Fall 2021

# **Alcohol Consumption & G.I. Cancer**

Recommendations May Be Changing Soon

New research from South Korea suggests that even "light" alcohol consumption may put you at risk of developing six specific gastrointestinal (G.I.) cancers, including esophagus, stomach, colorectal, liver, bile duct, and pancreas. Data from nearly 12 million South Koreans showed that even if people drank an equal amount of alcohol per week, those who consumed one or two drinks every day were more likely to develop cancer than those who engaged in episodic binge drinking (i.e., several drinks at the bar on a weekend).

This flies in the face of current thinking that suggests one to two drinks for men and one drink for women daily poses minimal health risk. It also goes against what we consider "socially acceptable." Presently, the American Cancer Society recommends that men do not exceed the two-drink per day limit and women not drink more than one. Certainly, this study is not a reason to switch from daily drinking to binge drinking, since binge drinking has its own health risks (intoxication, acute alcohol poisoning, cirrhosis of the liver, intoxication/impaired decision-making). Yet, it does give pause to those whose daily habits include a pre-dinner cocktail, or a glass of wine with dinner, or a relaxing nightcap — especially if there's a family or personal history of G.I. cancer.

There may simply be no "safe" amount of daily alcohol when it comes to G.I. cancer. This is primarily due to the fact that organs of the G.I. tract are so easily affected by alcohol. In 2018, the American Society of Clinical Oncology reported that more than 5% of newly diagnosed cancers are associated with alcohol consumption. To access the South Korean study online, search PubMed for JAMA Netw Open. 2021 Aug 2;4(8):e2120382.

# 6 Steps to Changing Undesirable ("bad") Habits & Behaviors

- 1. Identify environmental cues which trigger the undesirable behavior.
- 2. Disrupt the cues to help throw bad habits and behaviors off track.
- 3. Replace a bad habit with a good habit.
- 4. Keep the new habit simple.
- 5. Think about the long-term benefits of the new habit, as well as the long-term consequences of the bad habit.
- 6. Remain persistent with the new behavior as it becomes a permanent good habit.

OLDHABITS

### RESEARCH PEARLS:

**Insufficient Water Intake and Heart Failure** 

Researchers at the National Heart, Lung, and Blood Institute recently reported findings which suggest that "maintaining good hydration can prevent or at least slow down the changes within the heart that lead to heart failure." If the body does not have enough water, it attempts to conserve what it does have by activating processes that contribute to the development of heart failure. Measuring the amount of sodium in the blood is an indicator of hydration status; drinking less fluids causes the sodium levels to increase. Higher sodium levels in midlife are associated with higher risk of heart failure 25 years later.

Daily fluid intake recommendations vary from 1.6 - 2.1 liters for women and 2 - 3 liters for men. Insufficient water intake is a global problem but relatively easily remedied in Western countries. Make a new habit to drink more water if you are chronically dehydrated.

European Society of Cardiology Congress - August 2021

#### Mitochondria

#### **Dysfunction Drives Down Health & Longevity**

Mitochondria are organelles (tiny organs) which reside with the body's cells and function like energy factories to convert food into adenosine triphosphate (ATP), a usable form of energy. ATP fuels other cellular processes which contract muscles, send nerve signals, synthesize proteins, and contribute to major metabolic functions within the human body. These "powerhouses of the cells" are responsible for producing about 90% of the cellular energy and are critical to the body's normal functioning.

As the mitochondria age (as you age), they slowly lose their ability to provide cellular energy; at the same time, they start releasing reactive oxygen species (ROS), or free radicals, that harm other cells and contribute to low levels of systemic inflammation. This is known as *mitochondrial dysfunction*, and it is one of the root causes of aging. Although it's not classified as a disease itself, mitochondrial dysfunction is observed in certain metabolic diseases. If the ROS cause damage to the mitochondria's DNA, it may in turn, lead to cancer.

Furthermore, mutations in the mitochondrial DNA can lead to errors when the cells replicate. The mitochondria themselves may not replicate properly, leading to compromised ATP production and more ROS, among other problems. This vicious cycle contributes to the deleterious characteristics of an aging process that is either premature or accelerated relative to various age-related, degenerative diseases and "inflammaging."

Fortunately, improving the health of the mitochondria is possible through lifestyle behaviors. With more people now living increasingly sedentary lives, some daily physical activity can go a long way in helping you to age better. Daily exercise tops the list for reducing oxidative stress and improving oxygen delivery via increased blood flow. Intermittent fasting can also play a role by stimulating autophagy, which occurs when the body is in a fasting state. This process of cellular "housekeeping" allows the mitochondria to remove ROS, unwanted proteins, and other debris that has accumulated. Without autophagy, there appears to be an increased risk of cancer, Alzheimer's disease, Parkinson's disease, and decreased immunity — all of which are experiences associated with advancing age. Thus, one part of aging well is to maintain optimal mitochondrial function for as long as possible.

Change is the only constant in life.

Heraclitus of Ephesos (500 BC)

## Dear Dr. Liker...

Do I still need a flu shot this year, even if I'm masking-up in public spaces, maintaining distance, and staying home more often?



YES. Even though there were significantly fewer cases of influenza during the 2020-2021 season due to more mask wearing and less social interaction with non-household members, this shouldn't give you a false sense of security this year. In the event that COVID is again surging at the same time as the typical flu season, you'll want to minimize your overall risk by getting a flu shot early enough to develop protective antibodies.

The ideal window to get your flu shot is from mid-September to the end of October. It takes about 14 days for the flu shot to be fully effective (i.e., the body has generated antibodies). Protection will begin to wane in mid to late Spring — at the same time as when the amount of circulating flu viruses drops precipitously.

Since there can be some overlap between influenza symptoms and COVID symptoms, be sure to get tested and self-isolate. Even if you "only have the flu," spreading it to others who may be immunocompromised can have serious consequences for them. The flu can be deadly for some people. Mask-wearing helps stop the spread of all types of respiratory infections.

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