

DECAYED - MISSING - FILLED TEETH INDEX (DMFT INDEX)

PS

It was developed by Henry T. Klein, Carroll E. Palmer and Knutson J. W. in 1938 to determine the prevalence of coronal caries.

ADVANTAGES:

- Simple
- Rapid
- Versatile
- Universally acceptable and applicable measurement that has been used widely for several decades.

This index is based on the fact that the dental hard tissues are not self-healing and established caries leaves a scar of some sort. The tooth either remains decayed or if treated, it is extracted or filled. The DMFT index is therefore an irreversible index measuring the lifetime caries experience.

PROCEDURE:

The DMFT Index is applied only to permanent teeth. It is composed of three components:

- D - used to describe decayed teeth.
- M - used to describe missing teeth due to caries.
- F - used to describe teeth that have been previously filled due to caries.

INSTRUMENTS USED:

Mouth mirror, Explorer.

The teeth not included are:

1. The third molars
2. Unerupted teeth
3. Congenitally missing and supernumerary teeth
4. Teeth removed for reasons other than dental caries such as for orthodontic treatment or impaction
5. Teeth restored for reasons other than dental caries such as trauma (fracture), cosmetic purposes or for use as a bridge abutment
6. Primary teeth retained with the permanent successor erupted. The permanent tooth is evaluated since a primary tooth is never included in this index.

Criteria for identification of dental caries are:

- a) The lesion is clinically visible and obvious
- b) The explorer tip can penetrate deep into soft yielding material.
- c) There is discoloration or loss of translucency typical of undermined or demineralized enamel.
- d) The explorer tip in a pit or fissure catches or resists removal after moderate to firm pressure on insertion & when there is softness at the base of the area.

EXAMINATION METHOD:

D - Decayed: Indicate the number of permanent teeth are decayed. In counting the number of decayed permanent teeth, remember that a tooth can only be counted once. It cannot be counted as decayed and filled. If it has been restored

RECORDING FORMAT FOR DMFT INDEX

17	16	15	14	13	12	11	21	22	23	24	25	26	27	
47	46	45	44	43	42	41	31	32	33	34	35	36	37	

DT = MT = FT =

DMFT SCORE =

'M' - Missing: Indicates the number of missing permanent teeth due to decay. Those teeth which are so badly decayed that they are indicated for extraction are counted as missing. Teeth that have been extracted for orthodontic reasons, unerupted permanent teeth, missing teeth because of accident or any congenitally missing teeth are not included. When possible histories should be taken when it is suspected that teeth have been lost for reasons other than caries.

'F' - Filled: Indicates the number of permanent teeth that have been attacked by caries, but which have been restored to keep them in a healthy condition in mouth. A tooth may have several fillings but it is counted as one tooth. If a tooth has a filling but shows evidence of recurrent decay, it is counted as a decayed tooth.

CALCULATION:

The maximum number for an individual DMFT score is 28 or 32, if the third molars are included.

A) Individual DMFT:

Total each component, i.e., D, M, & F separately, then, total $D+M+F = DMF$

B) Group average:

$$\frac{\text{Total DMF}}{\text{Total no. of the subjects examined}}$$

C) Treatment Index: $(M+F/DMF) \times 100$

D) Carie Index: $(F/DMF) \times 100$

E) Restorative Index: $(F/D+F) \times 100$

LIMITATIONS:

1. DMFT values are not related to the number of teeth at risk.
2. DMFT index can be invalid in older adults because teeth can become lost for reasons other than caries.
3. DMFT index can be misleading in children whose teeth have been lost due to orthodontic reasons.
4. DMFT index can overestimate caries experience in teeth in which "preventive fillings", have been placed.
5. DMFT index is of little use in studies of root caries.
6. DMFT index equates a disease state with a healthy state by assigning the same score for decayed tooth as well as for filled healthy tooth.

WHO modification of dental caries criteria (1987):

1. All third molars are included.
2. Temporary restorations are considered as 'D'.
3. The initial lesions like chalky or discolored rough spots and stained fissures are not considered as 'D'. Caries is recorded when there is an unmistakable cavity, undermined enamel or a softened wall or floor.
4. Only teeth missing due to caries are included in its M-component.

WHO modification of dental caries criteria (1997): The instruments used to record dental caries are a mouth mirror and the WHO/CPI probe. For individuals 30 years and older, the M-component should comprise teeth missing due to caries or for any other reason. But for subjects under 30 years of age, the M-component should only include teeth missing due to caries.