Healing Cancer at the Root
HYPERION
Functional Medicine

THE G.I. MICROBIOME & COLORECTAL CANCER

The G.I. microbiome plays a significant role in the development and progression of colorectal cancer (CRC) which is now present on a global scale and occurring in much younger age groups. Trillions of microbial cells from hundreds of species of bacteria are in the colon. Interactions of the microbiome with the immune cells and colon epithelial tissue release metabolites, proteins, and molecules that regulate CRC development. Dysbiosis of the gut microbiota, and changes in the type of bacteria contained there and their functions, has been linked to CRC tumor growth. Diet and alcohol consumption can alter the microbiome impacting the development of colorectal cancer. Fiber is considered beneficial because it contains short chain fatty acids which have antitumor properties[1].

Specific bacteria have been identified and found in higher levels in colorectal cancer patient's intestines. There are specific bacteria that have been identified in the G.I. microbiome which can cause DNA damage and lead to Colorectal cancers[2].

Dysbiosis in the gut microbiome will lead to inflammation, as with other cancers, can contribute to colorectal cancer development and tumor progression. Bacteria contained in the G.I. tract also influence how the body responds to treatments.

The G.I. microbiome can influence the development of cancers and the risk of developing colorectal cancer when chronic inflammation and poor diet are in play. Processed red meats, and other compounds released from high heat cooking also increase the risk. Stress, overuse of antibiotics and intake of synthetic food dyes have also been seen as contributory to colorectal cancer development.

Bacteria in the gut send signals to the mitochondria, this has been observed to alter mitochondrial metabolism, activate immune cells, induce inflammation, and alter the intestinal barrier. Dysbiosis of the microbiome in the gut and the resulting mitochondrial dysfunction are associated with chronic intestinal inflammation and cancer[3].

Hyperion functional medicine places nutrition at the top in our functional oncology cancer treatment program. Many patients don't realize the extent that toxic foods drive inflammation throughout the body in their daily lives. They have not been educated on foods that are direct contributors to chronic G.I. symptoms and dysbiosis. The diet has a direct effect on inflammatory levels and the health of the G.I. microbiome impacting cancer and other chronic diseases.

A comprehensive stool analysis is essential to evaluate the health of the cancer patient's microbiome and the overall function of the G.I. system. Hyperion functional medicine uses stool testing in patients who are in the Phase 1 Functional Oncology Program. The G.I. stool test is used to evaluate the microbiome for dysbiosis, potential for immune dysfunction, inflammatory markers, bacterial metabolites, infectious bacteria, parasites, and overall microbial diversity.

A detailed and stepwise functional treatment plan is made based on the results of the stool test which may include prescribed beneficial probiotics or prebiotic's, G.I. specific nutritional recommendations, pharmaceutical grade supplements as indicated, and botanical antibiotic treatment remedies based on the microbiome testing results.

CANCER ROOTS
Collaborating for a Cure

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2 - Li S, Liu J, Zheng X, Ren L, Yang Y, Li W, Fu W, Wang J, Du G. Tumorigenic bacteria in colorectal cancer: mechanisms and treatments. Cancer Biol Med. 2021 Sep 30;19(2):147–62. doi: 10.20892/j.issn.2095-3941.2020.0651. Epub ahead of print. PMID: 34586760; PMCID: PMC8832957.
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