first few days to make sure the plant material hasn't absorbed any alcohol and left any material uncovered. You may find that you will need to top off the jar and add more vodka. When the four to six weeks have passed, strain out the liquid and bottle it in a dropper bottle. Take twenty drops once a day to start, and slowly up the frequency to three times a daily if needed.

### Yarrow Tea

Yarrow tea is another way to utilize yarrow for autoimmune disease. This method of preparation is somewhat less potent than a tincture and great for those who just want to take yarrow for maintenance.

Fill a tea bag or tea infusion ball with dried or fresh yarrow and infuse this in a cup of hot water for at least fifteen minutes. Add raw honey to taste. Drink one to three cups of this daily for best results. Yarrow tea is also helpful for reducing fevers by inducing sweating. It is a wonderful ally for cold and flu season! You can also use yarrow tea on hemorrhoids to help soothe and heal the area. Pour the tea into a spray bottle and spray it on the affected area as needed. This method works especially well when combined with witch hazel.

### Yarrow Salve for Autoimmune Rash Management

Yarrow can be infused in oil to make a salve for autoimmune-related rashes, as well as bites, stings, scrapes, and other wounds. It may help to reduce redness and inflammation in the affected areas, as well as aid in healing. Create a salve with yarrow by filling a jar with dried and chopped yarrow (aerial parts). Completely cover the plant material with a carrier oil such as olive oil.

Put a lid on the jar and store it in a cool, dark place for four to six weeks. Shake daily to agitate and promote infusion. When the allotted infusion time has passed, strain out the oil and add eight ounces to a double boiler. Next, add one ounce of beeswax pellets. Allow this to melt thoroughly, stirring with a wooden or metal spoon.

Once the beeswax has melted and everything is blended well, pour the warm salve into containers or jars to cool. Use on rashes, wounds, bites, stings, and other skin afflictions as needed.



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### Yucca for Autoimmune Disease

Yucca is a good remedy for autoimmune conditions because it can help improve joint stiffness and muscular pain, as well as soothe skin that is afflicted by autoimmune disease.

It can also help regulate the immune system and improve digestion. Its high vitamin C content, combined with its fiber content, help make yucca effective for immune and digestive health.

A species of yucca known as Adam's Needle is one of the most widely researched yucca species. Yucca roots contain compounds called resveratrol, as well as saponins, which have been shown to help pain and inflammation associated with arthritis. Yucca should be consumed in moderation due to the presence of saponins and natural cyanide, because too many much cause stomach upset.

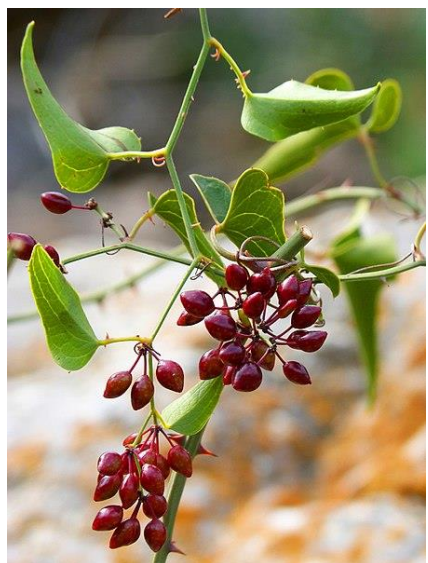
If the yucca root is peeled before preparation, this helps reduce the chances of an upset stomach.

### Yucca Extract

To create your own yucca supplement, fill a jar one third of the way with dried yucca root. The root should be powdered or finely chopped. Make sure to peel and wash the root first if you are working with it fresh.

Next, fill the jar up to half of the way with at least eighty proof alcohol. Fill the jar up to three-fourths of the way with distilled water. Finally, fill the jar the rest of the way with non-GMO vegetable glycerin.

Place the lid on the jar and shake everything well. Store this in a cool, dark, place for four to six weeks. Shake this daily to help the yucca infuse better into the liquid. After the allotted time has passed, strain out he liquid and bottle it in a dropper bottle.

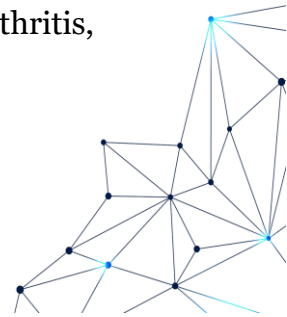


Take 20-30 drops of this liquid once a day to start. You may increase the dosage to up to three times a day if needed. Take the extract under the tongue (hold it there as long as you can) or add it to water and drink it.

### Sarsaparilla

Sarsaparilla has been used for centuries to treat issues like gout, arthritis, digestive issues, fevers, and psoriasis. All of these issues can be linked to autoimmune diseases.

This makes sarsaparilla a promising remedy for those with autoimmune conditions like rheumatoid arthritis, inflammatory bowel conditions, and psoriasis.



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The root of this plant is most often used for medicinal preparations. It is nutritious, containing antioxidants and flavonoids that give it its therapeutic effects. It is also thought to help purify the blood.

### Sarsaparilla Infusion

A popular beverage made from sarsaparilla has been enjoyed for years and simply goes by the name of the plant. It has a distinct and enjoyable flavor that is certainly tolerable to most. Create a nourishing infusion with sarsaparilla roots by finely chopping one cup of the root and placing it in a quart jar. Next, bring water to a boil on the stove and remove it from heat. Carefully dump the water over the roots and fill the quart jar. Place the lid on this and let it infuse for at least eight hours before straining out and consuming. Drink up to three cups of this infusion daily. Start with one cup to see how your body tolerates it, and go up from there as needed.

### Chamomile

Chamomile has been utilized for thousands of years for its pain-relieving, skin soothing, anti-inflammatory, and antispasmodic properties. It is these properties that make chamomile a handy remedy to have on hand for autoimmune conditions that cause muscular and joint pain, rashes, and inflammation.



Chamomile is a very effective remedy, especially when combined with lavender, for those seeking help getting to sleep naturally. Chamomile is available in a variety of preparations, including tinctures, salves, and dried to use in tea. However, consider using chamomile essential oil for a potent and helpful natural remedy.

### Chamomile Essential Oil

Chamomile buds can be steam distilled to capture isolated medicinal compounds in the plant. This essential oil is highly beneficial for topical use, and adding just five drops to two teaspoons of olive oil can result in an effective massage blend for inflammation, swelling, and pain in the joints, as well as help with skin rashes. Adding five drops to an ultrasonic diffuser an hour before bedtime can calm the body and mind and help you sleep.

Adding ten to twenty drops to a few tablespoons of olive oil and combining this with a cup of Epsom salt can create a wonderful bath soak that can target stiff, sore muscles and joints. A little of this strong oil goes a long way, and one bottle can last for years.



# Managing Everyday Environmental Triggers



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**F**rom the 1940s to the late 1950s and 1960s, a "safe and effective" pesticide called DDT was commonly used to help fight against malaria, typhus, and other insect-borne diseases. It was sprayed on children and adults alike, as well as on livestock and in gardens. However, as over the course of several years, people began to question whether or not this "miracle pesticide" was indeed safe.

Turns out, DDT was not safe at all. It caused a large number of environmental and toxicological issues. Studies showed it to cause reproductive harm in humans, as well as liver tumor development in animals. Today, DDT is not used anymore and is classified as a potential carcinogen.

The lesson gathered from this should be that just because the "experts" say something is safe, doesn't mean it actually is. Time and time again, things once thought safe have been proven dangerous. From discontinued pharmaceutical drugs to recalled products, we are constantly reminded that the science is never "settled" on anything. Until long-term studies can prove something is safe, we should approach everything with caution and plenty of evidence-based research under our belts.

This final chapter covers a wide array of potential triggers for those with - and even without- an autoimmune disease. Every day, we are bombarded with a barrage of potential triggers that may affect our health. These triggers can be found in the foods we eat, products we use, medications we take, and even in our neighborhoods. Avoiding some of these things can be quite a challenge, but making any kind of change in lifestyle and habits can be beneficial in the long run.

### Dietary Triggers

Many dietary triggers have already been covered in this book. Processed foods, dairy, gluten, sugars, and foods that contain genetically modified organisms are among the most popular triggers. Other foods like red meat contain arachidonic acid. This substance can trigger flare ups in those who suffer from psoriasis. Arachidonic acid is also found in dairy and eggs. However, free-range eggs tend to be much healthier and likely do not contain the high amounts of arachidonic acid that caged eggs have. A wide variety of foods like shellfish, peanuts, and soy can trigger deadly allergic attacks in those who suffer from food allergies. Dairy and eggs are also major allergy triggers. However, one substance many people include in their diets is highly linked to autoimmune issues. This substance is alcohol:

### Alcohol

Another dietary concern for those with autoimmune disease is alcohol. Alcohol of any kind can be damaging to the immune system because it may disrupt immune system pathways. Alcohol is especially harmful for those with psoriasis, as it may trigger flare-

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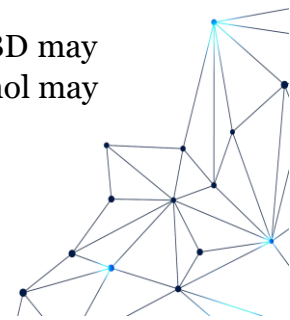
ups. However, alcohol isn't just bad for those with psoriasis. Studies have shown that when alcohol is present in the bloodstream, the body's natural killer cells (T cells) become dysfunctional. When these killer cells are harmed, so are B cells. When B cells are not able to function properly, they may begin to produce more antibodies. Those who drink heavy and often have been found to have more antibodies circulating in their blood. This antibody circulation has been strongly linked with autoimmune disease.



Some have attributed alcohol's ethanol content to flare-ups. This is because when our bodies metabolize ethanol, they create compounds called neoantigens. These compounds can attach to other proteins in the body and trigger an immune system attack. Aside from ethanol, many types of alcohol are also created with sugar, possible GMO grains, grains high in gluten, and other unhealthy substances.

Alcohol is not advised for those with Inflammatory Bowel Diseases (IBD) either. Too much alcohol can worsen anemia for those with certain inflammatory bowel diseases, and may also trigger bowel issues like diarrhea, gastritis, and ulcer development. Those with an inflammatory bowel disease already have issues with these things, and alcohol can make it worse. Not only this, but alcohol may interact negatively with certain prescription drugs for those with IBD.

One of the more serious complications those with autoimmune conditions like IBD may experience is liver disease. It is already well known that overconsumption of alcohol may







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lead to liver disease or liver failure. If there is already a risk for liver issues for those suffering from IBD, alcohol may expedite that chance. Of course, if you already have liver issues as a result of IBD, alcohol can make it worse.

Some people with autoimmune disease may be able to tolerate certain types of alcohol. Others may not be able to tolerate any at all. Knowing the risks of alcohol consumption on the immune system, as well as for those with an existing autoimmune condition, is important when seeking to eliminate potential triggers from the diet.

### Processed Foods



You have likely heard over and over that processed foods are unhealthy. Some people wonder exactly what processed foods are and why they are so bad for our bodies. The answer is somewhat complex because there are several reasons why processed foods are harmful for those with autoimmune disease, as well as the general population.

Processed foods aren't just foods that have been processed in some way, because the fact is that most foods have been processed to some extent. Fruit must be picked and washed. This is technically considered "processing" the fruit. However, the difference is that the fruit was mechanically processed, versus chemically processed. Keep this difference in mind as you read more about processed foods.

The problem with many chemically processed foods is that they were made with artificial and refined ingredients that do no good for the body. Have you ever read a label on the food you purchased? Were you able to pronounce the ingredients? Did you know what each ingredient was? Many people would have no clue what they were reading if they picked up a box of processed food from the grocery store and proceeded to read off the ingredients. This is because artificial ingredients like preservatives, food coloring, flavor enhancers, and texturants have been added. These ingredients may have been tested for safety, but the FDA also says sugar and vegetable oil is safe, when most people know they cause serious health issues.

### Preservatives

The purpose of preservatives is to keep bacteria in food from growing and causing the food to go bad. Preservatives are also used to keep food from separating. The purpose of companies adding these preservatives to food is to keep the people who consume it from getting sick, and this is good. However, many preservatives are not meant to be consumed

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in large quantities. This is a problem, because many people eat processed foods daily, sometimes for every meal.

The high amounts of preservatives consumed are correlated with the development of high blood pressure, heart issues, and even cancer. Not all preservatives are bad. Sometimes, opting for frozen foods can reduce your chances of purchasing a food filled with preservatives. That said, it is still best to read labels and understand what to look for in food. The following preservatives have been shown to affect the body negatively: sulfites, trans fats, partially hydrogenated oils, sodium nitrates, and butylated hydroxyanisole.

Preservatives called sulfites may worsen autoimmune issues and have been shown to trigger asthma. The FDA banned the use of sulfites on fresh fruits and vegetables, but that doesn't mean they aren't in a wide array of other foods. When reading labels, look for terms like sulfur dioxide, potassium bisulfite, sodium bisulfite or sodium sulfite. These are all types of sulfites.

Trans fats have already been mentioned, and thankfully these damaging substances have been banned in the United States after they were shown to be strongly linked to heart disease. The same goes for partially hydrogenated oils.

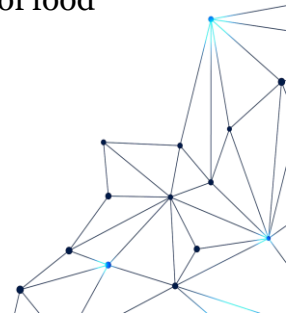
Sodium nitrate is added to meat to enhance the color, as well as the flavor. Nitrates are particularly dangerous when they are heated. This poses a problem when nitrates hit your stomach acid. Stomach acid is strong and interacts with the sodium nitrate to create a dangerous substance called nitrosamines. These nitrosamines have been linked to the development of colon and pancreatic cancer.

Butylated hydroxyanisole is also referred to as BHA. It is a solid that has been used to help preserve lard, meat, and butter. It is supposed to help prevent food from going rancid, and while it may do this, it may also be a carcinogen. More studies need to be conducted to prove this, but in the meantime, it may be best to avoid or seriously limit BHA. BHA is also found in chips, cereals, cookies, and vegetable oils.

A great way to avoid potentially dangerous preservatives that harm the body and possibly trigger autoimmune issues is to buy non-packaged/boxed foods. Also, reading labels and educating yourself on dangerous ingredients is important. Try shopping local, opting to buy your foods at farmer's markets as well.

### Food Coloring

Food coloring may seem harmless, but many food colorings are linked to a number of serious autoimmune and health issues. Each color contains different chemicals that affect different areas of the body. Research is continuing to emerge showing the dangers of food coloring.





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Yellow #6 has been associated with adrenal tumors in animal studies. It has also been shown to cause hypersensitivity reactions that may become severe. Look for this on labels, and especially on products like bakery goods, cereals, beverages, dessert powders, candies, gelatin deserts, and sausage. This has also been added to some cosmetics and drugs. Yellow #5 also causes hypersensitivity reactions, and has been linked to behavioral issues in children.

Blue #1 has been shown to potentially lead to kidney tumors in mice. Blue #2 has been linked to an increase in the risk of tumor development. In male rats, it was shown to increase the risk of brain glioma development.

Green #3 is used in candies, beverages, ice creams and sorbet. It can also be found in ingested drugs, lipsticks, and cosmetics that are applied externally. This particular food coloring was shown to potentially cause bladder and testes tumors in male lab rats.

There are several types of red food coloring. Red #40 is the most popular and widely used food coloring. It can be found in some beverages, bakery goods, dessert powders, candies, cereals, foods, drugs, and cosmetics. This dye may be particularly dangerous if you are suffering from an autoimmune disease, as it has been linked to the acceleration of immune system tumors in studies with mice. This dye also causes allergic reactions in many individuals. Red #3 is used in some sausage casings, oral medication, maraschino cherries, baked goods, and candies. This toxic substance has been recognized by the FDA as being a potential thyroid carcinogen in animals. Around 1990, it was banned in externally applied drugs and cosmetics. Especially avoid this food coloring if you have any sort of autoimmune issues with the thyroid, such as Hashimoto's or Graves' disease. Citrus Red #2 is used on the skins of many Florida oranges. This food coloring has been shown to cause tumors in rodents, particularly in the bladder and urinary system and it doesn't even have to be consumed in large amounts to cause harm.

Dyes are very common in many foods, especially those geared towards children. It is harrowing to think about what may result from children consuming large amounts of these dyes over time. It may not be a coincidence that the rates of behavioral issues (as well as hyperactivity) in children are on the rise with so many foods containing coloring linked to these very same issues.

Not only is the fact that food colorings are linked to behavioral issues alarming, but the many links to tumor growth in mice and other rodents is also cause for apprehension. When it comes to food coloring, do your best to avoid it altogether. Read labels, and think twice before consuming (or letting children consume) those colorful drinks and snacks.

### Flavor Enhancers and Sweeteners

Many flavor enhancers and artificial sweeteners began their journey in a lab. Most are not at all natural. They were created to make food taste better, which causes issues in itself,

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as this may lead to obesity. When reading labels, look for terms such as monosodium glutamate, sodium benzoate, sucralose, aspartic acid, acesulfame potassium, and aspartame. These have all been linked to dangerous health issues.

Monosodium glutamate is both a flavor enhancer and preservative. It has been added to a variety of canned and packaged/boxed foods. This substance is linked to a sickening amount of issues ranging from cancer cell growth to chronic inflammation, making it a substance to seriously avoid if you suffer from any sort of autoimmune disease...or even if you suffer from nothing at all. Manufacturers may try to hide it on labels, but you can be vigilant by understanding other names it may go by. Look for ingredients like autolyzed yeast extract, natural flavorings, soy protein, and whey protein isolate when reading labels.

Sodium benzoate is linked to neurodevelopmental disorders like Attention Deficit Hyperactive Disorder (ADHD). It is also linked with inflammatory disorders like asthma, so especially avoid this substance if you have an autoimmune disease. Sodium benzoate is in many soft drinks and processed foods. When this substance is combined with ascorbic acid (synthetic vitamin C often derived from GMO Corn) in some drinks, it can create another substance called benzene. Benzene has been shown to cause cancers like leukemia and lymphoma.

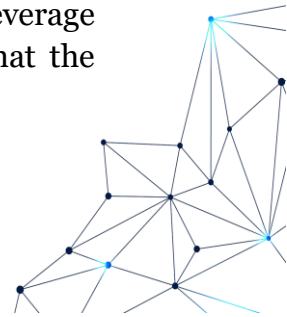
Aspartic acid can overexcite nerves and lead to the destruction of cells in the body. This means that aspartic acid is excitotoxin. When this substance is heated, its cancer-causing abilities are increased and nervous system damage can result.

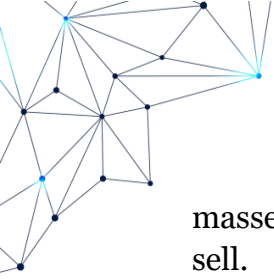
Acesulfame potassium is a type of artificial sweetener that may be used in combination with other artificial sweeteners like sucralose and aspartame. It may cause an increase in insulin excretions, without increasing blood sugar. This is one reason why it is so toxic for those with an autoimmune condition: increased levels of insulin may result in immune system harm and inflammation. This substance may also cause various types of cancer and respiratory diseases.

Aspartame is used as a sugar substitute, but this doesn't make it any better than sugar. Consumption of this substance has been linked with depression. It has also been linked with emotional and psychotic disorders because it disrupts serotonin levels in the nervous system. Because it affects the nervous system so detrimentally, it is best avoided altogether, and especially for those with autoimmune diseases like multiple sclerosis.

### Texturants

The purpose of texturants in processed foods is to enhance the texture of the food and make it more pleasing to eat. There is fierce competition in the food and beverage industry, and many corporations believe that in order to provide something that the





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masses will enjoy, they must improve the physical properties of what they are trying to sell.

Texturants are just another synthetic food and drink additive that may cause cancer and inflammation in the body. Some companies may boast that their texturants are completely natural and safe, but it is always best to do your own research before purchasing any foods or beverages you may suspect contain these substances.

### Avoiding Dietary Triggers

It may seem like avoiding dietary triggers is overwhelming, but just trying to keep it simple and fresh when shopping for food is your best bet. You can avoid processed foods and all the dangerous additives by shopping at farmers markets or purchasing whole foods to create meals with. Purchasing free-range eggs is the best way to avoid unhealthy eggs. Substituting dairy products like milk with almond milk or coconut milk can help you avoid triggering an allergic reaction, since dairy is often associated with skin condition and allergies. When shopping for meat, try a local farmer instead of the grocery store. Drink plenty of water instead of sodas and other sugary drinks. If possible, consider starting your own garden for vegetables you know are fresh and have not been treated with dangerous substances. Gardening is not only a healthy way to obtain your own food, but a great therapeutic tool! Reading labels and understanding what is in the foods and drinks you are consuming is also crucial to staying healthy.

### Drug Triggers

If you ever watch much television, you may have noticed the commercials from law firms asking viewers to call a certain number if they took a certain drug. This is because many drugs, prescription and nonprescription, have not undergone long term testing to see what the potential effects may be. This results in the people taking the drugs to become a kind of experiment. Years later, after taking a drug they thought to be safe, they find out that it is linked to dementia, cancer, or another life-threatening complication. Sometimes, it is too late for the person taking the drug to seek retribution due to the drug taking their life.

### Over-The-Counter Drugs

Many people with autoimmune conditions that cause pain and inflammation turn to over-the-counter pain killers/fever reducers like ibuprofen. Ibuprofen can be effective at combating inflammation and pain, but the long term implications of taking both ibuprofen and Tylenol can be liver or kidney damage.

In addition, research has shown that even taking drugs like ibuprofen for as little as five days in a row may lead to gastritis, ulcers, and leaky gut syndrome. It is almost certain that this common drug interferes with gut health in some way. Keep this in mind as you

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decide what you want to take to manage your symptoms. You may think about turning to natural alternatives like those listed in the natural remedies section of this book instead.

### Hormonal Contraceptives

Hormonal contraceptives have already been mentioned, but are worth mentioning again. These are pushed on women from an early age in many cases to treat everything from acne to irregular periods. They contain synthetic hormones that actually disrupt a woman's normal cycle, cause hormonal imbalance, interrupt ovulation, change the uterine lining, and affect cervical mucus. They may even cause fertility issues later in life. Women have been deceived into thinking that hormonal contraceptives are regulating hormones, when they could be masking symptoms of something more serious that needs addressing in a different way.

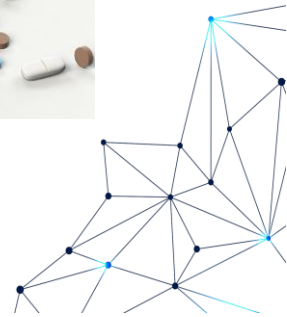
What most hormonal contraceptives do is suppress ovarian function and shut down the body's natural hormone function. The natural hormones are then replaced with synthetic steroids that induce a monthly bleed that is not actually a "real" menstrual cycle, but rather a bleed induced by stopping the synthetic hormones.

Affecting the natural hormones produced in a woman's body also alter other functions. Estrogen plays a critical role in immune system health, and when estrogen is altered by hormonal contraceptives, issues may arise. Women are much more likely to suffer from autoimmune disease, and a more critical look at hormonal contraceptives needs to be taken. Not only this, but women who take hormonal birth control at an increased risk for stroke. This is because some forms of hormonal contraception affect mineralocorticoid receptors that are responsible for salt and water balance (swelling and blood pressure) in the body.

For far too long, women have been told that hormonal contraceptives are safe and effective. While they may be effective (only if taken properly), they are not as safe as medical professionals would like to believe.

### Antibiotics

At one time, antibiotics were handed out by doctors without much hesitation. Today, many doctors are beginning to realize that overuse of antibiotics is contributing to the destruction of gut bacteria. The fact that antibiotics are destructive to gut bacteria has already been discussed in this book, but it is something to





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keep in mind as you decide what medicinal avenue to pursue for the various illnesses you face.

There is no clear answer for what you can take if you wish to avoid antibiotics, since they are quite necessary in some circumstances. There are some plants that have antibiotic properties, such as goldenseal, olive leaf, oregano, and garlic. However, many people are unaware that the same properties that give the plants the ability to kill bacteria also affect the microbiome in a similar way that prescription antibiotics do.

Colloidal silver is another option people go to for an alternative treatment similar to antibiotics. Colloidal silver is an old remedy that uses microscopic flakes of pure silver to kill bacteria in the body.

The flakes are usually suspended in a liquid of some sort, such as demineralized water. Just like the antibiotic plant remedies, colloidal silver can affect the microbiome in a negative way, killing the good bacteria.

The best thing you can do is research the antibiotics you decide to use, as well as work with an experienced naturopath, to determine what will be best for your body. In addition, consuming plenty of prebiotics and probiotics while you are taking antibiotics (and when you are not) can help bring balance back to the gut.

### Other Drugs

Antibiotics are widely known to affect the microbiome, but there are many other drugs that can have a negative effect on gut bacteria. Drugs like anti-diabetics, proton pump inhibitors, and antipsychotics have recently been shown to alter gut bacteria. Now that more research is being conducted on how these drugs are affecting the microbiome, the future may look a little brighter for those who need to take them to manage their conditions.

Some drugs are said to cause autoimmune diseases like lupus. Drug-induced lupus erythematosus (DILE) is an unfortunate side-effect from taking drugs such as Sulfadiazine, Hydralazine, Procainamide, Isoniazid, Methyldopa, Quinidine, Minocycline, and Chlorpromazine. Procainamide demonstrates the highest chances of developing DILE.

Researchers estimate that there may be over one hundred different types of drugs that are linked to autoimmune disease.

### Triggers Around Us

There are many environmental factors that may trigger autoimmune disease or affect our health in a negative way. Knowing what these are can help us become more vigilant in our fight to stay healthy. Whether you have an autoimmune disease or not, it is important to

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understand that there are common substances and objects that we are exposed to each day that may be harmful:

### The Kitchen and Household

Many household items contain toxic chemicals, from household cleaners, to soaps and cosmetics. Plastics contain bisphenol A (BPA) which is a toxic substance that is thought to be associated with damage to the brain and prostate glands, especially in a growing fetus. Some non-stick pan coatings (like Teflon) contain dangerous chemicals that have been linked to high cholesterol and heart disease.

Our microwaves are another item in our kitchen that not only reduce the nutrition in the foods we eat, but emit radiation and cause possible health issues, especially if they are used to cook the foods we eat on a regular basis.

Cosmetics and common toiletries like shaving cream, shampoo, conditioner, hair products, and skin creams contain toxic ingredients like Sodium Lauryl Sulfate, Propylene glycol, methylisothiazoline, polyethylene terephthalate, polymethyl methacrylate, benzaldehyde, toluene, methylparaben, propylparaben, octinoxate, isophthalates, ethylparabens, aluminum zirconium, isopropyl myristate, and phthalates. Each of these ingredients have been linked to issues like hormone disruption, neurological damage, immune system disruption, fertility issues, rashes/skin irritation, allergies, and changes in cell structure. Look for the aforementioned ingredients in the items you buy to avoid exposure. There are apps you can download on your cellphone that help you determine whether or not a product is safe when you are shopping. One helpful app is called “Think Dirty.” The Think Dirty app can be downloaded on your phone and all you have to do is take a picture of the product to figure out if the product contains dangerous chemicals or not.

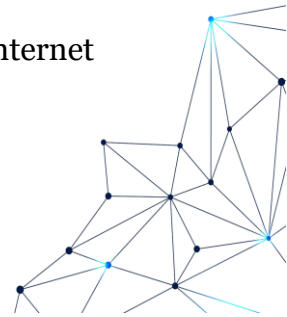
### Dental Fillings

Many of us have had to have dental work done at one time or another. Did you know that dental amalgam fillings contain toxic metals like mercury? Mercury is a substance that has been linked to a disturbing array of autoimmune diseases.

Some with amalgam fillings claim to have developed diseases like arthritis, multiple sclerosis, Lou Gehrig’s disease, Parkinson’s disease/muscle tremors, fibromyalgia/muscle or joint pain, lupus, and Crohn’s disease as a result. Before going in for dental work, make sure your dentist knows where you stand on the type of fillings you desire and opt for resin fillings instead.

### Cell Towers

In our demanding, fast-paced world, it is no surprise that people want fast internet wherever they are.







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This demand has resulted in cell phone companies sticking towers all over the place. As a result, 4G isn't good enough anymore, and many people are excited about an even faster system called 5G.



The problem with this is that there are absolutely no long-term studies demonstrating the safety of this radiation around us all the time. There have even been reports of multiple children being diagnosed with cancer from the same school district where a 5G tower was installed nearby. You may not be able to avoid 5G radiation wherever you go, but there are things you can do to avoid it as much as you can.

If you are home shopping, look around the home for nearby towers and if you see any, avoid purchasing that particular home. Sometimes tower companies get sneaky with how they install the towers, making them appear like natural parts of the landscape. Be aware of this and keep your eyes open for anything that looks like it doesn't belong. There are also companies that offer products that can help block this radiation if you are concerned about exposure.

### **Folic Acid and MTHFR**

Folic acid has been marketed as safe and even necessary, especially for pregnant women. However, this is not completely true. Folic acid is actually a synthetic form of vitamin B9.

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The natural form of this is called folate. Always look for folate instead of folic acid when supplement shopping.

Folic acid is linked to the development of tumors, cognitive issues, trouble sleeping, and changes in hormone levels. Too much of this in the bloodstream has been linked to cancers, as well as the growth of existing cancer. There are supplements that contain folate instead of folic acid. Foods that contain folate include dandelion greens, lentils, legumes, asparagus, avocados, broccoli, spinach, lettuce, collard greens, and mangoes.

It is important to get enough of this vitamin, but make sure you are getting it the natural way. If you have a certain genetic mutation called MTHFR (this stands for Methylene tetrahydrofolate reductase), it is especially important that you stay away from folic acid and other potential triggers mentioned in this book. The MTHFR gene produces an enzyme that is necessary for properly using vitamin B9 (folate). Those with the MTHFR gene mutation have trouble processing synthetic folic acid, as well as eliminating toxins from their body.

There are places you can go to get tested for this gene mutation if you suspect you have it. Ask a naturopath or healthcare professional if they have this testing available. This may give you great insight into your autoimmune disease and overall health.

### Taking Back Your Health with Knowledge

It may seem overwhelming at first when you begin to understand common health dangers that not only affect those with autoimmune disease, but people of all ages and walks of life. However, you will find that this knowledge will also give you the power to take back your health.

Whether it is a change in diet or limiting exposure to possible environmental triggers, remember to take things one day at a time. Even small steps in the right direction can affect your health in a dramatic way!

