Oral cavity 0

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- The oral cavity acts as a complex, heterogenous microbial habitat
 - Saliva in the oral cavity contains antimicrobial enzymes such as lysozyme and lactoperoxidase
 - High concentrations of nutrients near the mouth surface however promote the growth of bacteria
- Dental plaque is the result of the extensive growth of microorganisms, especially Streptococci
 - As the plaque develops, **anaerobic bacteria begin to grow**, these produce high amounts of acid that result in the **decalcification of the tooth**
 - Streptococcus sobrinus and Streptococcus mutans are both lactic acid bacteria
 - Diets high in sugar encourages lactic acid bacteria to ferment and produce lactic acid
 - Sucrose is common in developed countries and so 80-90% of people are • colonised by S. mutans
 - Fluoride makes the tooth more resistant to decay •
- 0 GI tract
 - This includes: •

- . Stomach
 - Such as Lactobacilli
 - Small intestine
 - Such as Enterococci & Lactobacilli
- Large intestine
 - Such as Bifidobacterium & Clostridia
- The microflora here are responsible for the digestion of food, absorption and production of Intestinal microorganisms carry out a number of essential functions Vitamin synthesis Gas and odour production Production of bioaction
- - Production of the yrnes, such as β -glugaro
- bstances is influenced by diet and the intestinal flora The type and and the produced o aì
- Respiratory tract 0
 - This includes:
 - Nasal cavity
 - Such as *Staphylococus aureus*
 - Pharynx
 - Such as *Corynebacterium diptheriae*
 - Trachea
 - Such as the influenza virus
 - The upper respiratory tract contains microorganisms bathed by secretions of mucous
 - They enter from the air, become trapped and then are expelled
 - Resident organisms include Staphylococcus & Streptococcus
 - The lower respiratory tract, including the bronchi and trachea, are essentially sterile
 - Ciliated epithelial cells expel bacteria and particulate matter
 - Only matter smaller than 10µm can reach the lungs
- Urogenital tract 0
 - The bladder is typically sterile in healthy humans •
 - Altered conditions can cause potential pathogens to inhabit the urethra (such as *E. coll*)
 - The vagina of the adult female is weakly acidic (pH<5) and contains a lot of glycogen
 - Lactobacillus acidophilus, a resident organism in the vagina, ferments glycogen producing lactic • acid which produces a protective environment
 - This changes before, during and after puberty as well as after menopause