

# NOVEMBER

# Chronic Inflammation & Immunity



JORDAN SIMONE, ACM JIF WELLNESS DIRECTOR

## Quote of the Month

*"For us to transform as a society, we have to allow ourselves to be transformed as individuals."*

*And for us to be transformed as individuals, we have to allow for the incompleteness of any of our truths and a real forgiveness for the complexity of human beings."*

*- Rev. Angel Kyodo Williams*  
On Being Podcast

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**CHOOSE A CAUSE & PARTICIPATE IN AN ACTIVITY THAT RAISES AWARENESS THIS MONTH**

## NOVEMBER IS...

- Alzheimer's Disease Awareness Month
- Lung Cancer Awareness Month
- COPD Awareness Month
- Diabetes Month

# INFLAMMATION: *What is it?*

## ACUTE INFLAMMATION:

Body tissue damage due to trauma, microbial invasion, or noxious compounds can induce acute inflammation in the body.

Starts rapidly and becomes severe in a short time. Symptoms may last for a few days, for example - cellulitis or acute pneumonia.

Subacute Inflammation is the period between acute and chronic inflammation and may last 2-6 weeks.



## CHRONIC INFLAMMATION

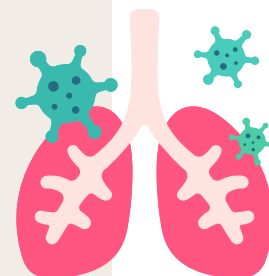
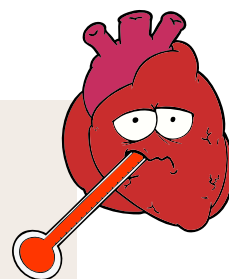
Referred to as slow, long-term inflammation lasting for prolonged periods of several months to years.

Extent and effects vary with the cause of injury and the ability of the body to repair and overcome damage.

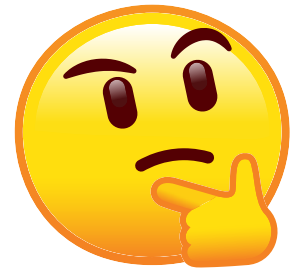
Chronic inflammatory conditions are the most significant cause of death in the world. The World Health Organization (WHO) ranks chronic diseases as the greatest threat to human health.

## MOST PREVALENT CHRONIC INFLAMMATORY CONDITIONS:

- DIABETES
- CARDIOVASCULAR DISEASES
- ARTHRITIS & JOINT DISEASES
- ALLERGIES
- CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)



# INFLAMMATION: 5 Common Myths



## **MYTH 1: INFLAMMATION IS INHERENTLY A BAD THING**

Inflammation can absolutely cause health problems. However, it doesn't mean inflammation as a whole is the evil many assume it is. According to Mark Hyman, MD, "Inflammation is part of the body's natural defense system." When your body detects foreign invaders (like bacteria or a virus), your white blood cells and immune system chemicals called cytokines, "mobilize and protect you", causing inflammation. Without inflammation, the body wouldn't know anything is wrong.

Cytokines are critical to our health - they help wounds heal and repair arteries. "However, if inflammatory cytokines are being overproduced for a long period of time, then we start to see issues and chronic disease," Dr. Hyman says. "This is when the inflammation can run rampant, causing a chronic smoldering fire inside your body that contributes to disease and so much more."



## **MYTH 2: INFLAMMATION IS ALWAYS EASY TO DETECT**

While some signs of inflammation are obvious—redness, swelling, and parts of the body that feel hot to the touch—integrative family medicine physician Bindiya Gandhi, MD, says she's often encountered patients experiencing inflammation without even realizing it. "Many people are not aware they have any inflammation until we check labs, and sometimes people have vague symptoms like fatigue, joint pain, or malaise," she says. And because some of these signs of chronic inflammation can seem like other conditions (or are subtle), people don't often recognize them for what they are. Regular face time with your MD can help pinpoint the exact reasons why it's happening. This is why yearly check-ups are super important!



## INFLAMMATION: 5 Common Myths

### **MYTH 4: INFLAMMATION IS COMPLICATED & KNOWING WHERE TO START FIGHTING IT IS CONFUSING**

While it's true that fighting inflammation typically involves many steps and not just one "quick fix," Dr. Gandhi says there's one common place to start: diet. "In Chinese medicine and Ayurvedic medicine, most disease process and inflammation starts in the gut and many people don't pay enough attention to nutrition," she says. "This is the first pillar of improving overall health and inflammation. Dietary changes can be hard and challenging but when you eat right for your body type and your medical ailments you will see great vast improvement." Basically, if you don't know how to start healing your body, start with the gut.



### **MYTH 5: INFLAMMATION IS INEVITABLE**

If you've ever looked into ways to avoid inflammation, it can be overwhelming. Everything seems to cause it, from stress to sugar. But Dr. Hyman emphasizes that taking measures to lower it—like making dietary changes, exercising, managing stress, and getting enough sleep—pay off big time. "Addressing the causes of inflammation, and learning how to live an anti-inflammatory lifestyle, can protect your body and your brain," he says.



### **MYTH 3: IT TAKES ONE LIFESTYLE OR DIETARY CHANGE TO KEEP INFLAMMATION AWAY**

Dr. Gandhi says another common misconception she sees about inflammation is that many people think it can be fixed with a single action, like consuming more turmeric or avoiding a common food allergen. "In fact, there are numerous changes together you have to work on to improve overall inflammation after you find out the root cause including dietary changes, taking supplements, stress management, and more," she says.

Fortunately, she says, inflammation can be reversed. "A lot of people also think they can't improve or reduce their inflammatory makers but with work and effort, it is possible to reverse them."

# The Link Between

## STRESS, INFLAMMATION & OUR IMMUNITY

### CHRONIC STRESS

Stress is a physical response to feeling challenged or threatened and is good in small doses, however, when stress becomes chronic and mismanaged, it is a detriment to our health and well-being.

Examples of unhealthy stress include inadequate recovery from physical, mental and emotional stress of any kind. This could be related to exercise, constant worrying and repetitive thoughts of a negative nature, and even emotions such as depression and anxiety.

Prolonged stress leads to increased levels of the hormone, cortisol. This alters the effectiveness of cortisol to regulate both the inflammatory and immune response because it decreases tissue sensitivity to cortisol.



### IMPAIRED IMMUNE SYSTEM

When we're stressed, the immune system's ability to fight off antigens (toxin or foreign substance that induces an immune response in the body) is reduced. That is why we are more susceptible to infections. The stress hormone corticosteroid can suppress the effectiveness of the immune system (e.g. lowers the number of lymphocytes - body's main type of immune cell). Stress can also have an indirect effect on the immune system as a person may use unhealthy behavioral coping strategies to reduce their stress, such as drinking and smoking. Stress is linked to: headaches; infectious illness (e.g. 'flu); cardiovascular disease; diabetes, asthma and gastric ulcers.

### INFLAMMATION

As the human body heals, inflammation becomes a response to stress. Like stress, inflammation is beneficial, although when stress becomes chronic, it can lead to constant tissue breakdown and impairment of the immune system.

A review published in June 2017 in the journal *Frontiers in Human Neuroscience* concluded that inflammation is a common pathway of stress-related diseases. "Chronic inflammation is an essential component of chronic diseases," the authors wrote.

Although, "There's no one simple answer," says Alka Gupta, MD, co-director of integrative health at the Brain and Spine Institute at Weill Cornell Medicine in New York City. "We do know, though, that when we teach people how to reduce stress in whatever form — stress management tips, classes, individual advice, yoga, deep breathing — we see decreases in some of these inflammatory side effects."

**Source:** <https://www.rn.com/featured-stories/stress-inflammation-immunity/>

**Source:** [https://www.simplypsychology.org/stress-immune.html#:~:text=When%20we're%20stressed%2C%20the,lowers%20the%20number%20of%20lymphocytes\).](https://www.simplypsychology.org/stress-immune.html#:~:text=When%20we're%20stressed%2C%20the,lowers%20the%20number%20of%20lymphocytes).)

# What's Sleep GOT TO DO WITH IT?

The benefits of a good night's sleep go way beyond feeling rested in the morning and alert for the remainder of the day. Quality sleep just might help us live longer lives! Let's take a look at it's effect on inflammation and our arteries...

## ACCORDING TO SLEEP SCIENTISTS AT UC BERKELEY...

**Sleep, inflammation and clogged arteries are pathologically intertwined.** They have discovered what exactly about fragmented sleep leads to fatty arterial plaque buildup aka "clogged arteries" or atherosclerosis, and can result in fatal heart disease.

"We've discovered that fragmented sleep is associated with a unique pathway — chronic circulating inflammation throughout the blood stream — which, in turn, is linked to higher amounts of plaques in coronary arteries," said study senior author Matthew Walker, a UC Berkeley professor of psychology and neuroscience.

The findings linking poor sleep to atherosclerosis via chronic inflammation have major public health implications, researchers said. For example, atherosclerosis often begins in early adulthood. "Unfortunately, this process goes largely unnoticed until the plaque buildup, in middle or old age, suddenly blocks arterial blood flow to the heart, lungs, brain and/or other organs, hence its moniker, 'silent killer,'" said Vallat. "The insidious nature of the disease requires that we pay extra attention to our sleep hygiene, even starting in early to midlife," said study co-lead author Vyoma Shah.

"This link between fragmented sleep and chronic inflammation may not be limited to heart disease, but could include mental health and neurological disorders, such as major depression and Alzheimer's disease," Walker said. "These are new avenues we must now explore."



## TIPS TO IMPROVE SLEEP QUALITY

- Maintain regular sleep routine - going to bed & waking up at the same time
- One hour before bed, avoid the computer, smartphone and TV screens; keep digital devices out of the bedroom
- Get some form of exercise each day
- Get exposure to natural daylight, especially in first half of the day
- Avoid stimulants like caffeine and sedatives like alcohol later in the day
- If you can't sleep, get out of bed and do a relaxing activity like reading in dim light
- Consult your doctor if you are experiencing insomnia
- Get screened for sleep apnea if you are known to be a heavy snorer and/or feel excessively tired during the day

# MINDFUL MOMENTS

## What is HEALTH & WELLNESS COACHING?

**Individual and Group Health Coaching is available to all ACM JIF Municipal Employees**

### WHAT IS IT?

Health Coaching is not about one diet or one way of living. Instead, it focuses on bioindividuality - the idea that we're all different and have unique dietary, lifestyle, emotional and physical needs. There is no one-size-fits-all approach. Health Coaching helps you to discover how to fuel your body and become the happiest, healthiest version of yourself through a holistic approach.

### WHAT DO WE WORK ON?

- **Nutrition**
- **Physical fitness**
- **Weight management**
- **Stress management**
- **Long & short-term goal setting**
- **Building healthy habits & routines**

- ✓ **Health Coaching is provided by your Wellness Director, Jordan Simone**
- ✓ **Health Coaching is provided to an employee individually or in a group setting. All sessions are virtual, via Zoom.**
- ✓ **ALL sessions are strictly confidential. All information disclosed within sessions will not be shared with or revealed to anyone.**



# N O U R I S H

## BEET & CITRUS SALAD

Recipe From: @functional.foods

IMMUNE  
SUPPORTING  
& GUT LOVING



### ingredients

- 2-3 medium-sized beets, cubed
- 2 1/2 cups fresh citrus fruit such as grapefruit, orange & tangerine
- The juice from 1 medium lime
- 1/2 cup chopped walnuts
- 1/4 cup pomegranate seeds
- 1/4 cup mint, finely chopped
- 1 tbsp organic balsamic glaze - optional

### BENEFITS

- **Beets aid in vasodilation and provide cardiometabolic benefits**
- **Citrus is rich in Vitamin C - a potent antioxidant**
- **Citrus is also rich in anti-inflammatory bioflavonoids**

### recipe preparation

- To a food processor add pitted dates, cocoa or cacao powder, peanut butter (or other nut/seed butter), rolled oats, salt, and vanilla (optional).
- Note: If you don't have a food processor you can try using a blender, but dates can be tough for blenders due to their sticky nature, so use a low speed if possible and pulse rather than blending.
- Pulse until the mixture is well blended and starts to clump together (~30 seconds - 1 minute). If it's too dry or crumbly and it doesn't stick together when pressed between two fingers, add more nut butter or pitted dates (just ensure your dates are sticky and fresh, or it will only further dry out the mixture.)
- Scoop out 1 1/2 Tbsp amounts and gently roll into balls. As the original recipe is written, ~12 balls.
- Enjoy immediately or store leftovers covered in the refrigerator up to 2 weeks, or in the freezer up to 1 month. Let come close to room temperature before enjoying for best texture (in our opinion). Top with extra peanut butter for a "frosting" effect. You probably won't regret it.