

# Supragingival and Subgingival Calculus

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# Calculus



- \* Calculus- commonly known as tartar is a buildup of dental biofilm that mineralized from saliva and gingival cervical fluid on teeth

# Supragingival and Subgingival

Supragingival-coronal to the free gingival margin  
-Can be seen clinically as white or yellow



Subgingival-apical to the free gingival margin



# Calculus composition



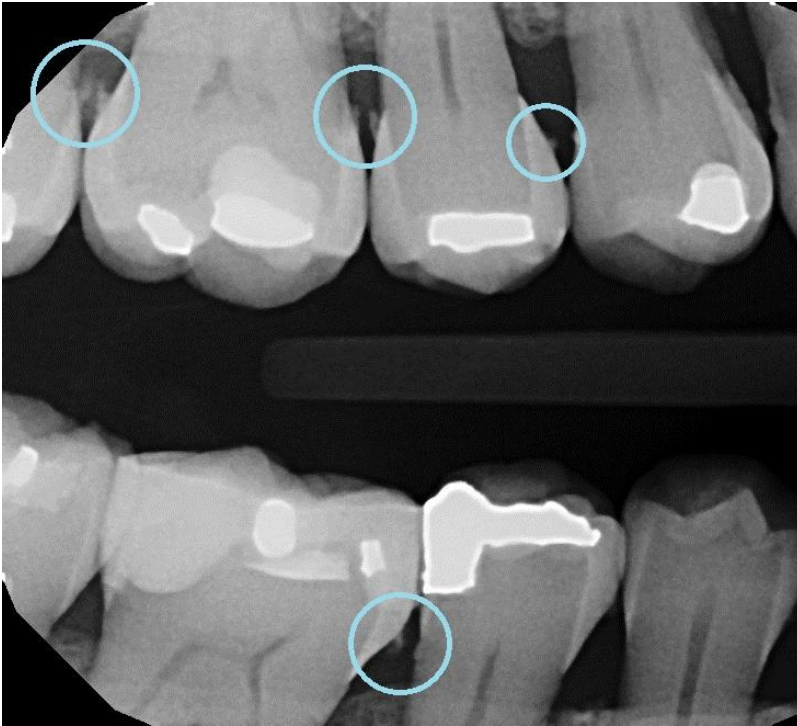
- \* Calculus is made up of organic and inorganic components
- \* Organic components: amorphous calcium phosphate, dicalcium phosphate dihydrate, octacalcium phosphate, whitlockite and hydroxyapatite.
- \* Inorganic components: proteins, carbohydrates and a minor lipid fraction

# Calculus formation

- \* Calculus forms from the depositing of minerals into a biofilm matrix. Develops in three stages:
  1. pellicle formations
  - \* 2. biofilm formation
  - \* 3. mineralization

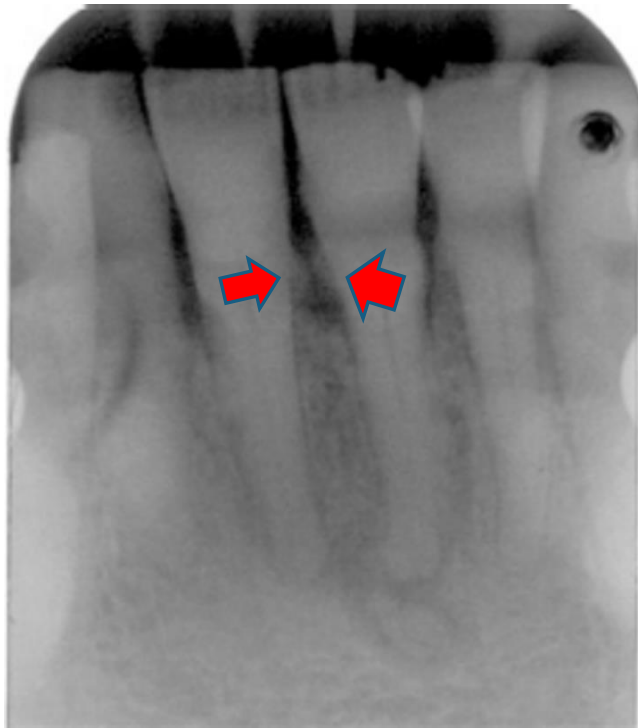


# Radiograph Calculus Detection



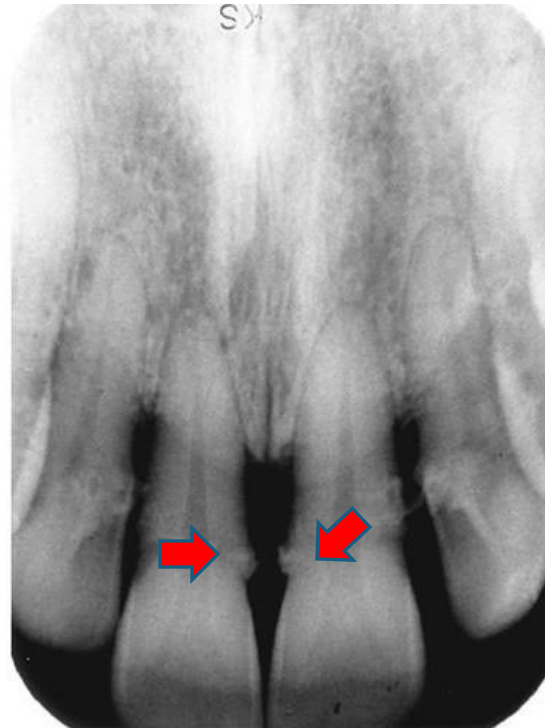
- \* Dental radiographs can help with locating subgingival calculus
- \* Calculus is radiopaque on radiographs
- \* Explorers are also used clinically to help detect calculus subgingivally

# Subgingival calculus on mandibular anteriors



- \* This is the most common site for calculus since the submandibular gland is located right next to it

# Subgingival calculus on maxillary anteriors





# Subgingival calculus on maxillary and mandibular molars



Brushing twice daily and flossing daily prevents the formation of calculus on your teeth



Once calculus forms, a person cannot remove it with regular brushing and flossing, and the only way to get it removed is by a dental hygienist with proper scaling.

# References:

- \* M. Wilkins, Esther (2017) Clinical practice of the dental hygienist. Philadelphia: Wolters Kluwer.
- \* "Calculus (Dental)". *En.Wikipedia.Org*, 2020, [https://en.wikipedia.org/wiki/Calculus\\_\(dental\)](https://en.wikipedia.org/wiki/Calculus_(dental)).
- \* "How Subgingival Calculus Forms And How To Prevent It". *Colgate.Com*, 2020, <https://www.colgate.com/en-us/oral-health/conditions/plaque-and-tartar/how-subgingival-calculus-forms-and-how-to-prevent-it>.