# Inflammation

Inflammation is the body's natural response to something offensive within the system. It happens when your immune cells are warding off invaders or healing damage to your tissues. In general, the immune system responds to the offender by activating white blood cells, antibodies, and cytokines as a team to work your body back to normal balance. Inflammation is a problem when this immune system is being activated when it isn't needed. This is what we refer to as chronic inflammation. Chronic inflammation can lead to damage to the body's DNA increasing risks of cancer, heart disease, arthritis, Alzheimer's disease, Type 2 Diabetes, and obesity.

While we are still leaning about chronic inflammation and various strategies to combat it, research so far has shown a few effective strategies to focus on preventing inflammation:

- ⇒ Eating a variety of fruits and vegetables provides a complimentary balance of different phytochemicals such as antioxidants (Beta Carotene, Lutein, Lycopene, Retinol, Resveratrol, Vitamin E, Anthocyanins, among many others). In fact, there is a 5% reduced risk of all cause mortality for each serving of fruit and vegetable included, up to 5 servings, daily.
- ⇒ Healthy fats from plant sources and Omega 3 Fatty acids reduce inflammation by decreasing LDL cholesterol and Triglycerides reducing risk for cardiovascular disease and stroke.
- ⇒ Avoiding foods higher in saturated fats which are associated with increased inflammation as well as insulin resistance.

Unfortunately, many of the studies on "anti-inflammatory foods" such as dark chocolate, green tea, red wine, turmeric, ginger, etc., are all done on lab animals and not real people. Conclusions on how these foods and additives can impact inflammation in the long run can't be promised quite yet. While most are not harmful in modest amounts, in some cases, some supplements may cause a detrimental or dangerous effect with overconsumption or in combination with other therapies. Always check with your provider prior to starting any new supplement or treatment. A beneficial effect can be seen with many of those foods when consumed in balance with a healthy diet and lifestyle.

# "GIFT" yourself protection against inflammation

## Get adequate sleep

Quality and duration of sleep directly impact inflammation. Try to go to bed at a reasonable time and avoid blue light stimulation for at least 1 hour before laying down. It is also recommended to avoid eating 2 hours before bed to allow the digestive tract to rest. If you are risk for sleep apnea, consider getting checked - as many as 80 percent of individuals with sleep apnea are undiagnosed.

## Include regular activity

Regular exercise has multiple benefits with improving immune function, decreasing inflammation, as well as helping to better manage stress. Moderate intensity is most recommended, high intensity can have a detrimental effect rather than a positive one. There are also benefits to including a balance of cardiovascular activities as well as strength training and adequate stretching.

#### **F**it in more whole foods

Include a variety of fruits and vegetables, as well as whole grains, lean proteins, and unsaturated fats. All are vital in a healthy, balanced diet to support your body's nutritional needs. Following a diet pattern similar to MyPlate helps to include the right balance of each food group at all meals during the day. Limiting refined sugars, excess sodium and high saturated fat foods is also beneficial by avoiding introducing inflammatory foods to the system.

### Tame stress

Positive psychological characteristics in people are associated with better health and longevity which in turn lowers markers of inflammation. Happier individuals have lower inflammatory markers. This has been studied directly with people who have Type 2 Diabetes. If you are experiencing depression symptoms, it is important to reach out for support. This could be your doctor, counselor, friends, or spiritual advisor. Depression is associated with higher inflammatory markers. Choose to do something you enjoy every day... it's for your health!

Researchers reporting in the June 2019 Psychological Bulletin comber data from 138 studies testing more than 11,000 people worldwide on how facial expressions affect emotions. They found that smiling makes people feel happier, just scowling makes them feel angrier, and frowning makes them feel sadder. It may seem like a small change but the impact of a smile can make a world of a difference.