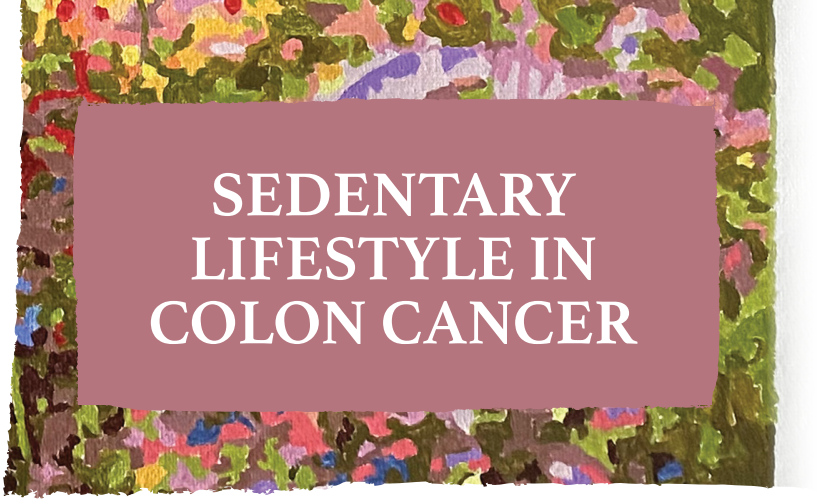
Healing Cancer at the Root
HYPERION
Functional Medicine



SEDENTARY LIFESTYLE IN COLON CANCER

A sedentary lifestyle is associated with an increased risk of colon cancer. A study found that people who sit at desk jobs or drive for a living have a 24% higher risk of developing colon cancer. Watching more than one hour of TV per day is associated with a 12% increased risk of colorectal cancer, and watching more than two hours per day is associated with a 70% increased risk. As with other cancers, the risk associated with a sedentary lifestyle could be explained by hyperinsulinism or insulin resistance, which might stimulate the growth of colon cancer cells[1].

Insulin and insulin-like growth factor are endocrine hormones with important roles in glucose metabolism, and lead to cancer cell proliferation, cancer cell ability to avoid death, and blood vessel formation of tumors. Overstimulation of insulin and insulin -like growth factor biomarkers and their signaling pathways have been associated with increased risk of malignancies. It is well established that excess body fat, particularly abdominal fat, is positively correlated with insulin resistance. When there are consistently high levels of blood glucose, excess insulin is secreted from the pancreas and commonly results in hyperinsulinemia increasing promotion of tumor growth[2].

Hyperion Functional Medicine orders detailed lab testing for all cancer patients to identify and treat insulin resistance, hyperinsulinemia, resulting metabolic syndrome, and inflammation.

Engaging in endurance and resistance exercises, as well as maintaining an active lifestyle, can improve the functioning of mitochondria and has been shown to the risk of cancer[3]. Metabolic dysfunction plays a role in many types of cancers. Disruption of glucose metabolism is associated with higher cancer recurrence rates and reduced survival. Health benefits from exercise during and after cancer treatment improve survival[4].

In cancer, the term "mitochondrial dysfunction" refers to mitochondrial impairment leading to abnormal metabolic reprogramming of cellular energy functions characterized by accelerated glucose uptake and lactate production. It was discovered by the Nobel Laureate Otto Warburg one hundred years ago[5]. Physical activity can help improve mitochondrial function and lower the risk of cancer growth and proliferation.

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Tumor cells in cancer are assisted by mitochondria that have been damaged leading to reprogramming of their functions. This reprogramming increases energy needed for cancer cells survival by switching to a specialized form of metabolism known as the "Warburg Effect" for growing the tumor. These results of reprogramming favor tumor progression, blood vessel growth for the tumor, and suppression of the immune system.

What is important for patients to think about, if you have these risk factors, and you are under treatment for your cancer with radiation, chemotherapy, immunotherapy, or other targeted treatments, how well will any treatment plan for your type of cancer work to decrease cancer growth or cure your cancer if you don't address underlying cancer roots?

A patient centered exercise and nutrition plan targeting weight loss, if needed, is a part of all Hyperion Functional Medicine cancer treatment protocols.

CANCER ROOTS
Collaborating for a Cure

In partnership with healingstrong

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