

## Some Facts About Prosthetic Dental Treatment of Elderly

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### Abstract

The growing elderly population in Europe is increasingly facing a range of dental and medical issues, being particularly significant. Longer life expectancies and lower birth rates, is putting additional pressure on healthcare systems to address these complex and interconnected health issues. There is a growing need for integrated care models that consider the unique challenges of treating elderly dental prosthetic patients with multiple medical conditions, including the coordination between dental and medical care to ensure comprehensive treatment plans. While implants and fixed prosthetics offer stability and improved functionality, removable dentures can also provide significant benefits, particularly when adjusted to the needs of the elderly. Well-fitted removable dentures can improve chewing efficiency, speech, and overall comfort, contributing positively to an elderly person's quality of life without the high costs associated with more permanent solutions.

By focusing on accessibility, caregiver support, and policy advocacy, society can better address the oral health challenges faced by the growing elderly population, ensuring that all individuals have the opportunity to maintain their dignity and well-being.

**Keywords:** *Elderly; Oral Health; Removable Dentures; Implants*

### Introduction

The increasing number of elderly individuals in Europe, driven by longer life expectancies and lower birth rates, is putting additional pressure on healthcare systems to address these complex and interconnected health issues. There is a growing need for integrated care models that consider the unique challenges of treating elderly patients with multiple medical conditions, including the coordination between dental and medical care to ensure comprehensive treatment plans. Impairments in the musculoskeletal system are common in the elderly and can significantly impact their ability to maintain personal and oral hygiene. As people age, conditions such as arthritis, osteoporosis, sarcopenia (loss of muscle mass), and general frailty can lead to reduced mobility, joint pain, stiffness, and muscle weakness. These issues can make it difficult for elderly individuals to perform daily tasks that are essential for maintaining hygiene, such as brushing teeth, bathing, and grooming [1-4].

Arthritis, for example, particularly in the hands, can make gripping and manipulating objects like a toothbrush or hairbrush challenging. Similarly, limited range of motion due to joint stiffness or pain may prevent an individual from reaching certain areas of their body, which can lead to inadequate cleaning and an increased risk of infections or skin conditions.

The decline in muscle strength and balance also increases the risk of falls, particularly in the bathroom, which is one of the most hazardous areas in the home for the elderly. Fear of falling may lead to avoidance of necessary hygiene activities, further complicating health and wellness.

Furthermore, musculoskeletal impairments often coexist with other age-related conditions, such as cognitive decline or neurological issues, which can compound the difficulties in maintaining hygiene. For instance, someone with both arthritis and dementia may struggle not only with the physical aspects of hygiene performance but also with remembering to these tasks regularly.

Neurological problems, such as dementia, Parkinson's disease, and stroke, are also prevalent among the elderly. These conditions can make it difficult for patients to maintain their oral hygiene, exacerbating dental issues. Moreover, the cognitive decline associated with these neurological conditions often complicates dental treatment, requiring specialized care and approaches from healthcare providers.

### Oral health care and prosthetic treatment plans

The growing elderly population in Europe is increasingly facing a range of dental and medical issues, being particularly significant. As people age, oral health often deteriorates due to factors like dry mouth (often a side effect of medication), gum disease, and tooth loss. Poor dental health can lead to more severe complications, such as infections, malnutrition, and an overall decline in quality of life.

To address these challenges, adaptive devices such as electric toothbrushes, shower chairs, grab bars, and long-handled sponges can be very helpful. Additionally, caregivers often play a crucial role in assisting elderly individuals with their hygiene needs, ensuring that they maintain their dignity and overall health despite physical limitations. Regular assessments and personalized care plans are essential to address the specific needs of elderly patients with musculoskeletal impairments [5].

For elderly individuals, the decision to undergo a simple dental tooth replacement, such as a dental implant, bridge, or denture, must consider their ability to perform routine oral care. As people age, their capacity to maintain proper oral hygiene can decline due to factors like reduced manual dexterity, cognitive impairments, and other health issues. This makes it essential to choose the most suitable tooth replacement option that aligns with their ability to care for it properly. There are several options for treating partial tooth loss:

1. **Dental implants:** While dental implants are a popular and durable option, they require a high level of oral hygiene to prevent infections like peri-implantitis. Elderly patients who struggle with brushing and flossing due to arthritis or other limitations might find it challenging to care for implants effectively. Therefore, implants are generally recommended for elderly patients who can maintain good oral hygiene or have consistent support from caregivers [6-9].
2. **Dental bridges:** Another option that can replace missing teeth are dental bridges. However, they require careful cleaning too, especially around the bridge and the supporting teeth. If an elderly patient can manage their oral hygiene routine, a bridge can be a viable option. Otherwise, it might pose a risk of decay to the adjacent teeth.
3. **Dentures:** Removable dentures are often the most practical choice for elderly patients with limited ability to perform oral care. They are easier to clean and maintain, especially with assistance. Partial dentures can replace a few missing teeth, while full dentures are used when all teeth are missing. Regular removal and cleaning of dentures are crucial to avoid gum infections and other complications [10,11].

Given these considerations, the choice of dental replacement should be guided by the elderly patient's overall health, their ability to maintain oral hygiene, and the level of assistance they receive from caregivers. Regular dental check-ups are also important to monitor the condition of the dental replacements and to provide professional cleaning and adjustments as needed.

Special dental care for the elderly often includes both adjusted surgical procedures and the use of adapted equipment designed to address the unique challenges faced by this age group. As the elderly population typically experiences a range of health issues that can complicate dental treatment, specialized care is essential to ensure their oral health and overall well-being.

### Special dental care for the elderly

This involves procedures specifically adjusted to the elderly, considering factors like bone density, healing capacity, and overall health. Surgeries might include tooth extractions, gum surgeries, or the placement of dental implants, all performed with extra caution to minimize trauma and ensure proper healing.

Due to receding gums and other age-related changes, elderly patients might require surgeries to manage soft tissue issues, such as grafts to address gum recession or surgeries to treat periodontal disease [12-15].

For those who are suitable candidates, implant-supported dentures can provide more stability than traditional dentures. However, this involves surgical placement of implants, which must be carefully planned, considering the patient's bone quality and general health.

### Adapted equipment for elderly dental care

Ergonomically designed tools for maintenance oral hygiene like toothbrushes, floss holders, and inter dental brushes, designed with larger handles or grips to accommodate elderly patients with reduced dexterity due to arthritis or other musculoskeletal conditions.

Electric toothbrushes can be particularly beneficial for elderly patients who struggle with manual brushing. These toothbrushes, with soft bristles and gentle cleaning modes help ensure effective plaque removal with minimal effort.

Dentures for elderly patients made with softer materials to increase comfort, and to fit more securely to account for changes in the mouth's structure due to age.

Specialized tools, such as denture cleaning kits, mouth mirrors with lights and water flossers, can improve maintenance of oral hygiene more easily for the elderly patients.

Dental chairs with enhanced support will be of utmost importance for patients comfort during treatment. They are usually equipped with features like extra padding, adjustable headrests, and tilt functions to accommodate patients with mobility issues or back pain, ensuring they are comfortable during treatments [16].

### Considerations for elderly dental care

Dental care for the elderly often requires coordination with their primary care physicians or specialists, especially if they have chronic conditions like diabetes, cardiovascular disease, or neurological disorders. Pre-surgical assessments and convenient anesthesia plans are very important to minimize risks.

Regular monitoring at least once a year to minimize the increased risk of oral diseases in the elderly, are recommended. This allows for early detection and management of issues like oral cancer, gum disease, and tooth decay.

Special dental care for the elderly encompasses a combination of adapted surgical procedures and equipment that considers their unique physical and medical needs. This approach helps ensure that elderly patients can maintain their oral health despite the challenges associated with aging.

When considering the social approach to expensive dental prosthetic treatments for the elderly, particularly in the context of nursing home residents, there are several important factors to take into account. Removable dentures, while often more convenient and affordable, also raise questions about accessibility, quality of life, and the balance between cost and care [17].

### Social and economic considerations of prosthetic treatment

Affordability and accessibility of dental prosthetics, like prosthetic supra structures on implants or fixed bridges can be prohibitively expensive, especially for elderly individuals living on fixed incomes or relying on public assistance. Many elderly patients do not have dental insurance that covers advanced prosthetic treatments. Removable dentures, on the other hand, are significantly less expensive and often more accessible to a broader population [18].

In many countries, public health systems or insurance providers offer limited coverage for dental care, and expensive treatments like implants may not be fully covered. Advocating for broader insurance coverage or government subsidies for essential dental care, including high-quality removable dentures, could improve accessibility for elderly populations.

While implants and fixed prosthetics offer stability and improved functionality, removable dentures can also provide significant benefits, particularly when adjusted to the needs of the elderly. Well-fitted removable dentures can improve chewing efficiency, speech, and overall comfort, contributing positively to an elderly person's quality of life without the high costs associated with more permanent solutions.

There is a growing recognition that access to basic dental care, including the provision of functional dentures, is a matter of social justice. Elderly individuals, particularly those in nursing homes or with limited resources, should not be denied the opportunity to maintain oral function and dignity due to financial constraints. Social policies should aim to reduce disparities in dental care access, ensuring that even the most vulnerable populations receive necessary treatments.

### Convenience and usage of removable dentures in nursing homes

Removable dentures are often more practical for dependent elderly residents in nursing homes. These individuals may have limited dexterity or cognitive impairments that make the maintenance of fixed prosthetics challenging. Removable dentures can be easily cleaned, adjusted, and replaced as needed, making them a more manageable option for both the residents and the caregivers.

In nursing homes, caregivers play a crucial role in assisting residents with their daily oral hygiene. Removable dentures are generally easier for caregivers to manage, allowing for more effective and consistent cleaning routines, which is critical in preventing oral infections and other complications.

Removable dentures can be adjusted to accommodate changes in the elderly patient's mouth, such as gum shrinkage or changes in the bone structure. This flexibility ensures that the dentures remain comfortable over time, reducing the risk of sores or discomfort that can occur with poorly fitted prosthetics.

For elderly patients with multiple health issues, removable dentures pose fewer risks compared to surgical interventions like implants, which require good bone health and a lengthy healing process. Removable dentures avoid these complications, making them a safer option for many nursing home residents [19].

### Community and policy advocacy

Raising awareness about the importance of oral health in the elderly is crucial. Community programs can help educate both elderly individuals and caregivers about the benefits and proper care of removable dentures, ensuring that they are used effectively.

Policymakers and healthcare providers should work together to establish standards that ensure all elderly individuals, especially those in nursing homes, have access to necessary dental care, including high-quality removable dentures. This could include lobbying for increased funding for dental services in public healthcare systems and nursing homes.

Integrating dental care into the broader healthcare services provided in nursing homes ensures that oral health is not overlooked. This holistic approach can help address the interconnected issues of oral and general health, improving outcomes for elderly residents.

### Conclusion

While implants and fixed prosthetics offer better stability and improved functionality, removable dentures can also provide significant benefits, particularly when adjusted to the needs of the elderly.

Removable dentures represent a socially and economically viable solution for the dental needs of elderly individuals, particularly those in nursing homes. They offer a practical, cost-effective option that can significantly enhance the quality of life for dependent elderly residents. By focusing on accessibility, caregiver support, and policy advocacy, society can better address the oral health challenges faced by the growing elderly population, ensuring that all individuals have the opportunity to maintain their dignity and well-being.

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