

## Editorial note on anaerobic bacteria.

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### Editorial

Anaerobic bacteria predominate in the normal skin and mucosal flora. Infections caused by anaerobes are common and can occur if they have a normal flora (endogenous) and can be serious or life-threatening. Anaerobic bacteria are demanding, difficult to isolate, and often overlooked. Their extraction requires appropriate methods of collection, transport and culture. Their ubiquity on the mucosal skin surface often impedes the generation of meaningful cultures. However, they make a big difference in the lethal effect of oxygen. Severe anaerobes do not grow on the 10 carbon dioxide in the air. Micro aerobic bacteria can grow in air or in oxygen under aerobic or anaerobic conditions, and facultative organisms can grow in the presence or absence of air. The general teaching is that the negative redox potential (Eh) of the environment is an important factor. However, studies with *Bacteroides fragilis* have shown that oxygen has a direct toxic effect. If oxygen is not introduced, the chemical manipulation of the redox potential has no effect. In addition, the airworthiness and possibly toxicity of anaerobic bacteria correlates with the ability to induce the protective enzyme superoxide dismutase upon exposure to oxygen.

The classification of anaerobes has changed due to improved characterization by genetic studies. The genera and groups most frequently isolated from clinical infections in descending order of frequency are *Bacteroides/Prevotella*, *Peptostreptococcus*, *Clostridium*, *Fusobacterium*, Gram-positive rods and Gram-negative cocci. DNA techniques (eg, determining DNA mol% of guanine and cytosine content, ribosomal RNA homology,

gel electrophoresis sequencing) and chemical taxonomic analysis (e.g., peptide glycan analysis, whole cell fatty acid gas-liquid chromatography). There is a classification in the use of Relationships between anaerobic bacteria. Extensive taxonomic changes affected the Bacteroidaceae family and anaerobic Gram +ve cocci. *Bacteroides melaninogenicus* was a single species until 1977 and is now composed of two genera and >15 species. With minor changes to the classification of Gram +ve rods, the genus *Eubacterium* is heterogeneous and under-studied.

Anaerobic microorganisms are common pathogens in humans. The most clinically important anaerobes are involved in mixed infections in addition to aerobic bacteria, but under certain circumstances: B. Bloodstream causes serious illness. There is a possibility. Anaerobic bacteria that commonly cause infections in humans are *Bacteroides*, *Prevotella*, *Fusobacterium*, *Clostridium species*, and Gram-positive anaerobic cocci. Anaerobic bacteria are symbiotic organisms on the mucosal surface of the oral cavity, gastrointestinal tract, and female reproductive organs. Anaerobic infections are usually multimicrobial and often result primarily from surgery, trauma, and destruction of the mucosal surface due to the presence of tumours. Anaerobic bacteria are difficult to diagnose and are often overlooked due to their demanding nature. Their separation requires appropriate methods of collection, transport and culture. Infections caused by anaerobic bacteria include aspiration pneumonia, lung abscess and brain abscess, oral and dental processes. Antibiotics that have the greatest effect on most anaerobic bacteria include metronidazole, a  $\beta$ -lactam /  $\beta$ -lactamase inhibitor combination, and a carbapenem.

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