



# Considered to be a risk factor for general health issues, geriatric dentistry

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## Abstract

Although maintaining oral health is definitely challenging and different in old age, oral health is not distinct from general health. Even though only a small number of elderly people have physical or mental conditions that necessitate a special interest in the dental office, one should not assume that all elderly people share these conditions. Understanding a few aspects of old age is necessary to achieve health. Tissues in the body become harder with age, and the accumulation of waste products in cells and the loss of lubrication impair the functions of various organs. The dental profession faces numerous obstacles when developing and implementing comprehensive protocols for elderly preventive dentistry. Even though a specific protocol must be tailored to each patient's specific requirements, there are some elderly-specific factors that may influence these protocols.

**Keywords:** Oral health; Physical or mental conditions; Lubrication impair; Dental profession

## Introduction

One of the most pressing issues for the coming millennium will be the aging population, which is one of the most significant aspects of the 21st century worldwide. The proportion of children and adolescents in an aging population is decreasing, while the proportion of people aged 60 and older is rising<sup>1</sup>. The term "Older" refers to people who are at least 60 years old, as defined by the United Nations [1].

**Geriatric dentistry prosthetic:** Geriatric dentistry prosthetic considerations in many industrialized societies, more than half of the elderly population is edentulous. Various systemic and local factors, as well as the individual's previous experience with dentures, influence treatment selection and prognosis. The most significant factors are as follows:

**Ailment-causing conditions:** As a consequence of this, oral and prosthetic care is frequently completely neglected. The provision of satisfactory dental care may be seriously impacted by this circumstance. As a result, the person's prosthetic treatment should be delayed until their general health returns. The most effective treatment option for patients with chronic illnesses is to practice good oral hygiene to prevent caries and periodontal disease.<sup>8</sup> As we get older, the central nervous system's functional components deteriorate. The person is unable to develop new patterns of muscle activity as a result of these changes. As a result, elderly individuals learn new muscle activity patterns and adapt to prosthetic treatment more slowly [2].

**Changes in the mind:** The outcome of prosthetic treatment may be hampered if elderly patients have mental health issues. It's possible for patients to develop completely erroneous notions of what prosthetic treatment can accomplish [3].

**Changes in the physiological state of the mouth:** Aging is characterized by progressive atrophy of the masticatory, buccal, and labial muscles. However, this process is frequently accelerated in denture wearers. Decay of the masticatory muscles may seriously lessen biting effectiveness, which can't be adequately worked on through prosthetic treatment. Instead, it's important to show the person how to eat a healthy, easy-to-digest diet.

Xerostomia, or reduced salivary secretion, is frequently a complicating factor in debilitating diseases like diabetes or psychotropic treatment. This causes traumatic lesions and infections

of the oral mucosa as well as widespread caries and loss of denture retention. People with xerostomia who wear dentures should practice meticulous oral hygiene in addition to using mouthwashes containing chlorhexidine and using artificial salivary substitutes on a daily basis to reduce the risk of complications [4].

**Segment upset:** Around the world, the extent of individuals matured 60 years and over is becoming quicker than some other age bunch. The "greying" of the world's population will be caused by an increase in longevity and a decrease in fertility rate<sup>2</sup>. With 77 million people over the age of 60 in 2001, India now houses 17% of the world's population, compared to China's 127 million. India's elderly population grew from 7.5% of the total population in 2001 to 8.2% in 2011. Around 78% of the Indian older populace lives in country regions. 80 percent of people over 70 who had been married were widows, and 27 percent were widowers<sup>3</sup>. 4. Changes in society and finances In addition to demographic shifts, India's elderly face a number of social and financial obstacles. Some of the challenges include shifts in cultural beliefs and values, weaker family and social welfare systems, and a lack of financial security. Public health is facing significant difficulties as a result of youth dependency, the decline of traditional extended family systems as a result of rural to urban migration, and the rising cost of health care [5].

**Financial and social shifts:** Due to the generation gap and shifts in lifestyle, older people are experiencing social exclusion and insecurity. Additionally, an increase in chronic functional disabilities with an increased lifespan necessitates assistance with daily living activities. The traditional system of "the lady of the house" taking care of the older members of the family at home is losing popularity. Elderly women suffer more than men because they frequently lack a source of income and are reliant on their spouses for all of their essential needs. Elderly

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women try not to be a burden or an inconvenience to other family members by giving their own health issues less importance. When a widow lacks the financial freedom to choose her own health care, it is entirely up to her children to decide what she needs [6].

**The effects of age-related nutrition on oral health:** Aging is frequently linked to diminished salivary gland function. The effects on oral health of disordered salivary gland maintenance. The digestive system, upper airway, and oral cavity are all protected by saliva, which also facilitates numerous sensorimotor phenomena. Therefore, the host suffers from numerous negative effects when saliva is absent. Acinar tissue decreases, ductal elements increase, and the major salivary glands undergo some degenerative changes as people get older. With age, these changes usually occur in a linear fashion. With age, minor salivary glands undergo similar degenerative changes [7].

As a result, the acinar content of salivary gland tissue naturally and uniformly decreases with age. However, it is difficult to generalize about the age-related status of salivary gland fluid output. It would appear that reduced salivary flow does not always accompany aging in healthy individuals. The aging salivary glands' morphological changes contrast with these functional observations. One theory that has been proposed to explain this is that salivary glands have a functional reserve capacity, which enables the glands to produce the same amount of fluid throughout an adult's life. The main oral health issues associated with old age are mouth dryness and dental caries.

**The oral mucous membrane changes with age:** The oral mucosa plays an important protective role that has a significant impact on the host's overall health and well-being. The aging host may become exposed to a wide variety of pathogens and chemicals that enter the oral cavity during daily activities if the oral mucosa's protective barrier function deteriorates. The epithelium and connective tissue, both histologic layers of the oral mucosa, play an important defensive role. A stratified epithelium that acts as a physical barrier that prevents harmful substances and microorganisms from entering. It contains cells that are attached in close proximity to one another and is stratified. Oral mucosal surfaces also possess a protective self-cleansing mechanism that is provided by the natural turnover of the epithelial cells. These substances include keratin and laminin, which are essential for maintaining the mucosal surface [8].

According to previous research, the oral mucosa thins and becomes smoother with age, exhibiting a satin-like edematous appearance, loss of elasticity, and stippling. With the loss of filiform papillae, it is reported that the tongue in particular undergoes significant clinical changes and becomes smoother. The use of prosthetic appliances, which have a significant potential to alter mucosal integrity if not maintained properly, is an additional complication in evaluating oral mucosal status in older people. With age, there is a tendency for the development of sublingual varices, an increasing susceptibility to various pathological conditions such as Candidal infections, and a decreased rate of wound healing.

## Materials and Methods

**Population and study design:** The RETROGAH was a multicenter, retrospective study that was carried out in fourteen Spanish hematology units. Patients over 65 who had recently been diagnosed with myelodysplastic syndrome (MDS), acute myeloid leukemia (AML), multiple myeloma (MM), or chronic lymphoid leukemia (CLL) were included in this study. They had previously participated in the GAH study. In addition, participants were required to give written

informed consent if they were still alive at the time of the study and to have received standard front-line treatment within three months of completing the GAH scale. The Ethics Committee of the Hospital Universitario de la Ribera, Alzira (Valencia, Spain), waived informed consent for deceased patients, and the study was approved.

**Thresholds for cuteness:** Von Frey filaments weighing anywhere from 0.008 g to 4 g were used to measure mechanical sensitivity on the hindpaw's plantar surface. For four seconds, or until the paw withdrew, filaments were applied to the plantar surface of the hindpaw with increasing force. Using the up-and-down approach for von Frey filaments, which was previously discussed, results are expressed as the 50% withdrawal threshold in grams. The time it took for the right hindpaw to withdraw from a heat stimulus was used to measure heat sensitivity. Mice were placed in cages made of Plexiglas on top of a glass sheet. The center of the hindpaw's plantar surface received a heat stimulus from IITC Life Science Inc., Woodland Hills, CA, USA. The average of three 10-minute measurements of withdrawal latencies was calculated. To prevent tissue damage, a 17-second cutoff was established [9].

**Recurring neuropathy pain:** Isoflurane was used to anesthetize the mice (3 percent for induction and maintenance; Baxter Corporation), and the left sciatic nerve was exposed at high thigh level under aseptic conditions. At a location close to the trochanter, just distal to the point where the posterior biceps semitendinosus nerve branches off the common sciatic nerve, the nerve's dorsum was carefully removed from the surrounding connective tissues. With a 3/8-curved, reversed-cutting mini-needle, an 8-0 silk suture was inserted into the nerve and tightly ligated so that 1/3–1/2 of the nerve's thickness was trapped in the ligature. Two to three skin stitches (4-0) were then used to close the wound.

## Result

Geriatric dentistry, also known as gerodontics or gerodontology, focuses on the dental care and oral health needs of older adults. The field of geriatric dentistry recognizes that older individuals may have unique oral health challenges and requires specialized knowledge and techniques to address those needs.

**Improved oral health:** Geriatric dentistry aims to improve the oral health of older adults by addressing dental issues such as tooth decay, gum disease, and tooth loss. By providing preventive care, early diagnosis, and treatment, geriatric dentists help older adults maintain functional and healthy teeth.

**Enhanced quality of life:** Oral health plays a crucial role in overall well-being and quality of life. By promoting oral health in older adults, geriatric dentistry can help prevent or alleviate pain, discomfort, and functional limitations associated with dental problems. This, in turn, can contribute to better nutrition, speech, and social interactions [10].

**Customized treatment plans:** Geriatric dentistry takes into account the specific needs and considerations of older adults, such as age-related changes in oral tissues, underlying health conditions, and medications. Dentists specializing in geriatrics develop individualized treatment plans that are tailored to the unique circumstances of each patient.

**Preventive care and education:** Geriatric dentists focus on preventive strategies to maintain oral health and prevent future problems. They may provide education and guidance on proper oral hygiene practices, diet, and lifestyle factors that can impact oral health.

Regular dental check-ups and cleanings are also important components of preventive care.

**Restorative and prosthetic solutions:** Geriatric dentistry offers various restorative and prosthetic treatments to address tooth loss, dental decay, and other oral conditions. These may include dental fillings, crowns, bridges, dentures, and dental implants. The goal is to restore oral function, improve aesthetics, and enhance overall oral health.

## Conclusion

The underestimation of the oral health care requirements of the elderly and residents would be the primary obstacle to their care. The residents' dental care is typically limited to treating emergencies and does not aim to retain teeth. On the other hand, the goal of oral health should include: Keeping their teeth, keeping their teeth solid and keeping their teeth pretty."Home dentistry or domiciliary dental care" would be the best option for serving the locals, but it is still uncommon in India. Studies ought to be led in this area regularly to recognize the occupants needing oral consideration surrounding nursing homes, advanced age homes, ashrams, secure units, and local area families.

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