Abstract

The study of the microbiota is a relatively new field that still has so much unknown. Until recently it was assumed by most of the population that all microorganisms were harmful. However it is becoming known now that these microorganisms have grown and evolved with humans for thousands of years. It is estimated that there are around 100 trillion microorganisms that live on and in the human body. This means that these microorganisms outnumber our human cells 10 to 1 and play a huge role in many functions of the body. These organisms also exhibit many of their own unique genes, which far outnumber the number of genes expressed by our own human cells. One of the main functions of these organisms is their role in the immune system and how it relates to health. When working at optimal level the microorganisms and body's immune system work together to fight off pathogens. In today's germ free age though the new autoimmune disorders, allergies, and other disorders are on the rise due in some part to a disruption of the body's natural microorganisms. This paper will explore the effects these microorganisms have on the immune system and other components of health. Specifically it will look at how these organisms develop and establish themselves in the body. It will also look at tolerance as well as colonization resistance and the role the microflora has in these processes. Lastly it will look at the gut/brain barrier and different disorders that can arise from a disymbiosis in the microflora.

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