

*What are dental calculi?

When plaque is bound to tooth surfaces by salivary calcium and phosphorus, it hardens into calcified deposits called dental calculi. Like plaque, dental calculi are bacterial masses. While dental calculi do not cause dental caries, they can cause periodontal disease. They cannot be removed by brushing alone. Once plaques calcify, they will turn to calculi within a few days. This is why dentists recommend removing plaque by brushing before plaque calcifies.

*Common dental calculi adherence sites

Calculi are liable to deposit at three sites (Figure 1) where saliva is secreted: i.e., the mandibular anterior teeth on the lingual side and the maxillary molar teeth on the bilateral buccal sides.

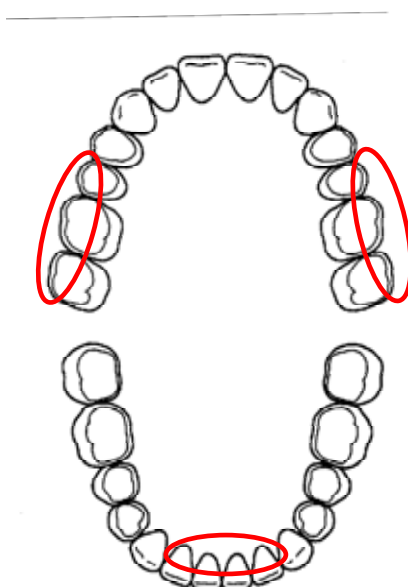


Figure 1 Common dental calculi adherence sites

Once a calculus adheres to a site, the surface will roughen, increasing the likelihood that more plaque will adhere to make the calculus even larger.

*Types of dental calculi

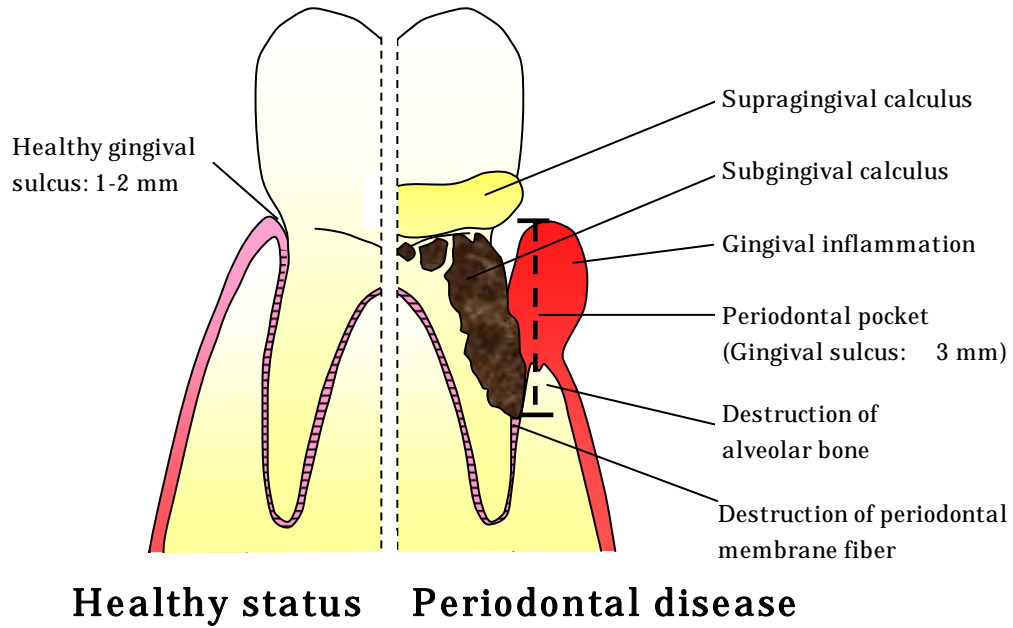
The two general types of dental calculi are classified by adherence site:

① Supragingival calculi: Calculi adhering to tooth surfaces above the gumline. They are milk white and relatively easy to remove.

② Subgingival calculi: Calculi adhering to the surface of the tooth below the gumline. These calculi are dark brown, hard, and difficult to remove. They create periodontal pockets.

If left untreated, calculi can progress to advanced periodontal disease, as shown in Figure 2.

Figure 2 Comparison of healthy periodontal tissue and periodontal disease



***An actual example of dental calculus**



Supragingival calculus of the mandibular anterior teeth



Immediately after removal of the calculus (Subgingival calculus)



Five days after removal of the calculus (improvement in the gingiva)



Tooth extracted due to periodontal disease (Subgingival calculus)

*** As shown in the photos above, gingival inflammation generally remains mild if calculi are removed when restricted to supragingival areas. Calculi should be removed regularly as part of routine dental care.**