

# Geriatric Dentistry

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## Abstract

*Geriatric Dentistry (Gerodontology) deals with the provision of dental care to the elderly, including the prevention, diagnosis and treatment of problems associated with age-related diseases. Its purpose is to prepare specialists to acquire skills, knowledge and experience to treat patients in an institutional, public or private environment. In the older population, poor oral health is considered a risk factor for general health problems. Older people are more susceptible to oral diseases or illnesses due to an increase in chronic diseases and physical or mental disabilities. Thus, the elderly form a distinct group in terms of care delivery. Gerodontology provides a comprehensive overview of the aging process and its implications for oral health and dentistry.*

*It is a discipline that has been developing over the last half century but has not received sufficient interest from professionals. It is particularly relevant as the older population needs specific dental care. Gerodontology has started to receive more attention in recent years. It is important that all dental professionals have the necessary knowledge, skills and attitudes to recognize and treat oral problems in these patients. The boundaries of most conventional dental specialties must be repeatedly crossed to provide optimal dental care for our parents. Dental practitioners need knowledge in numerous frontier areas. Bringing these diverse topics together in one place benefits clinicians, but most of all our mothers, fathers, and grandparents. The ultimate goal of gerodontology is to improve the quality of life and oral health of the elderly.*

**Keywords:** Gerodontology, geriatrics, geriatric dentistry, general health, oral health

## Introduction

From the moment we are born, we are constantly changing, and with time, and it takes its toll through aging. With aging comes health and mental health issues; financial, social, housing, and transportation challenges. Demographic data on the age structure of the population shows a significant increase in the number of elderly people worldwide, especially over the age of 80. Low birth rates and higher life expectancy are changing the age structure, especially in Europe. The relative share of persons of working age is decreasing, and the number of retirees is increasing (1).

We rarely appreciate the importance of oral health in the elderly as one of the important health issues. In fact caries, periodontitis, problems related to removable dental prostheses, changes in salivary secretion,

plaques on the tongue, preneoplasias and cancers in the oral cavity can lead to tooth loss, pain, discomfort, local and systemic infections, impaired oral function (2). Biting, chewing, swallowing, taste sensations, speaking are disturbed, levels of bad breath increase (3). Changes occur in the appearance, aesthetics, self-esteem, communication, which leads to a deterioration in the quality of life of the aging population (4; 5). Although the majority of oral diseases can be prevented or treated when detected early, oral problems in older people are still common and neglected and remain largely underdiagnosed and undertreated due to a number of obstacles, misconceptions, or inadequate training of health professionals.

Age-related problems with the teeth are becoming more common (6). This is largely due to the success in the prevention and treatment of the teeth, gums, periodontium, application of minimally invasive techniques, biological methods of treatment, resulting in retention of more natural teeth into old age (7). With advancing age, preserved teeth are at risk of developing diseases, which are sometimes very severe. Due to limited income, reduced mobility and changing priorities, many older people have irregular access to oral health care. In the coming decades, with the rapid growth of this segment of the population, dental practices will also be affected. Maintaining oral health in this age group is important not only for quality of life, but also for maintaining general health. Diagnosis and treatment planning of the elderly should also include biological, mental, psychological, social and economic considerations in addition to oral problems (8).

### Geriatric Dentistry

Geriatric Dentistry (Gerodontology) deals with the provision of dental care to the elderly, including the prevention, diagnosis and treatment of problems related to age-related diseases. Its purpose is to prepare specialists to acquire skills, knowledge and experience to treat patients in an institutional, public or private environment. The mouth is a mirror of overall health, and oral health is an integral part of general health (2). In the older population, poor oral health is considered a risk factor for general health problems. Older people are more susceptible to oral diseases or illnesses due to an increase in chronic diseases and physical or mental disabilities. Thus, the elderly form a distinct group in terms of care delivery (9). Gerodontology provides a comprehensive overview of the aging process and its implications for oral health and dentistry. It is a discipline that has been developing over the last half century but has not received sufficient interest from professionals (10). We find limited research information on gerodontology education in medical curricula with a lack of comprehensive information on the content of the discipline in dental schools (11,12,13). It is particularly relevant as the older population needs specific dental care. Gerodontology has started to receive more attention in recent years (14). With time this discipline will begin to be taught in all dental schools (15,16).

The elderly need special attention to their oral health because:

- Physiological and anatomical changes occur in the maxillofacial region with age;
- Their access to oral care is more limited;
- Almost all general diseases have oral manifestations, the first sign of which can manifest in the oral cavity;
- A large portion of the elderly population takes medications that can cause changes in the mouth;
- Oral infections have a significant impact on morbidity and mortality in medically compromised patients (17).

Poor oral health in cachexic, frail, care-dependent elderly people is associated with barriers and risk factors that can be classified as: personal factors, lack of professional or social support, and lack of appropriate policy for good oral health. There are numerous reasons why care-dependent older adults often have limited access to dental care.

When working with the oldest patients, it is important to know, assess and explain:

- The normal anatomy and functions of the maxillofacial region and differentiate between normal and abnormal findings;
- Oral health as an important element of general health and quality of life (3);
- Medication intake and identify potential negative side effects of medications on oral health (18);
- Training and motivation in preventive measures for good oral health and offering oral health counseling to adults as well as their caregivers (19,20).

Interprofessional geriatric teamwork is important. Geriatric health care professionals include a team of physicians, nurses, assistants, physical therapists, therapists, dieticians, nutritionists, pharmacists, speech therapists, psychologists, etc. All team members must be competent to perform initial oral health assessments, to identify oral pathologies, refer the patient to a dentist when necessary, and provide oral health counseling and dietary advice to patients and caregivers (21).

**Gerodontology deals with various problems including (22, 23, 24, 25):**

Demography, epidemiology, dental health of the geriatric population	Access to dental care for geriatric patients
Informed consent for geriatric patients	Identification and management of common oral diseases in the elderly
Changes in the mouth and maxillofacial region in aging	Geriatric oral diseases and their consequences
Relationship between general and oral health	Oral rehabilitation
Medication intake and attitude towards oral health	Nutrition, food habits, diet and oral health
Oral palliative care	Specificity of the dental work with adult patients
Conditions for comfort when working with the oldest patients	Treatment planning for geriatric dental patients
Dental specialists as part of an interdisciplinary geriatric team	Oral health maintenance disparities in the oldest patients
Training in preventive measures for good oral health in the elderly and their caregivers	Comorbidities in adults affecting dental treatment
Orofacial pain	Socio-economic issues and geriatric oral health
Quality of life of adults with oral disease	Difficulties in the treatment of adults
Mobile dentistry	Dental care outside the office
Integrating gerodontology into general dental practice	Possibilities and limitations of prevention and treatment in adults
Theories of aging	Ethics in gerodontology
Inequality and discrimination of adults	Psychology and behavior of the elderly patient
Legal aspects in the treatment of adults with dementia, depression, delirium	Coping strategies in gerodontology
Psychological disorders of patients	Interaction with nursing staff in gerodontology
Root caries in the elderly	Burnout during treatment in gerodontology of medical staff and relatives
Disorders of salivary secretion in adults	Physiological changes in old age
Local anesthesia in gerodontology	Periodontology, surgery, implantology, cariesology, endodontics, prosthetic restorations in gerodontology
Bad breath in adults	Oral hygiene in the elderly
Communication between the patient and the doctors	Emergency care, stabilization and definitive treatment in gerodontology

Assessment of oral health should be included in the medical assessment during hospitalization, upcoming manipulations, and operative interventions. The elderly should be provided with assistance with daily oral hygiene and dental prostheses. It is wise to ensure a healthy diet that protects oral health. The elderly must have access to emergency and routine dental examinations and comprehensive dental care. Adults should be offered regular oral exams.

## Conclusion

Given the increasing proportion of the elderly population and the serious shortage of dental professionals with knowledge and skills in the field of gerodontology, it is important that all dental professionals have the necessary knowledge, skills and attitudes to recognize and treat oral problems in these patients. The boundaries of most conventional dental specialties must be repeatedly crossed to provide optimal dental care for our parents. Dental practitioners need knowledge in numerous frontier areas. Bringing these diverse topics together in one place benefits clinicians, but most of all our mothers, fathers, and grandparents. The ultimate goal of gerodontology is to improve the quality of life and oral health of the elderly.

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