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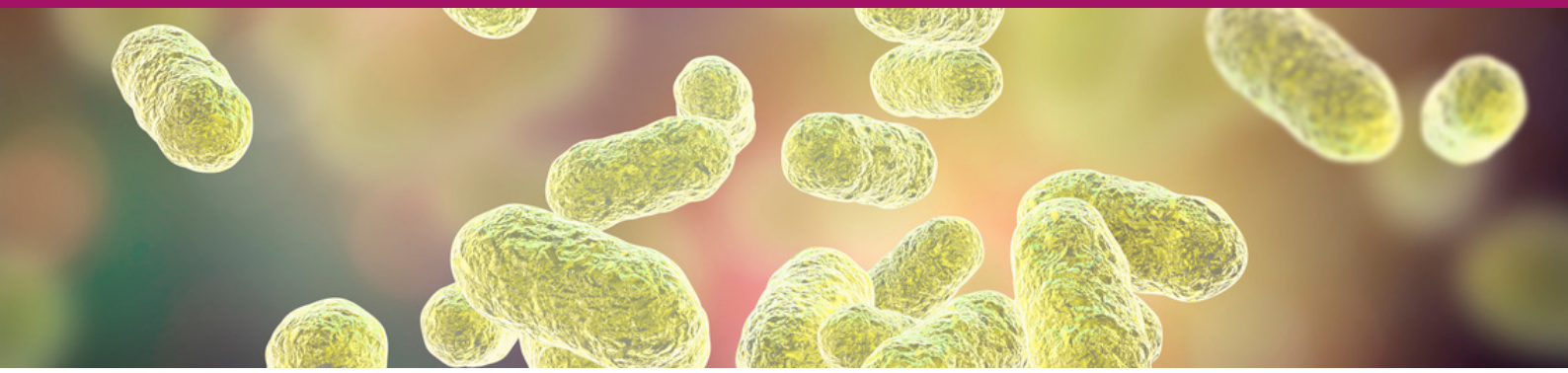
Science-based nutrition practice since 1997

The Gut Microbiome

The "gut microbiome" constitutes trillions of microorganisms and their genetic material residing in the gastrointestinal tract (GIT)



The gut microbiome comprises a wide array of microorganisms, encompassing bacteria, viruses, protozoa, and fungi, as well as their collective genetic material present in the gastrointestinal tract (GIT). In simplistic terms there are two types of bacteria; symbiotic healthful bacteria and pathogenic harmful bacteria. Maintaining a healthy balance of these bacteria in the gut is important for healthy digestion and a strong immune system as both play a pivotal role in health. These microorganisms work symbiotically and actively participate in the digestion of food, as well as assist in the absorption and synthesis of nutrients.

Health & The Microbiome

The gut microbiome influences health in many ways:

- **Digestion and Nutrient Absorption**: Commensal bacteria produce enzymes that aid in the digestion of certain nutrients, leading to better nutrient absorption.
- **Protection against Pathogens**: Commensal bacteria in the gut act as a barrier, preventing harmful pathogens from colonising the GI tract and causing dysbiosis (bacterial imbalance), inflammation and disease.
- **Mental Health and Brain Function**: Certain bacteria produce neurotransmitters and chemicals that can affect mood and behavior. Several mood disorders, such as anxiety, depression, and autism spectrum disorders have well-established links to functional GI disruptions.
- **Immune Support**: The gut is a major part of the immune system with <70% of immune cells harvested within the gut. This allows the induction of protective responses to pathogens and the maintenance of regulatory immune pathways.
- **Metabolism and Weight Regulation**: The gut microbiome influences energy metabolism and the storage of fat.

Factors such as diet, alcohol consumption, stress, sleep, medication and antibiotic use, and environmental exposures can influence both the composition and diversity of gut microbiota, and function of the gut microbiome.

Diet & Nutrition

There is a strong link between diet and gut health. Certain foods, especially those rich in certain fats, ultra processed foods and drinks, and refined sugars, have the potential to negatively impact microbiome diversity. BANT nutrition practitioners assess and identify potential nutritional imbalances to understand how these may be contributing to imbalances and will optimise the diet accordingly to restore balance of gut microbiota and function.

FOOD FOR YOUR HEALTH

Compiled by BANT Registered Nutritionist ® Simona Yakarova, last updated 15/01/24