

# Talking with Patients

## Dental Caries

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### WHAT IS IT?

Dental caries is an oral disease that leads to tooth cavities. Cavities result from the loss of minerals from the tooth and are caused by the acids produced by bacteria. Research suggests that dental caries is a transmissible infectious disease that can be prevented, and that the presence of cavities is only the most noticeable sign of the disease.

The bacteria that cause dental caries and cavities accumulate around and between the teeth, forming what is called dental plaque. For a cavity to develop, a tooth generally is covered with dental plaque for an extended period of time. Frequent ingestion of sweets and low saliva flow also favor the development of cavities in the presence of dental plaque. Cavities may sometimes result in the tooth being sensitive.

### HOW IS IT DIAGNOSED AND TREATED?

Dental caries is diagnosed during clinical examinations by your dentist. X-ray films can reveal cavities located between teeth and under the gums where direct inspection is difficult. New technologies for detection of dental cavities also are available and include laser fluorescence probes and fiber-optic transillumination devices. Cavities are

treated with fillings, the size of which depends on the extent and depth of the cavity.

Plaque accumulation and the presence of high counts of caries-causing bacteria in the saliva, which can be determined with salivary tests, might indicate an individual who is at high risk for caries. Also, patients who often have new cavities in routine dental checkups and patients with a dry mouth (low saliva flow) can be considered to be caries prone. Patients at high risk for caries benefit from frequent dental checkups and prevention-oriented actions. Such actions are targeted to each individual's needs but generally emphasize plaque control (brushing and flossing regularly), a healthy diet (low frequency of sugars), frequent use of fluoride, and periodic professional tooth cleanings. Fluoride has been shown through research to be extremely

helpful in preventing dental caries; it can be applied professionally in the form of gels and varnishes and/or used at home in the form of toothpastes and oral rinses.

### CONCLUSIONS

Dental caries results from dental plaque (bacteria) being present in and around teeth for extended periods of time. Some conditions increase the chances for cavities to develop, such as the frequent intake of sweets, a dry mouth, and poor oral hygiene. Cavities can be prevented, but once present they need to be filled to stop their progression and to restore the tooth to its normal contour and function.

The following photograph shows teeth severely affected by dental caries.

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