

# Microbiome, E. coli Bacteria can Prevent Infections

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## INTRODUCTION

Every person has their own microbiome, which is distinct from everyone else's. Each is made up of a variety of bacterial, fungal, and viral species that can be found on all body surfaces, including the skin, mucous membranes, and the gastrointestinal system in particular. Furthermore, microbiomes have a significant impact on their hosts' immune systems, endocrine systems, and metabolism [1].

Many people are familiar with E. coli's negative side, as certain strains of the bacteria can cause disorders including diarrhoea, sepsis, and even cancer. However, there are several E. coli strains that are harmless. The majority of them colonise people during or shortly after birth, helping to establish a healthy host-microbe interaction [2].

E. coli does not always have the ability to prevent Salmonella infections. If the microbiome's complexity is too low, its members won't be able to consume all of the sugar substrates that Salmonella strains require, allowing the infection to establish itself.

A total of 12 bacterial species were discovered in this microbiome, all of which are common in the healthy mouse gut. This mix of species was then administered to germ-free mice, which were later infected with Salmonella.

E. coli was unable to prevent Salmonella infection in the absence of Lachnospiraceae. The host can be protected from bacterial infections by a combination of competition for carbon sources and intricate interactions between bacterial species [3].

Human-to-human transmission of commensal intestinal bacteria could improve health by developing, maintaining, and renewing microbial diversity in an individual's microbiota. Despite the

potential similarities between pathogens and commensal bacteria, the pathways of transmission for both remain unrecognised and poorly understood. As a result, broad infection control strategies such as oversanitation and the overuse of antibiotics, which are intended to limit pathogen transmission and infection, may accidentally harm human health by disrupting normal commensal transmission [4,5].

## Infections and their Treatment

- Make sure you get enough of rest.
- Drink plenty of water. Dehydration and weariness can be avoided by drinking plenty of clear liquids, such as water and broths.
- Take little sips of water. This can aid in the prevention of vomiting.
- Avoid meals that aggravate your symptoms.
- Incorporate bland foods into your diet gradually.

## REFERENCES

1. Whitman WB, Coleman DC, Wiebe WJ. Prokaryotes: the unseen majority Proc Natl Acad Sci 1998;95:6578-6583.
2. Sekirov I, Russell SL, Antunes LCM, Finlay BB. Gut microbiota in health and disease Physiol Rev 2010;90:859-904.
3. Louis P, Hold GL, Flint HJ. The gut microbiota, bacterial metabolites and colorectal cancer Nat Rev Microbiol 2014;12:661-672.
4. Lawley TD, Walker AW. Intestinal colonization resistance Immunology 2013;138:1-11.
5. Human Microbiome Project Consortium. Structure, function and diversity of the healthy human microbiome. Nature. 2012;486:207-214.

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