Coliform Bacteria Encyclopedia Article

Coliform Bacteria

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Coliform Bacteria

Coliform bacteria live in the nutrient-rich **environment** of animal intestines. Many **species** fall into this group, but the most common species in mammals is ***Escherichia coli***, usually abbreviated *E. coli*. A typical human can easily have several trillion of these tiny individual bacterial cells inhabiting his or her digestive tract. On a purely numerical basis, a human may have more bacterial than mammalian cells in his or her body. Each person is actually a community or **ecosystem** of diverse species living in a state of cooperation, competition, or coexistence.

The bacterial **flora** of one's gut provides many benefits. They help break down and absorb food, they synthesize and secrete vitamins such as B_{12} and K on which mammals depend, and they displace or help keep under control pathogens that are ingested along with food and liquids. When the pathogens gain control, disagreeable or even potentially lethal diseases can result. A wide variety of diarrheas, dysenteries, and other gastrointestinal diseases afflict people who have inadequate **sanitation**. Many tourists suffer traveler's diseases known by names such as Montezuma's Revenge, La Tourista, or Cairo Crud when they come into contact with improperly sanitized water or food. Some of these diseases, such as **cholera** or food **poisoning** caused by *Salmonella*, *Shigella*, or *Lysteria* species, can be fatal.

Because identifying specific pathogens in water or food is difficult, time-consuming, and expensive, public health officials usually test for coliform organisms in general. The presence of any of these species, whether pathogenic or not, indicates that fecal contamination has occurred and that pathogens are likely present.