

Lifestyle and Dietary Guidelines for Patients with Chronic Inflammatory Conditions

In recent years there has been more evidence that chronic inflammation is the basic cause of many of the serious illnesses that affect Americans, including arthritis, heart disease, many cancers, and even Alzheimer's disease. There has been a plethora of information in print and broadcast media regarding the best dietary and lifestyle choices for people to follow in order to limit these conditions and for improved health in general. Some of the information is based on facts and some on opinion with little scientific basis, or for the purpose of selling a specific product.

The following information is a somewhat brief summary of factual information that has recently come to light with regard to the treatment of inflammation and chronic pain that I feel will be beneficial for my patients. Please bear in mind that there are a lot of diverse opinions regarding diets. I will do my best to avoid the controversial issues and minimize recommendations that are difficult to follow or conflict with dietary treatment of other entities not associated with inflammation and chronic pain. There is considerable overlap in dietary recommendations for prevention and treatment of diabetes, cardiac disease, stroke, cancer and auto-immune diseases. In general, it is recommended that diets which maximize the intake of food with higher pH (base foods) and minimize the intake of low pH foods (acidic) should be followed.

(See chart at <http://letsbraw.blogspot.com/2012/09/change-your-bodys-ph-and-dodge-disease.html>)

Recent studies have shown that patients are more likely to suffer with musculoskeletal pains and tendinopathy (breakdown of tendons) if they also have metabolic syndrome. Metabolic syndrome is a cluster of conditions — increased blood pressure, high blood sugar level, excess body fat around the waist and abnormal cholesterol levels — that occur together, and are associated with increased risk of heart disease, stroke and diabetes. Low-grade chronic inflammation is now known to be a driver of most chronic degenerative diseases. It manifests itself both locally and systemically due to the release of a variety of inflammatory mediators, which are found at elevated levels in patients with coronary

artery disease and arthritis. This common chemical condition is known as a “pro-inflammatory” state. We now know that stress, lack of sleep, lack of exercise and pro-inflammatory diet choices represent types of “non-traumatic” biochemical injury, which causes our cells to generate a low-grade inflammatory state by releasing increased levels of these inflammatory mediators. In addition, many patients with chronic inflammatory problems take narcotic medication for their pain, and it is known that opioids cause weight gain, impair glucose metabolism and increase sugar craving via opioid receptors. This explains why I frequently recommend significant lifestyle alteration including diet modification rather than drug treatment for these chronic conditions. Almost as important as **what** you eat is **how** you eat. This includes food preparation, as well as what you eat in combination and when you eat. For this I will refer you to The South Beach diet book, chapters “How Eating Makes You Hungry” and “It’s Not Just What You Eat, It’s How You Eat”.

Guidelines

The following information is an attempt to provide you with some guidelines about lifestyle and dietary choices as they relate to chronic inflammation. I have tried to simplify the choices and not overwhelm you with endless lists of recommendations. It is beyond the scope of this review to discuss lifestyle and diet as they contribute to other medical conditions and prevention. Recommendations regarding dietary supplements will be included in another handout.

It is important to be reasonable with yourself when addressing dietary habits. There is a lot of information here, so be kind to yourself in making decisions and remember to consider moderation.

The recommendations below are based on a modification of the Mediterranean diet, which is anti-inflammatory, high fiber and low glycemic load. In general, the foods to be avoided or minimized include processed foods, unhealthy fats, sugar, caffeine, and alcohol. Other foods that can increase inflammation include dairy, wheat, corn, eggs, soy, and peanuts. Baked goods, beer, cheese, fruit juice, sugar, dried fruits, and vinegar can affect inflammation by increasing the level of Candida bacteria in the gut. Excessive intake of these foods has been found to be associated with diabetes, cardiovascular disease, stroke, osteoarthritis, obesity,

sleep apnea, cancers, kidney and liver disease, endocrine abnormalities and other chronic diseases.

More comprehensive information may be obtained by going to the website of Andrew Weil, M.D. (drweil.com/dtw/n/ART02012/antiinflammatorydiet).

PRO-INFLAMMATORY DIET (Reactive foods – to be avoided or minimized)

Fats – Excess intake of omega-6 fatty acids leads to the synthesis of hormones that promote inflammation. These are fats that are found in oil-rich seeds and the oils extracted from them, which are used in almost all snack foods and fast foods. Avoid margarine, vegetable shortening and partially hydrogenated vegetable oils including corn, sunflower, safflower, peanut, and cottonseed oils. Fried foods, commercial baked goods, processed foods should be avoided.

Carbohydrates – Chemical reactions between sugars and protein produce pro-inflammatory compounds called AGEs (advanced glycation end products). Keeping blood sugars low and stable can keep this process in check. This means limiting your intake of high glycemic index foods including bread, most breakfast cereals, cake, pastries, cookies, rice, white potatoes, pasta, tortillas, candy, soda, fruit juice, and other refined sugar and flour products. Any fast foods or products made with high fructose corn syrup should be avoided. When you do eat these foods, they should never be eaten without protein.

Protein – Avoid fatty meats.

ANTI-INFLAMMATORY DIET

Fats – Omega 3 fatty acids, which have an anti-inflammatory effect are found in oily fish (see protein below), walnuts, flax, and hemp. With regard to oils we suggest olive, soy and canola oils. Avocados are a great source of healthy fats. Butter is also acceptable in moderation.

Carbohydrates – Eat more whole grains, beans, brown rice, bulgar wheat, quinoa, barley, sweet potatoes, winter squashes and other vegetables, and choose fruits such as blueberries, blackberries, acai, pomegranate, cherries, apples, and pears over tropical fruits such as bananas, pineapple, mango and papaya.

Protein – Eat fish (especially oily fish like salmon, tuna, sardines, mackerel, rainbow trout, barramundi, black cod, and herring), lean meat, skinless chicken, omega-3 fortified eggs, as well as more vegetable protein such as soy foods (edamame, miso), beans (black and pinto beans and chickpeas), lentils and other legumes, whole grains, seeds (chia, flax and sesame), and nuts, especially walnuts and pecans.

Other dietary recommendations –

- leafy green vegetables such as kale and spinach, broccoli, and brussel sprouts
- low fat yogurt is an excellent source of protein (also for its positive effect on gut bacteria)
- dark chocolate is better than milk chocolate
- red wine is the best choice for an alcoholic beverage
- water and/or green tea are the best choice for beverage
- cook pasta al dente

Supplements

Supplement recommendations are abundant and can be confusing. Of course, your dietary intake will affect which supplements you need to take. Also, the form of the supplement and the time of day and foods with which they are ingested can be significant. There is a reasonable consensus that the following supplements can be helpful in helping control inflammation:

Magnesium

Ginger

Turmeric (Curcumin)

Antioxidants

Vitamin D 2000 IU daily

Vitamin E 400 IU daily

Folic acid 200 mg daily

Vitamin C - Esther C 1000 mg daily

Omega-3 fatty acids

Zinc 25 mg 3x/day

Selenium 200 micrograms

Flax seed oil

Mixed carotenoids 10,000-15,000 IU daily

Probiotics

Fiber

Other supplements with less agreement

Resveratrol

Quercetin

Alpha lipoic acid

Copper

Vitamin B6

Bromelain

Chymotrypsin

Papain

Pancreatin

Enteric coated proteolytic enzymes USP grade

Pycnogenol

Boswelia

White willow bark