

Dental Indices

Index used for plaque assessment:

***Plaque Index (PII)** ... which was introduced by Silness and Loe in 1964

- ❖ Used together with GI, and should be preceded the gingival examination.
- ❖ Used on all teeth (28, wisdom teeth are excluded) or selected teeth (6 teeth) .
- ❖ No substitution for any missing tooth.
- ❖ Used on all surfaces (4)(M, B, D, L).
- ❖ This index measures the thickness of plaque on the gingival one third of the teeth.

-The six index teeth are:

6	2	4
4		2 6

E	B	D
D		B E

Score Criteria

0 No plaque

1 A film of plaque adhering to the free gingival margin and adjacent area of the tooth, which can not be seen with the naked eye. But only by using disclosing solution or by using probe.

2 Moderate accumulation of deposits within the gingival pocket, on the gingival margin and/ or adjacent tooth surface, which can be seen with the naked eye.

3 Abundance of soft matter within the gingival pocket and/or on the tooth and gingival margin.

Calculation:

1- Individual:

$$PII = \frac{\text{Total scores}}{\text{No. of surfaces examined}}$$

2- Population:

$$PII = \frac{\text{Total scores}}{\text{No. of subjects examined}}$$

Index used for gingival disease assessment:

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

- ☐ GI could be used in all teeth or selected teeth.
- ☐ 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.

Calculation:

1-Individual

$$GI = \frac{\text{Total scores}}{\text{No. of surfaces examined}}$$

2-Population

$$GI = \frac{\text{Total scores}}{\text{No. of subjects examined}}$$

0.1 - 1 Mild gingivitis

1.1 - 2 Moderate gingivitis

2.1 - 3 Severe gingivitis

Indices used for periodontal disease assessment:

***Periodontal Disease Index (PDI)** which was introduced by Ramfjord in 1959

- ❖ Which is composed of three components.
- ❖ All the three components will be scored separately using six Ramfjord selected teeth.

$$\frac{6}{4 \quad 1} \bigg| \frac{1 \quad 4}{6}$$

$$\frac{E}{D \quad A} \bigg| \frac{A \quad D}{E}$$

1-Gingival and periodontal component.

1-The criteria ranged from

$$\frac{0}{\text{normal}} \quad \frac{1 \quad 2 \quad 3}{\text{gingivitis}} \quad \frac{4 \quad 5 \quad 6}{\text{periodontitis}}$$

2-All areas (M, D, B, L) is scored as a one unit.

3-Only fully erupted teeth are scored .

4-There is no substitution for excluded teeth.

Calculation:
$$\frac{\text{Total sores}}{\text{No. of teeth examined}}$$

2-Plaque component:

1-The criteria ranged from 0 - 3 .

Scoring criteria:

0 No plaque

1 Plaque present on some but not on all interproximal, buccal, and lingual surfaces of the tooth.

2 Plaque present on all interproximal, buccal, and lingual surfaces, but covering less than one half of these surfaces..

3 Plaque extending over all interproximal, buccal and lingual surfaces, and covering more than one half of these surfaces.

2-All areas (B , L , M , D) are scored as one unit.

3-Only fully erupted teeth are scored .

4-There is no substitution for excluded teeth.

$$\text{Calculation: } \frac{\text{Total scores}}{\text{No. of teeth examined}}$$

3- Calculus component:

1-The criteria ranged from 0 - 3 .

Scoring criteria:

0 Absence of calculus.

1 Supragingival calculus extending only slightly below the free gingival

margin (not more than 1 mm).

2 Moderate amount of supragingival and sub gingival calculus or sub gingival calculus alone.

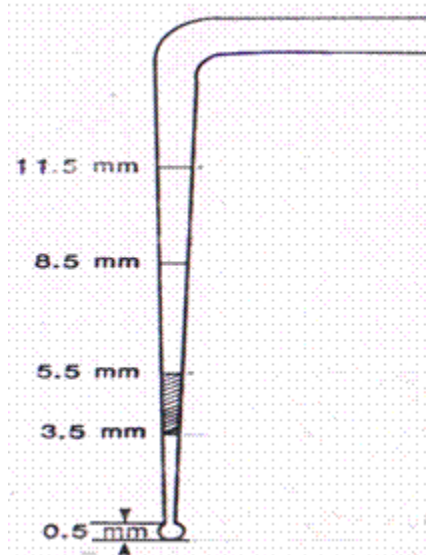
3 An abundance of supra gingival and sub gingival calculus.

$$\text{Calculation: } \frac{\text{Total scores}}{\text{No. of surfaces examined}}$$

***Community Periodontal Index of Treatment Needs (CPITN).....** which was introduced by WHO / FDI in 1982

- ❖ The mouth is divided into six parts (sextants).
- ❖ The examination done by special probe (WHO probe).
- ❖ The score is identified by examination of specified index teeth or all teeth.

6	1	6
6	1	6



CPI score criteria

- 0** No periodontal disease.
- 1** Bleeding on probing.
- 2** Calculus with plaque seen or felt by probing.
- 3** Pathological pocket 4 – 5 mm.
- 4** Pathological pocket 6 mm or more.
- x** When only 1 tooth or no tooth are present.

TN score criteria

- 0** No need for treatment.
- 1** Personal plaque control (Oral hygiene instruction).(1- 4).
- 2** Professional plaque control (scaling and polishing). (2- 4).
- 3** Deep scaling , root planning, surgical procedure. (3- 4).

Indices used for dental fluorosis assessment:

Dental fluorosis: is a hypoplasia or hypomineralization of tooth enamel produced by the chronic ingestion of excessive amount of fluoride during the period of tooth development.

* **Dean's Fluorosis Index–Modified criteria** which was introduced by Dean in 1942.

- ☐ Each tooth present in the mouth was examined.

Classification criteria

Normal No dental fluorosis.

Questionable The enamel discloses slight aberrations from the translucency of normal enamel ranging from a few white flecks to occasional white spots.

Very mild Small, opaque, white areas scattered irregularly over the tooth, but not involving 25% of the tooth surface, (no more than 1 -2 mm of white opacity at the tip of the cusps of bicuspid or second molars).

Mild The white opaque areas in the enamel of teeth are more extension, but not involve as much as 50% of tooth.

Moderate All enamel surfaces of teeth are affected and surfaces subject to attrition show wear, brown stains is a disfiguring feature.

Severe All enamel surfaces of teeth are affected and hypoplasia is so marked that the general form of the tooth may be affected, pitting surface with brown stain.