

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Community Dentistry Third class



Indices used for periodontal disease assessment

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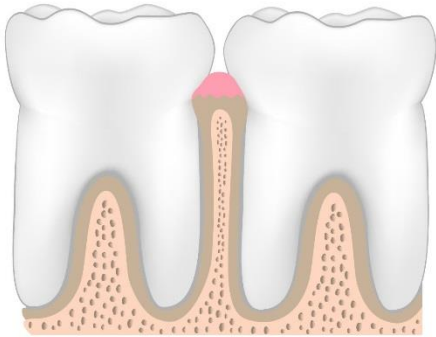
Objective



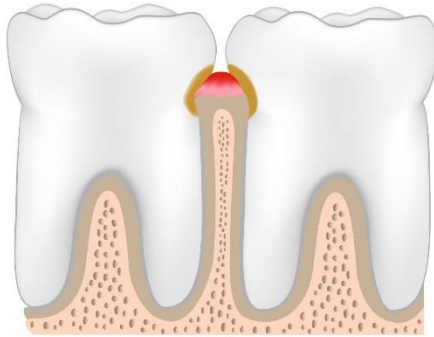
Periodontal diseases and their etiological factors:

1. Dental plaque: It is soft non mineralized, bacterial deposit formed on the tooth surface.
2. Gingivitis: It is an inflammation of gingival tissue mainly caused by dental plaque.
3. Periodontitis: It is an inflammation of periodontal tissues which mainly precede by untreated gingivitis.
4. Calculus: It is a hard deposit that forms by mineralization of dental plaque.

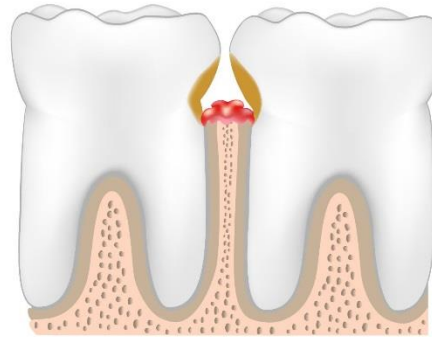
The stages of periodontal disease



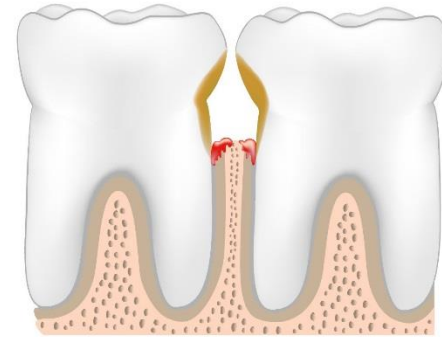
1. Healthy



2. Gingivitis

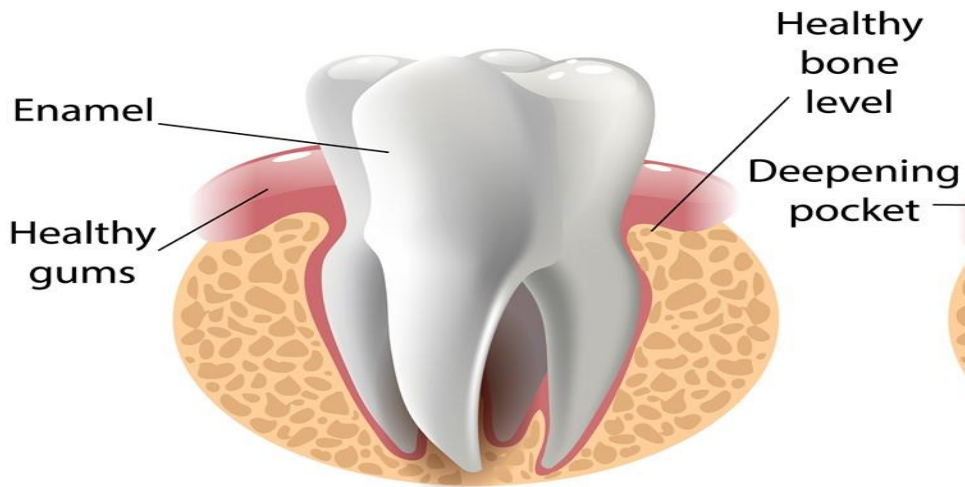


3. Periodontal pockets

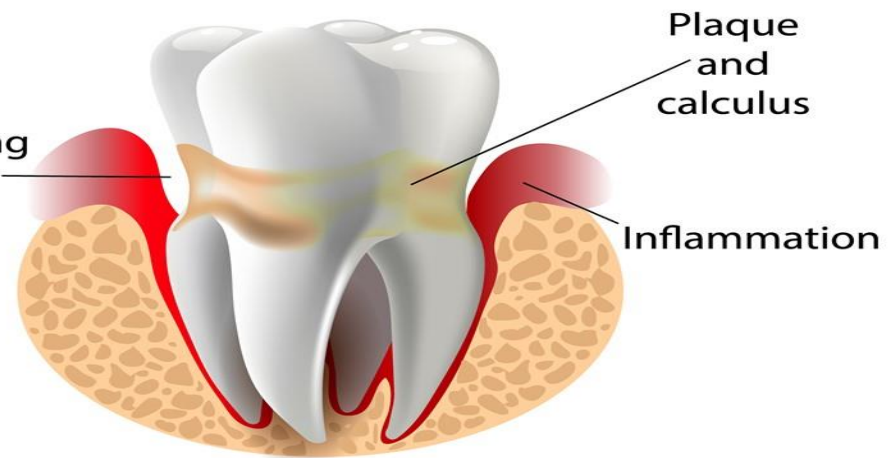



4. Periodontitis

Normal tooth



Periodontitis




- 
- Many indicators has been used in research and clinical studies to measure the prevalence and severity of periodontal diseases

The most common or popular indices have evaluated the following parameters:

- Extent of supra-and sub- gingival plaque.
- Gingival inflammation.
- Bleeding of gingiva.
- Supra- and sub-gingival calculi.
- Contour of gingiva.
- Color of gingiva.
- Pocket depth.
- Tooth mobility.





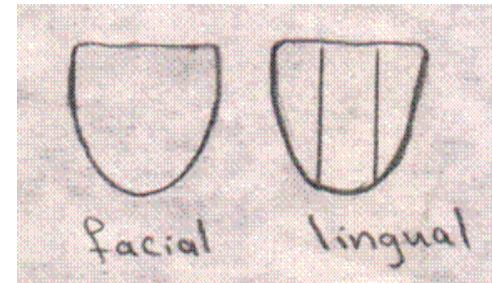
Indices for measurement of calculus

1. Calculus Surface Index (CSI) BY Sturzenberger and Radike (1961)

CSI assesses the presence or absence of supra and/or subgingival calculus by visual or tactile examination, regardless the quantity of calculus.

- 4 or 6 mandibular anterior teeth are examined.
- Each tooth divided into 4 areas.

- **Criteria of CSI:**
- **0:** no calculus present on surface
- **1:** any calculus present on surface.





2. Calculus surface Severity index (CSSI) by Ennever et al.(1961)

- **Selection of teeth and scoring :**
- Same as CSI
- **Criteria :**
- **0:** no calculus .
- **1 :** less than 0.5 mm width thickness of calculus.
- **2 :** 0.5-1 mm width thickness of calculus.
- **3 :** over 1mm thickness of calculus.

Indices used for gingival disease assessment

Definition of Gingiva:

The gingiva is the part of the oral mucosa that covers the alveolar processes of the jaws and surrounds the necks of the teeth



Normal Gingiva



Color: Coral pink-pale pink/physiologically pigmented.

Contour: Collar like scalloping fashion.

Consistency: Firm & resilient.

Surface texture: Stippling.



Gingival Index (GI).... which was introduced by Loe and Silness in 1963

- ☐ GI could be used in all teeth or selected teeth and in all surfaces or selected surfaces.
- ☐ The examination done by blunt probe.
- ☐ Partially erupted teeth, retained roots, teeth with periapical lesion and third molars should be excluded and there is no substitution.



Score

Criteria

- | | |
|----------|--|
| 0 | No inflammation. |
| 1 | Mild inflammation, slight change in color, slight edema, no bleeding on probing. |
| 2 | Moderate inflammation, moderate glazing, redness, bleeding on probing. |
| 3 | Severe inflammation, marked redness and hypertrophy, ulceration, tendency to spontaneous bleeding. |

Healthy Gums



Gingivitis







Calculation:

1- Individual:

Total scores

$$\text{PII} = \frac{\quad}{\quad}$$

No. of surfaces examined

2- Population:

Total scores

$$\text{PII} = \frac{\quad}{\quad}$$

No. of subjects examined



******If we want to calculate the maximum score for gingival index (4 surfaces and 6 teeth).....**

Total scores

GI = _____

No. of surfaces examined.

$$\text{GI} = \frac{3 * 4 * 6}{4 * 6} = \frac{3 * 24}{24} = 3$$



Thank You