Dental Cavity, Dental caries and Dental care

As per National Institute of Dental and Craniofacial Research (NIH), Tooth decay or dental caries is **"damage to tooth that can happen when decay-causing bacteria in (your) mouth make acids that attack the tooth's surface, or enamel".**

This damage over time can result in formation of small hole or 'cavity' on tooth surface.

This can lead to infections, pain and subsequently tooth loss.

Damage to enamel, cavity formation initated. If not controlled, it can turn serious.

Normal tooth without any damage on the enamel surface.

Enamel

Dentin

Pulp cavity

Symptoms

Appearance of dark
brown-black spot on the
tooth surface.

2. After a certain period of erosion, **toothache begins**.

3. As tooth infection develops,**Abscess containing pus**forms in the cavity.

4. Progressive infection, results in swelling, pain and fever.

5. Tooth sensitivity.

Uncontrolled cavity, can further invade into the dentin and then pulp cavity.

Statistics

As per CDC:

About **52% of children** in the age group of 6 to 8 years, have had a cavity in their primary tooth.

Children in low-income family are twice more likely to have cavities than their higher-income counterparts.

About **52% adolescents** (age group 12 to 19) have had cavity in permanent teeth.

> For adults, age 20 and above, about 90% have had at least one cavity.

What if a cavity is left untreated?

As enamel erodes further, it becomes a site for more bacterial onslaught. Cavity deepens. Subsequently deep caries develop, where the cavity reaches the dentin, and further the pulp cavity which contains nerves and blood vessels. This can be very painful. A dentist at this stage will require to remove the entire teeth, perform root canal and dental filling.







Excessive sugar containing food can lead to proliferation of bacteria. They develop into **biofilms** (a complex structure that house several bacterial colonies, and provides adhesion to a surface, as well as protection). These biofilms are called **Dental plaques.** Bacterial metabolism **produces acids** (e.g. lactic acid), which erodes the enamel resulting in formation of a cavity.

Risk factors

Age-related immaturity and deterioration (early-receding gums)

Excessive Sugary/starchy diet,

Causative agents

Common bacteria that are often related with the problem include *Streptococcus mutans*, *S. sorbinus*, *Lactobacilli*, *Bifidiobacterium sp.*, *Actinomyces sp.*, *Propionibacterium sp.*, *and Scardovia wiggsiae* However_selected bacteria

Dental Care

Brush twice a day and include flossing in the dental hygiene routine

Avoid excessively sugary/starchy food and alcohol