

Accelerated Cure Project for MS

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MS Diets – Is there enough evidence to recommend any of them?

A nutritious, well-balanced diet combined with other healthy lifestyle choices (exercise and refraining from smoking) is the foundation of good health not only for people with MS, but also for the general public. Healthy eating includes foods that are rich in fiber and low in saturated fat, such as lean proteins, whole grains, vegetables and fruit. The foods you should avoid are just as important, such as processed foods, as well as those high in sugar and salt. Eating in this manner helps the body’s everyday functions, promotes optimal body weight and can help with disease prevention. While there is no specific diet that will prevent or cure MS, there is [evidence](#) to support that eating certain foods and nutrients, and avoiding others, may help a person’s MS symptoms and disease activity.



A [recent study](#) shows that diet can influence the course of inflammatory diseases in two ways. Dietary factors can directly impact the metabolic process of inflammation in cells. What you eat can also change the mix of “good” and “bad” bacteria in the digestive tract (the [gut microbiome](#)). A healthy digestive tract is populated by a great number of microorganisms living in balance. A disruption of this balance can have a significant impact on one’s health, specifically the chronic, systemic inflammation that occurs in diseases such as MS.

Nutrition is a hot topic in MS research. Many studies reveal an added benefit for people with MS to the “usual” benefits of adhering to a healthy diet. For example, there is evidence that sodium (the primary component of salt) increases MS disease activity. In an



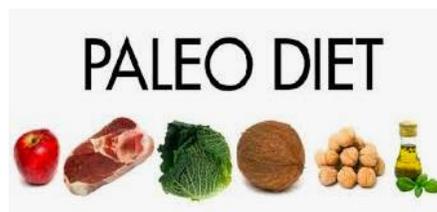
[observational study](#), people with MS who consumed a moderate or high amount of sodium had a higher rate of relapses and a greater risk of developing a new lesion on MRI than people who consumed a low amount of sodium. Another [study](#) shows that consumption of saturated fats (found in such foods as red meat and full-fat dairy products) not only increases the risk of developing MS, but is also linked to disease progression. In addition, a [study](#) published in February 2018 found that people who have MS are at an increased risk for heart problems compared to those who don't have MS, adding more weight to the conclusion that people with MS should steer clear of saturated fats, as well as sweetened foods (which also negatively impact heart health). High sugar intake is also associated with weight gain. [Research findings](#) point to obesity as a possible risk factor for MS. Excess weight can also make it more difficult for those living with MS to be mobile and perform activities of daily living. In addition, obesity increases fatigue, which is a common symptom of MS. Interestingly, one [study](#) suggests that drinking cow's milk may be linked to MS prevalence, however these results have not been confirmed.



According to the Harvard School of Public Health, [certain foods](#) may affect inflammation, either positively or negatively. For example, those that may cause inflammation include fried foods, sugar-sweetened beverages, red meat, [processed meat](#) and margarine. Some anti-inflammatory foods might include tomatoes, olive oil, green leafy vegetables, fatty fish, fruits and nuts (especially walnuts). This school of thought suggests choosing the right anti-inflammatory foods may decrease the risk of illness. Consistently picking the wrong ones may accelerate the inflammatory disease process.

Several diets have been proposed as treatments, or even cures, for MS. It's important to note that, while they may provide some symptomatic benefit, most have not been subjected to rigorous, controlled studies, and the few that have been evaluated have produced mixed results.

The [Paleolithic \(or Paleo\) diet](#) gained popularity with [Dr. Terry Wahls](#), a woman with secondary progressive MS that was wheelchair-dependent. However, after consuming a modified Paleolithic diet (along with physical therapy and [neuromuscular electrical stimulation](#)), she was able to walk again. The aim of the



Paleolithic diet is to return to a way of eating that's more like what early humans ate. The reasoning is that farming changed what people ate and established dairy, grains and [legumes](#) as staples in the human diet. According to the hypothesis, the human body has not been able to adapt to this change. While there are many variations of the Paleo diet, the commonly recommended foods are fruits, vegetables, nuts and seeds, lean meats, fish, and oils from fruits and nuts. Foods to avoid eating are grains, legumes, dairy products, refined sugar, salt, potatoes and highly processed foods. There isn't much scientific evidence to support this diet's role in MS. One [study](#) showed that the Paleo diet improved MS fatigue in people with secondary progressive MS, but the study was small and other interventions like stretching, massage, and meditation were used along with diet. As a result, it's hard to determine which of the interventions benefitted study participants.

The [Mediterranean Diet](#) (MD) is based on the traditional foods that people used to eat in countries bordering the Mediterranean Sea (such as Italy and Greece). It is known to be beneficial for people with heart disease and Type 2 Diabetes, and possibly prevents cancer. This diet promotes a low consumption of added sugar, [refined grains](#), [trans fats](#), [refined oils](#), processed meat, and other highly processed foods. The MD includes a moderate intake of red wine, and a high consumption of whole grains, vegetables, fruits, nuts, seeds, legumes, potatoes, breads, olive oil, and fish. A small 2016 [study](#) found that people who adhered to a MD had a lower risk for developing MS. Otherwise, there is no strong evidence linking its benefit to people with the disease.

The [McDougall diet](#) is based on the premise that the rich [Western diet](#) is the cause of several chronic diseases. It aims at eliminating animal-based food, as well as [vegetable fats](#), and replacing them with low-fat plant-based foods. The suggested staples of the diet include wheat flour products, corn, rice, oats, barley, quinoa, potatoes, sweet potatoes, beans, peas, and lentils, fresh fruits and [non-starch green or colored vegetables](#). This diet requires low sodium and sugar intake and consumption of dairy, oils, eggs, meat, poultry and fish is not allowed. There is no evidence that the McDougall diet provides benefit in MS or other autoimmune diseases. However, a [study](#) from the [McDougall Health & Medical Center](#) showed that 7 days of the diet led to a reduction in weight, blood pressure, and cholesterol levels. This study did not look at on the long-term effects of the diet.

A [study](#) published in March 2011 found a higher incidence of celiac disease, an autoimmune disease characterized by gluten intolerance, among people who have MS than among the general population. Gluten is a protein found in wheat barley and rye. People who have celiac disease must avoid gluten entirely to avoid intestinal damage, but many people who don't have celiac disease find they feel better overall when they adhere to a [gluten-free diet](#). While there's no evidence to suggest that avoiding gluten is beneficial for people with MS who don't also have celiac disease, it may be an option for those not finding relief with other things.



The [Ketogenic Diet](#) is a very low carbohydrate diet designed to force the body to burn fat instead of glucose for energy. This process produces ketones (which gives this type of diet its name). Key foods include avocado, full-fat cheeses, heavy cream, butter, whole eggs, [fatty nuts and seeds](#), bacon, beef, fatty fish, [low carbohydrate vegetables](#), and olive oil. The Ketogenic Diet has been used to treat epilepsy since the 1920s. Researchers are examining its [potential use](#) for treating other neurological disorders, like MS. The resulting change in the body's metabolism from glucose to fat is thought to improve the function of [mitochondria](#), which is linked to the [survival of nerve fibers](#). Because nerve fibers degenerate and die in progressive MS, scientists believe a Ketogenic Diet may benefit people with progressive forms of the disease. Further research is necessary in order to confirm this effect.



The [Fast Mimicking Diet](#) (FMD) follows the same general principles as regular fasting. The body is deprived of food in order to take advantage of health benefits like reduced inflammation and fat burning. The primary difference is that instead of eliminating all food for a single set period of time, calories are restricted for five days every one or two months. While some variation exists, the amount of food on the first day of the fasting period is typically restricted to 1,100 calories, consisting of 34% carbohydrates, 10% protein and 56% fat. For the remaining four days, calories are typically restricted to 800 per day with a content ratio of 47% carbohydrates, 9% protein and 44% fat. A [recent study](#) found that periodic 3-day cycles (3 days of fasting every 7 days for 3 cycles) of a FMD were effective in relieving symptoms in a mouse model of MS. In fact, there was a complete reversal of symptoms in 20 percent of the animals. It's important to note, however, that more research is needed to determine the role of fasting in humans with MS.

Dr. Roy Swank described the [Swank diet](#) in the mid-1950s. The Swank diet is low in fat, with no more than 15 grams of saturated fat permitted per day and no more than 20 to 50 grams of unsaturated fat and oils. Foods that are allowed on the diet include whole grain cereals and pasta, fruits and vegetables, white fish and shellfish, as well as skinned, trimmed poultry. Swank diet guidelines also recommend one teaspoon of cod liver oil and a multivitamin every day. Red meat is not allowed the first year,



and is limited to three ounces weekly thereafter. Processed foods and dairy products that contain more than one percent of butterfat are also not allowed. Dr. Swank recommended this diet to MS patients under his care for several years, many of which followed the diet. Dr. Swank collected data from those patients on the diet and reported his results in 1970. These results were [published](#) in 1990. Dr. Swank's data suggest the diet reduces occurrence of relapses, accumulation of disability and mortality in people with MS. It is important to note that Dr. Swank's study did not have a comparison arm following healthy control subjects. Also, a standardized scoring system, like the [Expanded Disability Status Scale](#) (EDSS), was not available at that time, making quantifying the degree of disability and, in turn, comparing groups of MS patients challenging. Other researchers have not duplicated Dr. Swank's results, so there is no scientific proof that the Swank diet really controls MS. However, there is anecdotal evidence from people with MS who say this diet makes them feel better.



[Overcoming MS](#) (OMS) is a nonprofit organization whose mission includes empowering people with MS by providing them with the tools and resources they need to make sustainable changes to their diet and lifestyle in order to live

longer, healthier lives. Their [Recovery Program](#) includes a modified version of the Swank diet that takes into consideration more [recent data](#) on dietary fats. Amanda Windhof, a member of the iConquerMS research committee and the lead of ACP's [Next Steps Committee](#) on nutrition, is a firm believer in the OMS lifestyle. For those interested, Amanda shares [recipes](#) that fit the OMS program on her [website](#). In her words, "I share

recipes that fit the Overcoming MS lifestyle in hopes that others will see healthy food does not mean lacking in taste.”

While many different dietary strategies are being promoted for people with MS, currently there is insufficient evidence to recommend any of them. Interestingly, despite their differences, these diets have several themes in common. Almost all advocate avoiding highly processed food, food that increases blood sugar levels and food that is high in saturated fat. Most diets also recommend reducing consumption of fatty red meat and increasing consumption of fruits and vegetables. It is important to consult with a doctor or nutritionist before making significant changes in the foods that you eat. One concern about adopting a specific diet is that it may be too restrictive, meaning a person may end up being deficient in important nutrients, causing more harm than good. More research surrounding dietary strategies in MS is needed to determine their benefit and risk. These studies are underway, an exciting development as diet is a factor that is easily controlled, giving people with MS some power over the disease.

