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COLON CANCER
& THE GUT

WHITEPAPER



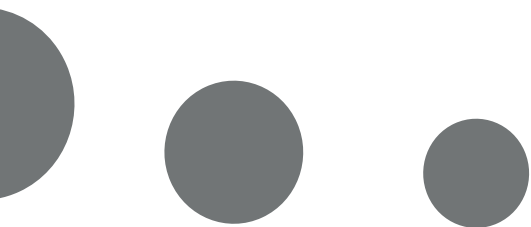
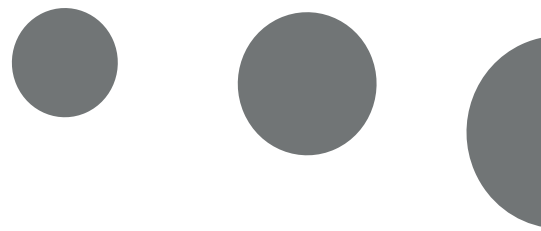
COLON CANCER AND THE GUT

Colon cancer or Colorectal cancer (CRC) is one of the most frequent cancers found in Western populations, and usually affects those over the age of 60. A number of different genetic and environmental factors contribute to its development. Risk factors for CRC include: genetic predisposition (family history), Western-style diet (high in red meat low in fibre), excessive weight, lack of physical activity, smoking and alcohol. CRC is treated with a combination of different invasive therapies including surgery or medicine targeting cancer cells (chemotherapy)⁽¹⁷¹⁾.

The role of microbiota in the development of CRC has been recognised through research. Some bacterial species dominate in CRC – the increased abundance of several species – *Fusobacterium nucleatum*, *Bacteroides fragilis*, and *Escherichia coli* have all been linked to this type of cancer. Bacteria such as these are believed to promote the development of CRC through various mechanisms (DNA damage, activation of cancer-causing genes and modification of the gut's protective barrier)^(149, 150, 151, 152).

Low concentrations of SCFAs (acetate and butyrate) and a secondary bile acid (ursodeoxycholic) have been noticed to be associated with development of CRC^(153, 154, 155). As we now know, diet is one of the major factors shaping the gut microbiota. A high-fibre diet is beneficial for overall health and, moreover, reduces the chances of events leading to cancer in the colon^(59, 60).





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