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# Dental Diseases: Epidemiology and Prevention

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## Editorial

Dental benefits relevant to three primary oral diseases and conditions-dental caries, periodontal disease, and malocclusion were considered by the committee. The topic of the efficacy of professional interventions at various phases of the disease process is crucial to the recommendation of specific advantages [1].

The committee's decision on which options to pursue is influenced in part by the possible impact of services on oral health [2]. This chapter looks at the genesis, epidemiology, prevention, and treatment of dental diseases. The prevention of caries and periodontal disease is emphasised since controlling the volume and severity of these two primary bacteria-related disorders will have a significant impact on oral health. Malocclusion is also studied because, in its severe or handicapping forms, it can have a significant impact on a child's growth and development [3].

The fundamental purpose of the human dentition is to allow for efficient chewing. A diverse and nutritious diet is possible with healthy teeth. Untreated dental disease leads to tooth loss and impairment. In 1971, around 11% of the American population lacked teeth, with 51% of those aged 65 and up having no teeth [4]. Although full dentures normally allow you to eat a nutritious diet, no denture can compare to the efficiency and comfort of real teeth. About 30% of denture wearers said their dentures needed to be fixed or replaced in the most recent National Health Interview Survey 92/ [5].

Tooth loss or dentition and oral tissue abnormalities can influence speech 93/ [6]. The absence of primary incisor teeth in children aged 18 months to 4 years can permanently alter the quality of some speech sounds 93, 94, and 95/.

Oral pathology or anomalies can cause disfigurement and pain, which can limit social function. A number of research 96, 97, 98, 99, 100, 101, and 102/ have stressed the social and psychological implications of face appearance. Dental disease, according to a recent assessment by the National Research Council, causes a growing burden on a person's mental well-being if left untreated, because pain and deformity lead to diminished comfort and poor self-image 103/ [7]. Individuals with abnormal dentofacial features are more likely to be discriminated against and to assume a dysfunctional social role 104/.

The most prevalent symptom of untreated oral disease is pain, which is frequently the catalyst for seeking expert dental help. Caries, periodontal disease, and malocclusion are the three most common dental diseases [8].

## Caries in the teeth

### Etiology

The progressive deterioration of teeth by organic acids generated locally by bacteria 105/ is known as dental caries (tooth decay). Caries lesions can arise as soon as the teeth erupt. Caries has a complicated aetiology that involves at least three factors: sugary foods, acid-producing bacteria, and vulnerable teeth. Because sugars are easily fermented to acid, they are cariogenic. Because some oral bacteria react with sucrose to form sticky polysaccharides, which enable acid-producing bacteria to adhere to the surface of the teeth in a film known as dental plaque, sucrose may play a unique role [9].

### Treatment

Dental caries is usually treated by removing the decayed portion and reconstructing the tooth. Teeth have limited capacity for self-repair, therefore carious lesions become worse with time. The type of treatment depends on how early it is instituted. Reconstructive services fall into three main categories fillings, inlays and on lays, and crowns. The filling materials generally are silver amalgam for posterior teeth, tooth colored composite resins for anterior teeth, and cast gold inlays/ on lays for teeth that have lost substantial amounts of tooth structure. A full crown is the treatment of choice when there is little or no supporting enamel remaining after the decay is removed. If the destruction caused by the decay has affected the tissues of the pulp chamber, endodontic (root canal therapy) may be needed if the tooth is to be retained. When the most extensive treatment (root canal filling and a crown) cannot be performed, the tooth must be extracted. The dental treatment then consists of replacing the lost tooth or teeth with either removable partial dentures or fixed bridges. Partial dentures usually are held in place by means of clasps on the adjacent natural teeth [10]. The loss of all teeth calls for full dentures. Because treatment of dental caries increases in complexity as the disease process advances, prevention of disease or early diagnosis and treatment are important.

## Epidemiology

The incidence of periodontal diseases varies most noticeably with age and oral hygiene 197/. The presence of organisms in dental plaque probably explains the relationship between oral hygiene and periodontal diseases, but the relationship with age is not clearly understood. It would appear that the microorganisms in dental plaque provide a chronic irritation that eventually begins to break down the periodontal tissues.

The gingival inflammation of children ages 6-11 is mostly associated with tooth eruption. Thirty-two per cent of American youths aged 12-17 and approximately half of the adult population with at least one remaining natural tooth have some periodontal disease. Thirty-seven per cent of adults have chronic disease with pocket formation between gum and tooth. Both income and education are inversely associated with high PI and OHI-S scores. Men have a mean score 40 per cent higher than women, and black adults have an 80 percent higher periodontal index than whites.

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## References

1. Ahovuo-Saloranta A, Forss H, Walsh T, Nordblad A, Mäkelä M et al., (2017) Pit and fissure sealants for preventing dental decay in permanent teeth. Cochrane Database Syst Rev (7).
2. Ainamo J (1982) Development of the World Health Organization (WHO) community periodontal index of treatment needs (CPITN). Int dent J 32: 281-291.
3. Albandar JM, Brown LJ, Loe H (1997) Clinical features of early-onset periodontitis. J Am Dent Assoc 128(10): 1393-1399.
4. Albandar JM, Brunelle JA, Kingman A (1999) Destructive periodontal disease in adults 30 years of age and older in the United States, 1988-1994. J Periodontol 70(1): 13-29.
5. Papapanou PN (1996) periodontal diseases: epidemiology. J Periodontol 1(1): 1-36.
6. Anderson RJ, Bradnock G, James PM (1981) the changes in the dental health of 12-year-old school children in Shropshire. A review after an interval of 10 years. Br Dent J 150(10): 278-281.
7. Antunes JLF, Narvai PC, Nugent ZJ (2004) Measuring inequalities in the distribution of dental caries. Community Dent Oral Epidemiol 32(1): 41-48.
8. Arendorf TM, Bredekamp B, Cloete CAC, Sauer G (1998) Oral manifestations of HIV infection in 600 South African patients. J Oral Pathol Med 27(4): 176-179.
9. Armitage GC (1999) Development of a classification system for periodontal diseases and conditions. J. Periodontol 4(1): 1-6.
10. Axelsson P, Nyström B, Lindhe J (2004) the long-term effect of a plaque control program on tooth mortality, caries and periodontal disease in adults: results after 30 years of maintenance. J Clin Periodontol 31(9): 749-757.