

# Dental caries

Template:Checked by Tooth decay is the most common infectious disease. The first theory about the causes of tooth decay was Miller's chemical-parasitic theory from 1898. It has not yet been disproved. <sup>[1]</sup>

## Causes of tooth decay

1. Bacteria – cariogenic organisms
  - Streptococcus (*S. mutans*, *S. sanguis*, *S. mitis*, *S. salivarius*)
  - Lactobacilli
  - Actinomyces
  - Fusobacteria
  - Bacillus subtilis
2. Low molecular carbohydrates (fermentable carbohydrates (sucrose, maltose, lactose) producing organic acids)
3. Tooth plaque
4. Poor oral hygiene
5. Quality of hard dental tissues (partially conditioned by genetics)

Bacteria are capable of breaking down sugars and demineralizing enamel through aerobic glycolysis. Saliva supports the self-cleaning of the teeth, thereby reducing the risk of tooth decay.

## Predilection sites of tooth decay

Among the places marked in this way are **pits, grooves, contact surfaces, cervical third of the tooth, exposed roots, foramina ceca**.

## Distribution of dental caries

There are several different ways to divide tooth decay. <sup>[2]</sup>

1. According to the involvement of hard dental tissues:
  1. enamel decay,
  2. dentin decay,
  3. cement decay;
2. according to the rate of progress:
  1. **acute** caries (caries acuta) - decaying matter is light yellow and the caries spreads quickly,
  2. **chronic** caries (caries chronica) - the caries progress slowly and the caries lesion is dark in color,
  3. **arrested** caries - darkly pigmented with completely hard base;
3. according to the relationship to the vital dental pulp:
  1. **superficial** caries (caries superficialis),
  2. **medium** caries (caries media),
  3. caries **close to the pulp** (caries profunda pulpa proxima),
  4. caries **penetrating** the pulp (caries profunda ad pulpam penetrans);
4. according to the nature of the course of caries in the dentin:
  1. **undermining** caries - little in the enamel, but mainly in the dentin just below the enamel,
  2. caries **penetrating** - leads quickly to the pulp;
5. according to the place of occurrence on the tooth:
  1. **primary caries** - i.e. on an intact tooth,
  2. **secondary caries** - i.e. next to the existing filling,
  3. **recurrent caries** - i.e. under the existing filling (result of bad treatment).



Penetrating decay

Conditional decay

Primary decay

Secondary decay

Recurrent caries

## Links

## Related Articles

- Tooth plaque
- Enamel decay
- Damage to the dentin
- Cement damage

## External links

- Dental caries

## References

1. MÁZÁNEK, George – URBAN, Francis, et al. *Stomatological refresher course*. 1. edition. Prague : Grada Publishing a.s, 2003. 456 pp. ISBN 80-7169-824-5.
2. SVOBODA, Otto, et al. *Dental propaedeutics : Textbook for medical schools*. 1. edition. Avicenum, 1984. 392 pp.

## Literature

- MÁZÁNEK, Jiří – URBAN, František. *Dental repeater*. 1. edition. Grada Publishing a.s, 2003. 456 pp. ISBN 80-7169-824-5.
- SVOBODA, Otto. *Textbook for medical schools*. 1. edition. Avicenum, 1984. 392 pp.