

## Explicit Conditions, Nutrients, and Periodontal Well-being

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Oral hygiene, genetic and epigenetic variables, systemic health, and diet all have an impact on periodontal health. Many studies have found that a healthy diet plays an important role in preserving periodontal health. Furthermore, the effects of nutritional supplements and dietary components on recovery following periodontal surgery have been shown. Several studies have sought to establish a link between tooth loss, periodontal health, and diet. Numerous vitamins, minerals, and trace elements also influence bone growth and periodontal regeneration. The purpose of this literature is to critically evaluate existing evidence on Nutrients, Periodontal Health, and Specific Conditions [1].

It is clear from the preceding discussion that a lack of certain nutrients (especially micronutrients) jeopardises periodontal health. A variety of reasons contribute to low blood levels of micronutrients, including genetic or gastrointestinal problems (which impair absorption and bioavailability), inadequate nutrition, or lifestyle [2]. Certain physiological changes, such as pregnancy and age, might modify the daily demand for different nutrients.

### Pregnancy

Pregnancy is a physiological state that causes a variety of transient changes in female bodily organs, including the mouth cavity. Almost all bodily systems, including cardiovascular, respiratory, and endocrine, undergo alterations in physiology. Nutritional health is mainly affected by physiological changes in the gastrointestinal system (nausea, vomiting, and heartburn) [3]. These

symptoms can include a lack of appetite, a change in eating habits, or the vomiting of consumed food. Pregnant women are more susceptible to periodontitis, gingivitis, and gingival hyperplasia when it comes to periodontal health. Although the cause is unknown, increased oestrogen production has been associated to periodontal disorders during pregnancy [4].

Because pregnancy necessitates special care, a healthy diet and nutritional counselling might be critical for the prevention and management of periodontal diseases. As previously stated, the significance of antioxidants in the treatment of periodontal diseases is well established. Natural produce (such as broccoli, berries, kiwi, beans, and spinach) is high in antioxidants<sup>2</sup>, and pregnant women should be urged to consume these items. In addition, increasing fibre and lowering refined sugar might be recommended as preventative strategies [1,2].

Patients should be taught on proper dental hygiene since it has the ability to minimise the number of oxidants. In the event of difficulties or nutritional issues, expert assistance or referral to a nutritionist must be explored.

According to an adult dental health survey, a majority of patients (85%) reporting periodontitis were 65 years or older [5-8]. The number of natural teeth decreases with age [9], exposing remaining teeth to greater masticatory pressures. This evidence suggests that the number of older people requiring periodontal treatment is likely to increase in the future.

### The role of diet nutrition in the aging population

Life expectancy and average age have both increased significantly as a result of recent advances in healthcare and quality of life. In the United States, the average life expectancy has grown by 30 years over the previous century [5] and is expected to reach 100 years by 2050 [6]. Aside from the average age, the number of centenarians is growing [7]. Centenarians in Mexican communities, for example, numbered less than 3000 in 1930 but rose to 19,000 in 2000 and are predicted to reach more than 135,000 by 2050 [6].

A variety of ageing issues, including tooth loss, oral prosthesis, loss of appetite and masticatory capacity, changed taste, and other gastrointestinal disorders, might affect oral health care [10,11]. Furthermore, polypharmacy and decreased body metabolism lead to dietary deficiencies.

Medical disorders or medicines that interfere with nutrient metabolism or absorption may result in nutritional deficiencies. For example, folic acid deficiency and accompanying problems have been linked to the senior population in the United States [12]. Individual variables such as decreased masticatory efficiency and dietary selection make older persons more vulnerable to nutritional deficits. Masticatory effectiveness is hampered by the presence of dentures and implants, the absence of natural teeth, and xerostomia [13,14]. When discussing dietary alternatives, patients' masticatory efficiency and preferences should be taken into account.

Patients, for example, may be unable to eat particular meals because they are difficult to chew or swallow (beef), hard or crunchy (carrots, crusty bread), or abrasive (potato chips) [15]. To address such difficulties, patients might be given a range of dietary options as well as assurance. Given the importance of nutrition in oral and periodontal health, nutritional counselling can be highly beneficial in the prevention and management of periodontal disorders.

Regular and timely dietary consultations during dental treatment can improve the elderly's quality of life [16,17]. In the event of a micronutrient deficit, food sources or nutritional supplements should be examined.

Although some studies show that better nutrition and supplementation of vitamins and minerals, particularly vitamin C, may contribute to improved periodontal health, there are a number of

limitations to existing research that must be addressed. The observed treatment benefits are too minor to show the size of therapeutic supplements when used as an addition to periodontal care. As a result, well-designed, long-term studies are required to determine the direct impact of dietary supplements on the outcomes of periodontal disorders.

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