

# THE ROAD TO HEALTH & WELLNESS



News and advice courtesy of  
**ELITE**  
PERSONAL TRAINING AND FITNESS SOLUTIONS

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### Inflammation and Cancer

No one wants to get cancer. The word itself is scary, let alone going through treatment. Can you help prevent cancer? Yes, you can. Getting chronic inflammation under control and adopting a healthy lifestyle are both key.



The immune system is a double-edged sword.

The immune system hunts down and destroys abnormal cells in the body, including cancer cells. Without this action, we would succumb to far more cancers than we do. As cancer cells begin to form small tumors, the T cells of the immune system destroy them before they grow large enough to cause damage. This is known as the “expansion” stage. Cancer doesn’t grow while the cancer cells and immune cells do battle. Essentially, the cancer stays inactive. This is called the “equilibrium” stage.

## Inflammation Series

David Trumbore  
PT, DPT, CSCI, CWT, CPI



SCAN ME

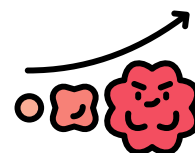
### Cancer cells are wily adversaries.

Cancer cells mutate over time. They become invisible to the immune system and thus elude detection by T cells. Cancer cells learn how to disable immune cells and alter the environment in ways that make it hostile for T cells to function. This is called the “escape” stage. It is the point at which cancer cells multiply, form tumors, and spread.

Elite Personal Training and Fitness Solutions does not provide medical treatment or intervention. We acknowledge scientific evidence that appropriately intensive exercise and sustainable nutritional intervention can have significant impact on chronic health disorders and obesity, dramatically improving symptoms when recommendations are followed. Please visit us at [Eliteptf.com](http://Eliteptf.com) for more information and to schedule your evaluation.

## The immune system can become the enemy.

While your immune system unquestionably protects you against cancer, immunity and inflammation also play central roles in driving tumor development. When infections, autoimmune responses, or conditions such as obesity go awry and cause chronic inflammation, that inflammation can, in time, promote growth of cancer cells.



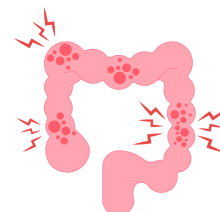
## Chronic inflammation is a risk factor for cancer.

Way back in 1863, German physician Rudolf Virchow discovered leukocytes—white blood cells—in cancerous tissue. He was the first to connect inflammation and cancer, coming to the conclusion that cancer occurs due to unchecked inflammation.

In 1986, Harvard University pathologist and vascular researcher Harold Dvorak noticed similarities between inflammation and cancer, including the proliferation of cells such as lymphocytes and macrophages, which are also activated at the site of injuries. At the time, he referred to these tumors as “wounds that do not heal.”

Some viruses and bacteria directly cause cells to turn cancerous, while others produce a state of chronic inflammation, releasing pro-inflammatory substances that help cancers thrive.

Inflammatory diseases create a hospitable environment hospitable for cancer. People with inflammatory bowel disease (Crohn’s disease or ulcerative colitis) are at increased risk for colon cancer. Inflammation can damage cells in their digestive tract to the point where they turn cancerous.



People with rheumatoid arthritis face double the risk of developing non-Hodgkin’s lymphoma. The disease itself contributes to the increased risk. The same immune cells that become active and produce inflammation in rheumatoid arthritis—B cells and T cells—are the ones that turn malignant in lymphoma. People whose disease is poorly controlled—those with the greatest amount of inflammation—are at the highest risk for developing lymphoma.

## Chronic inflammation increases cancer risk via different mechanisms.

Inflammation damages DNA, causing mutations that allow cancer cells to multiply unchecked. Severe DNA damage activates an enzyme that turns on the release of pro-inflammatory substances. A state of chronic inflammation creates a nurturing environment for cancer cells to replicate and spread.

Our newsletters present overviews of highly complex topics. For more in-depth discussion of vitamins, minerals, supplements, weight loss or ANY health-related topic, please contact our office.

The inflammatory process produces cytokines, growth factors, and free radicals, all of which stimulate the proliferation of cancer cells while inhibiting their death. It also stimulates angiogenesis—the growth of new blood vessels that feed tumors. Meanwhile, cancer cells themselves release substances that help dampen the immune system’s natural response against them.

Scientists are harnessing the protective effects of the immune system to help fight cancer. Immunotherapy is a relatively new treatment. It uses substances engineered in a lab or made by the body to increase the immune system’s capability to seek out and kill cancer.

Evidence supports the idea that NSAIDs, especially aspirin, have powerful anti-cancer properties. In a 2016 study published in JAMA Neurology, regular use of low-dose aspirin for a period of six years was associated with a significantly lower risk for cancer, especially cancers of the gastrointestinal tract.

Daily aspirin has the potential to prevent not only colorectal cancer, but also cancers of the esophagus, stomach, pancreas, lung, brain, and prostate. Long-term aspirin use may reduce cancer diagnoses and deaths by as much as 25%.



The quandary doctors face when prescribing daily NSAIDs is how to balance the cardiovascular and bleeding risks of these drugs with their ability to prevent cancer.

### **There are safe approaches to cancer prevention.**

A safer approach to cancer prevention involves lifestyle interventions like diet and exercise. An estimated one in five cancer cases stems from a combination of excess weight, inactivity, poor nutrition, smoking and excess alcohol use, all of which contribute to inflammation, and all of which are preventable!

In people who are obese, weight loss from bariatric surgery or other methods have been shown to lower cancer risk. Use of omega-3 fatty acid supplements may also offer cancer protection to people who are obese by reducing inflammation in fat tissue. Limiting alcohol use and quitting smoking can also slow or prevent cancer development.



This past year we took an in-depth look at inflammation. This month’s column completes the more technical aspects of this important topic. The series concludes in January 2023. The theme is Embracing Healthy Lifestyles to Decrease Inflammation.



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## Health Topic of the Month

No one likes to talk about it, but approximately 50% of Americans regularly experience constipation. This condition increases with age. It affects approximately 34% of women and 26% of men 65 years and older.



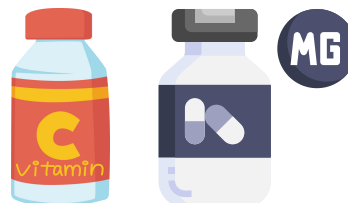
Unfortunately, the risks go well beyond discomfort. Constipation alters gut microbiota. Waste that should be eliminated lingers in the colon and leaks across the colon's semi-permeable membrane, allowing toxins into the bloodstream.

A 2019 study found that constipation is associated with all-cause mortality. Let that sink in. All-cause mortality refers to death from any cause! Constipation is especially associated with higher risks of atherosclerosis. This is a condition you do not want. It can lead to blood clots, chronic kidney disease, coronary disease, heart attack, and stroke.

## Did You Know...

There is a unique way to counter changes associated with constipation. A probiotic strain discovered in New Zealand yogurt is being used to reduce constipation.

For those who need immediate relief from constipation, combinations of magnesium plus vitamin C are effective. Also, keep in mind that certain foods contribute to constipation. Dairy, processed food, fried food, white bread, and alcohol are common culprits.



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## Research Shows

In clinical trials of patients with moderate constipation, daily use of a unique probiotic for two weeks led to the following:

- 42% decrease in constipation
- 52% decrease in abdominal pain
- 48% decrease in nausea
- 31% faster colonic transit times



The researchers concluded that besides restoring gut regularity, this particular strain of probiotic may help prevent several long-term health effects linked to constipation.

If you do not have at least one bowel movement per day, ask us about this targeted probiotic.

## Food Facts: Texture & Starch

Crispy. Crunchy. Chewing. Goey. What do these words have in common? They describe texture. Texture creates a satisfying food experience. That's why the food industry invests heavily in taste testing and textural analysis.

Texture affects taste. For example, texture influences the way saltiness or sugariness is perceived. Different textures can make a product seem more or less sweet or salty even though the level of sugar or salt is the same.

Modified starch is commonly used to create texture. This food additive enhances shelf life. It improves freezing and thawing cycles. It also acts as a stabilizer, thickener, and emulsifier. Who knew our food needed so much work. If it sounds scary, it is.

Modified food starch is bad for you. It can be treated with sulfuric acid, chlorine or other chemicals which are not altogether safe for consumption. Modified starch is calorie dense, so weight conscious individuals should take note. Just some food for thought...

Contributed by Lynette Jernigan

