



DENTAL CARIES



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DENTAL CARIES

- Progressive bacterial damage to teeth exposed to saliva.
 - one of the most major causes of all diseases and major cause of tooth loss.
 - ultimate effect-to breakdown enamel and dentin and open a path for bacteria to reach pulp.
- Consequences-inflammation of pulp and periapical tissues.



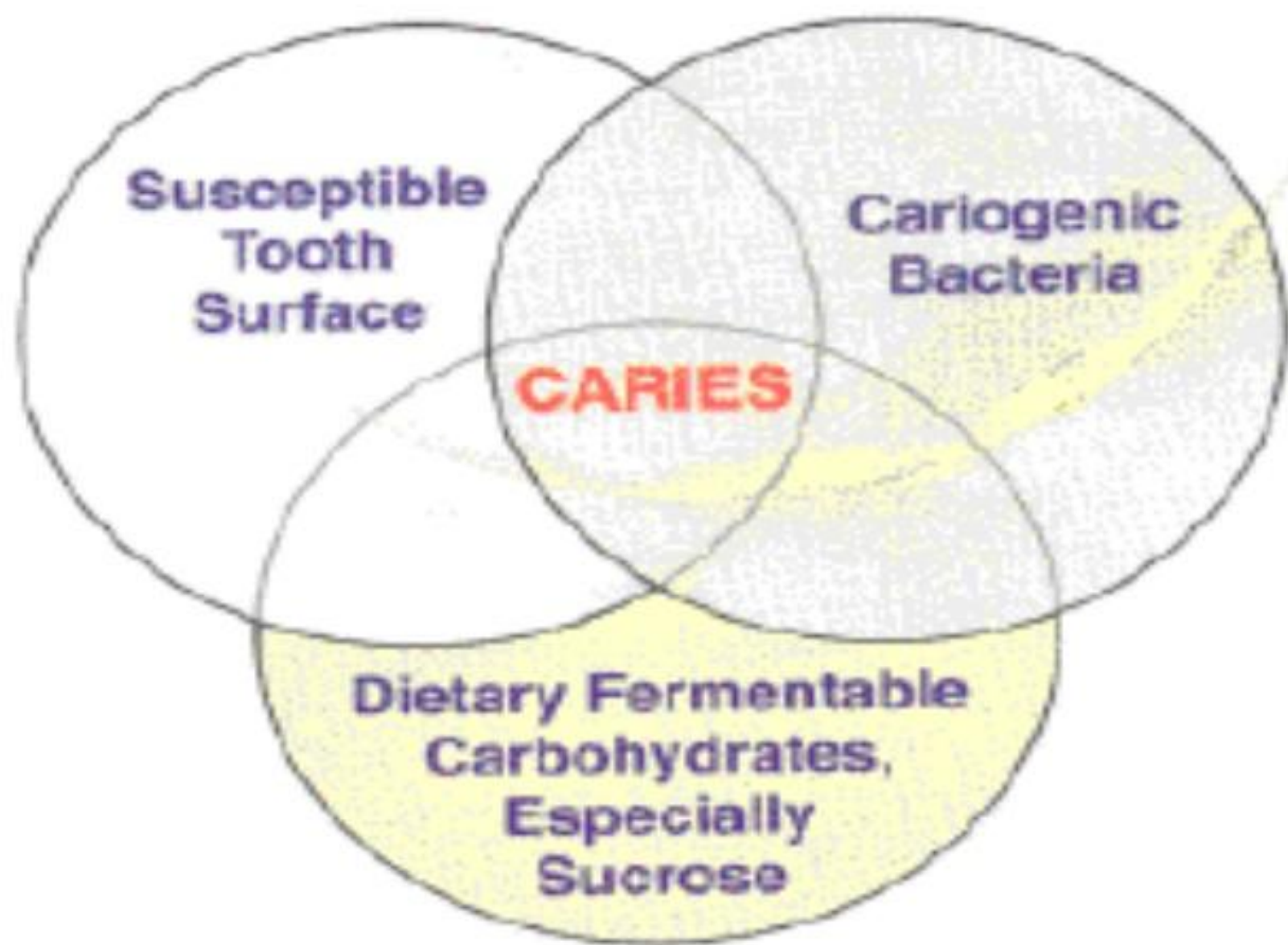
AETIOLOGY



- Four major factors involved in etiology:-
 - Cariogenic bacteria
 - Bacterial plaque
 - Susceptible tooth surface
 - Fermentable bacterial substrate (sugar)



Dental Caries is a Multi-Factorial Infectious Disease



Bacteriology of Dental Caries



- Major organisms responsible for caries are:-
- Strep mutans
- Lactobacilli
- Other strains of streptococci



**Germs Cause
Cavities**







CLINICAL

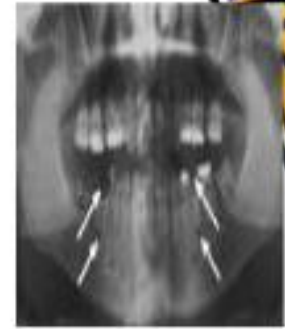
Symptoms and Signs

Caries initially involves only the enamel and produces no symptoms. A cavity that invades the dentin causes **pain**, first when **hot, cold, or sweet foods** or beverages contact the involved tooth, and **later with chewing or percussion**. Pain can be intense and persistent when the pulp is severely involved





CLINICAL



- Direct inspection
- Sometimes use of x-rays or special testing instruments
- Routine, frequent (q 6 to 12 mo) clinical evaluation identifies early caries at a time when minimal intervention prevents its progression. A thin probe, sometimes special dyes, and **transillumination by fiberoptic lights** are used, frequently supplemented by new devices that detect caries by changes in electrical conductivity or laser reflectivity. However, x-rays are still important for detecting caries, determining the depth of involvement, and identifying caries under existing restorations

SIGNIFICANCE



Consequences of Dental Caries



ORAL HEALTH CONSEQUENCES

- apical periodontitis,
- periapical abscess,
- cellulitis,
- and osteomyelitis of the jaw



Spread from maxillary teeth



- may cause purulent sinusitis
- meningitis,
- brain abscess,
- orbital cellulitis,
- and cavernous sinus thrombosis.



Spread from mandibular teeth may cause



- Spread from mandibular teeth may cause
- Ludwig's angina,
- parapharyngeal abscess,
- mediastinitis, pericarditis,
- empyema, and jugular thrombophlebitis.

