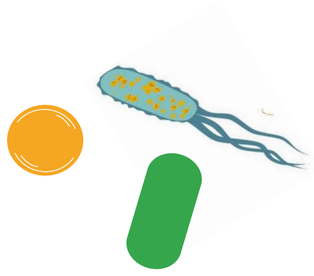
Advances in Nutrition, Gut Health, and the Microbiome

Gut microbiome: An ecosystem of bacteria, archaea, viruses, and eukaryotic microbes that play an important role in our health

The environment plays an important role in the development of the gut microbiome and can have a major impact at the beginning and end stages of life

Let's start at the beginning

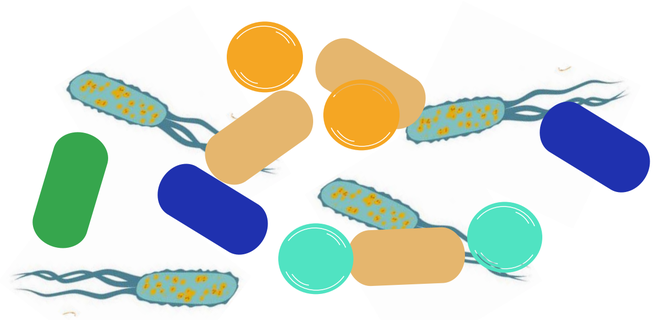
At birth the human gut becomes populated by microbes during and after delivery. C-section or vaginal birth can influence gut microbes



Newborns have an unstable gut microbiota with low diversity

Breastfeeding contributes to greater microbiome diversity

During infancy, contact with natural environments increases microbiome diversity



At approximately 2-3 years of age, the gut microbiome has become more diverse and stable

At approximately 2-5 years, the gut microbiome is similar in composition and diversity to an adult

Throughout our lifespan the gut microbiota remain relatively stable.

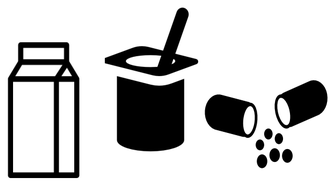
Use of antibiotics reduces microbiome diversity

The gut microbiome protects us against pathogens, interacts with the immune system, and contributes to good health until old age.

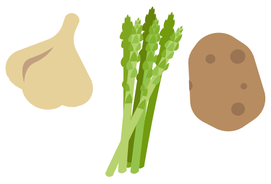
Diet can help maintain a healthy microbiota and prevent dysbiosis in the gut

Dietary fibre

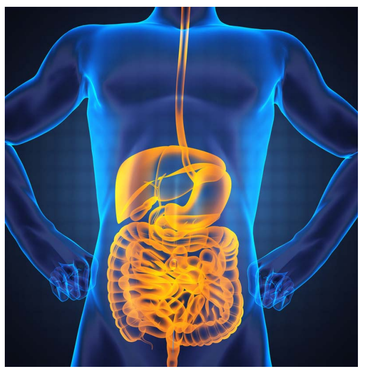
Probiotics



Prebiotics



Greater microbiota diversity that is stable and resistant to change



Canadian Nutrition Society
Société canadienne de nutrition

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Human Health and Nutritional Sciences

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Based on the 2017 CNS Thematic Conference
www.cns-scn.ca