

Dr. Cohen's Guide to

Anti-Inflammatory Foods.



ARE YOU EATING

**INFLAMMATORY
FOOD?**



A New Way Clinic

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Making changes to our diet is not easy.

The saying “It is easier to change a man's religion than to change his diet” (by Margaret Mead) is often very true. We see food not just as nourishment, but also as emotional comfort and a social event. However, so many published studies show us that food is much more than that. The food you eat can influence your function, quality of life, energy levels, cognitive function, and may trigger inflammation, that will lead or increase your pain. Changing your diet can have a profound influence on your life. For that reason, I wrote this guide.

Since I do not believe in diets, only a way of living that follows healthy guidelines, I researched the principles of a healthy diet and how can we embrace these principles into our lifestyle. We will start by understanding what foods cause inflammation and what to eat to avoid more inflammation. I hope this guide will serve you well.

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ANTI-INFLAMMATORY FOODS

“Let food be thy medicine and medicine be thy food.”

Source: Hippocrates

A review of the statistics on chronic disease shows an increase in diabetes, cardiovascular disease, Alzheimer's, cancer, and inflammatory or autoimmune conditions. It is estimated that changes in our food (e.g., high sugar, processed food, and lack of nutrients) have been leading to an increase of diseases. Our food, as research shows, is very important in keeping us healthy or sick.

There are several nutritional approaches to inflammation. Among them is the Dietary Approaches to Stop Hypertension (DASH) and the Mediterranean diet. Both diets are high in fruits and vegetables. It is estimated that the high antioxidant content in fruits and vegetables is one of the leading factors of their health benefits. According to a study published in *The American Journal of Clinical Nutrition*, higher consumption of whole grains, fruits, nuts, and green, leafy vegetables is significantly correlated with a lower concentration of the inflammatory markers CRP and IL-6 in a multi-ethnic population.²

The DASH diet contains high amounts of fruits and vegetables, low-fat dairy products, and low saturated fats and cholesterol. Studies found that following the principles of the DASH diet might lead to an increase in serum vitamin C and a reduction in the levels of the inflammatory marker, C-reactive protein.³

The Mediterranean diet became famous around the world due to its health benefits, as well as being associated with greater longevity and quality of life. Patients with arthritis who followed the Mediterranean diet benefited with a reduction of inflammation, an increase in physical function, and improved vitality.⁴

Eat Mediterranean

For the full benefit of the anti-inflammatory effect of the Mediterranean diet, observe the following principles:

- ✓ High consumption of vegetables (at least 50% of your plate) with the exception of potatoes and vegetable juices
- ✓ High consumption of fiber, legumes, and beans
- ✓ Small amounts of nuts and seeds
- ✓ Abundant consumption of "real" organic olive oil
- ✓ Other oils to use: Avocado, butter, and coconut oil
- ✓ Alcohol limited to one glass of wine, if consumed at all (mainly with meals)
- ✓ Moderate consumption of fish, seafood, yogurt, cheese, and eggs
- ✓ Small amounts, no more than two or three times a week of meat, chicken, or turkey. Favor meat from grass-fed animals
- ✓ Only 20% of whole grains (e.g., brown rice, lentil pasta, or quinoa)

Omega 6 and omega 3 fatty acids: Eating the wrong type of fat can increase your inflammation

Omega 3 has become famous in the last few years due to their health benefits. Both omega 3 and omega 6 fatty acids are polyunsaturated fatty acids, meaning they have more than one double bond. They are classified as "3" and "6" based upon the location of the first double bond in their chemical structure.

Both omega 3 and omega 6 are essential fatty acids. Our bodies cannot produce these, and we have to consume them in our diet. The dietary ratio of these is greatly important. Most doctors are not aware of the importance and, if they are, they do not talk about it. Several studies have shown that a higher ratio of omega 6 to omega 3 (higher omega 6) may promote many diseases, including cardiovascular disease, cancer, chronic inflammation, and autoimmune diseases. However, increased levels of omega 3 (a low omega 6:omega 3 ratio) have been shown to reduce these diseases and were associated with a 70% decrease in total mortality.⁵

The food industry and the dietary habits of humans have changed drastically over the past 100 years. A decrease in consumption of omega 3 fatty acids and an increase in consumption omega 6 fatty acids have become two defining characteristics of the western diet.⁶

Why low omega 3 and high omega 6 is dangerous to your health

Evidence from research and clinical experience shows us that, if you eat more food that has omega 6 and reduce consumption of omega 3, you increase the risk of chronic diseases and inflammation.⁷ Omega 3 appears to have anti-inflammatory properties and can benefit the prevention and treatment of chronic diseases and autoimmune conditions, while omega 6 is pro-inflammatory.

Omega 3 in Food

Cold water fish (herring, salmon, sardines, trout), fish oil, and algae provide EPA & DHA omega 3.

Flaxseed and flaxseed oil, walnuts, leafy green vegetables, and chia seeds provide ALA.

Eicosapentaenoic Acid (EPA)
Docosahexaenoic acid (DHA)
Alpha Linolenic Acid (ALA)

Omega 6 in Food

Canola oil, safflower oil, sunflower oil, corn oil, soybean oil, cottonseed oil, pine nuts, Brazil nuts.

Animal products, such as chicken, beef, and pork are high in omega 6, since they are fed grains all their lives.

Linoleic Acid (LA).

It is important to remember that both omega 3 and 6 are an integrated part of the membrane (outer protective layer) of each of your cells, so they are both required for healthy cell function. The increase in chronic diseases, inflammation, and cancer rates are estimated to be associated with the ratio change between these, due to the drastic changes in our diet. It is also estimated that, during the hunter-gatherer period, the ratio of fatty acids was 1:2 (omega 3:omega 6), while today the ratio is 20:1.8 That puts us in a pro-inflammatory state.

Testing your levels of omega and fatty acids

Testing for fatty acid amounts and the ratio between them might be useful in some cases. The test, called OmegaCheck™, is usually recommended if your triglyceride (another type of fat that is considered “bad”) or cholesterol levels are high, or if you have other factors that increase your risk of heart disease. Occasionally, the test is also ordered in order to check whether dietary changes or supplementation of omega 3 will lead to positive changes in your blood. In the next case, I will talk a bit more about the OmegaCheck™ test.

Case study: Mathew, chronic inflammation

Mathew, a 69-year-old, retired man, came into the clinic and reported several years of chronic neck pain with occasional headaches at the back of the head. He reported that the neck pain had started 20 years ago, and that he had tried a variety of pain medication, chiropractic care, physical therapy, and steroid injections that did not resolve the problem. Over the years, the pain had been increasing, and in the last few months, he gave up driving and playing golf. “I worked hard all my adult life and was looking forward to retirement, to enjoy traveling, playing golf, and spending time with my wife. The pain is constant, and I am tired of it,” said Mathew. Mathew came to one of my seminars and learned about the triggers of inflammation. “I had a feeling that I am missing something. I went to so many doctors, and I am looking for relief and if possible, to find what is causing me pain.”

After reviewing his medical history, his diet, and lifestyle I learned that Mathew’s diet consisted mostly of chicken, every day, and usually from restaurants. He was on over 15 prescription medications and was taking between ten and 15 Advil or ibuprofen a day! To find the triggers of his inflammation, Mathew ordered a comprehensive lab analysis that included a Cardiometabolic test and an OmegaCheck™, a test to measure the amount of fatty acids in his blood.

RESULTS

Test	Normal	Abnormal	Flag**	Units	Ref Range
Dense LDL IV		110	B	nmol/L	<100
Buoyant HDL 2b		1755	B	nmol/L	>1500
Non HDL Partioloc		1192	H	nmol/L	<1000
Cardio Metabolic Risk Assessment		MODERATE	B		LOW
OmegaCheck		4.5	M	%by wt	>5.5
Arachidonic Avoid/EPA Ratio		15.7	H		<5.0
Omega-6/Orrega-3 Ratio		9.0	H		<4.5
Omega-3 Total	4.5			%by wt	
EPA		0.7	L	%by wt	>20
DPA	1.5			%by wt	>1.0
DHA		2.3	L	%by wt	>4.0
Omega-6 Total	40.7			%by wt	
Arachidonic Avoid		11.0	L	%by wt	<9.0

As you can see in the test results, the most important omega 3 fatty acid levels (EPA and DHA) were found to be very low. Mathew's consumption of fish, green leafy vegetables, and other sources of omega 3 was very low. His levels of omega 6 fatty acid, arachidonic acid, was very high (11% when it should be below 9%). A combination of low omega 3 and high omega 6 in his body, as you can see from the high "omega 6:omega 3 ratio," leads to a harmful shift into a pro-inflammatory state. Reviewing his lab results, you can also see that his "Cardio-Metabolic Risk Assessment" resulted in "moderate" risk for cardiovascular diseases, including stroke, heart disease, and Atherosclerosis (a disease in which plaque builds up inside your arteries).

During the six months that followed these labs, Mathew has been introducing more vegetables—both raw, cooked, and in powders—to his diet and has reduced his consumption of chicken. He was placed on anti-inflammatory supplements, such as Boswellia, curcumin, and resveratrol, as well as large amounts of high-quality omega 3 fish oil (slowly increased from two to six grams a day) with meals. He received acupuncture and cupping for several months to increase circulation to the neck and shoulders

and was encouraged to start walking every day. After six months, his range of motion improved, he was able to drive, his pain reduced significantly, and he no longer had to take 15–20 Aleve and Ibuprofen.

Reviewing Mathew's case shows us how important healthy ratios of omega 3 to omega 6 are for healthy function and how increased omega 6 can cause more pain and inflammation.

How to correct an imbalance in omega 3 and 6 and reduce your inflammation

Correcting the imbalance between omega 3 and 6 is an important step in reducing inflammation and improving your health. This should be done in two ways: Increase supplementation of omega 3 and reduce consumption of omega 6.

Introducing supplement of omega 3 fatty acids (EPA and DHA) into your diet has been shown to be effective in correcting imbalance. This is by partially replacing arachidonic acid (omega 6) from the cell membranes of platelets and immune cells (e.g., erythrocytes, neutrophils, monocytes, and hepatocytes) with healthier omega 3 fats.⁷ See more information about supplementation later, in the "supplements" chapter of this book.

Reducing omega 6 is an important step. Supplements alone will not be useful. In severe or chronic inflammation, it is important to reduce animal products or replace them with organic products from pasture-raised animals. The results of the first large-scale, nationwide study of fatty acids in U.S. organic and conventional milk was published in 2013. The study found that on average over 12 months, organic milk contained 25% less omega 6 fatty acids and 62% more omega 3 fatty acids than conventional milk.⁹

Summary

Research has associated a “healthy” diet with lower inflammatory markers such as C-reactive protein, serum amyloid A, and interleukin 6 (IL-6).¹

The foods that reduce inflammation include fruits, vegetables, poultry, legumes, tea, fruit juices, and whole grains. Diets that increase systemic inflammation are high in refined grains, red meat, butter, processed meat, high-fat dairy, sweets and desserts, pizza, potatoes, eggs, hydrogenated fats, and soft drinks.

My recommendation is to increase the number of fruits, vegetables, legumes, and whole grains, to reduce animal products, and to eliminate fried food, refined grain (e.g., white flour bread or pasta), and processed food. I hope you enjoyed this guide.

For more information...

I hope that following these guidelines will support you in your journey to improve your health and reduce pain and inflammation. If you are interested in finding and addressing the triggers of your chronic condition and inflammation, I invite to give us a watch our educational videos or read some of our articles in our website (www.ANewWay.Clinic) or give us a call and set-up a consultation to see if you are a good fit for our Ultimate Health with Functional Medicine program. The program includes a comprehensive approach, including advance tests and tools, to transforming your health and life. **Call us now (503) 545-6285.**



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