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## Physical therapy in the prevention of fall-related accidents in the elderly.

*Physiotherapy in the prevention of accidents due to falls in the elderly*

Tatiane Dione Pereira – ESAS – Albert Sabin Higher Education

Advisor: Professor **Ronaldo Nunes Lima**, MSc – ESAS – Albert Sabin Higher Education Institution

### SUMMARY

**Introduction:** Aging causes significant physiological changes in the body, especially affecting postural balance, muscle strength, and motor coordination, making older adults more susceptible to falls and their consequences.

**Objective:** To analyze the effectiveness of physiotherapy in preventing fall accidents in older adults. **Methodology:** This is a descriptive and exploratory qualitative literature review. Searches were conducted on academic digital platforms such as LILACS, SCIELO, Virtual Health Library, and periodicals, covering the period from 2020 to 2025.

**Results:** It is believed that the results related to muscle strength, balance, functional capacity, and physical fitness in older adults are linked to the frequency with which they engage in physical activity. **Conclusion:** It is important to use a multidisciplinary approach, where physical exercise is a fundamental part of fall prevention in older adults.

**Keywords:** Physiotherapy. Elderly. Accident prevention.

### ABSTRACT

**Introduction:** Aging causes significant physiological changes in the body, particularly affecting postural balance, muscle strength, and motor coordination, making older adults more susceptible to falls and their consequences. **Objective:** To analyze the effectiveness of physical therapy in preventing falls among older adults. **Methodology:** This is a qualitative, descriptive, and exploratory literature review. Searches were conducted on academic digital platforms such as LILACS, SCIELO, the Virtual Health Library, and journals from 2021 to 2025. **Result:** It is believed that outcomes related to muscle strength, balance, functional capacity, and physical fitness in older adults are linked to the frequency with which they engage in physical activity. **Conclusion:** It is important to adopt a multidisciplinary approach, with physical exercise being a fundamental part of fall prevention in older adults.

**Keywords:** Physiotherapy. Elderly. Accident Prevention.

## 1. INTRODUCTION

As the population ages, so do the challenges related to...

maintaining the functionality, autonomy, and quality of life of individuals over 60

years. Among these challenges, falls stand out as one of the main risk factors for

loss of independence and the occurrence of serious injuries in this age group (Lima et al., 2021).

Aging causes significant physiological changes in the body, affecting

especially postural balance, muscle strength, and motor coordination, which makes the elderly more vulnerable.

most susceptible to falls and their consequences. These episodes, besides being common, are one of the

main causes of fractures, hospitalizations, and impairment of functional autonomy in the third age.

age, negatively impacting their quality of life (Castro; Lima, 2024).

The Statute of the Elderly (Law No. 10.741/2003) ensures that all opportunities and facilities

that services be offered to the elderly for the maintenance of their physical and mental health, as well as for their

Moral, intellectual, spiritual, and social development in an environment of freedom and dignity.



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Furthermore, the Statute emphasizes that it is the duty of the family, the community, society, and the authorities.

The public sector must guarantee, with the highest priority, the realization of the elderly person's right to life, health, and...

food, education, culture, sports, leisure, work, citizenship, freedom,

dignity, respect, and family and community life (Brazil, 2024).

In this scenario, physiotherapy has established itself as a fundamental tool in

Promoting the health of the elderly by offering exercise-based strategies that strengthen the

Muscle strengthening improves body control and promotes greater stability during locomotion.

Physiotherapeutic intervention can take place in both clinical and home settings, with strategies

adapted to the individual needs of elderly people at risk (Durães et al., 2023).

Therefore, this research is justified by the urgent need to better understand the

The impact of physiotherapy on fall prevention in the elderly is a topic that has become a growing concern.

of public health, which not only affects the physical health of individuals, but also has consequences

Deep social and economic, this work provides new information about the strategies

more effective physiotherapy techniques, in addition to contributing to the improvement of public health, with a focus on

Fall prevention and the promotion of healthier and safer aging. Because the choice

This excerpt aims to deepen the understanding of practices that truly make a difference.

Difference in the prevention of new accidents, based on recent scientific evidence.

Based on this excerpt, this study aims to analyze the effectiveness of physiotherapy in

Prevention of fall-related accidents in the elderly, aiming to improve quality of life and reduce accidents.

of the risks of injuries associated with falls. Because the elderly suffer greatly from this type of incident,

Thus, the study contributes to the development of evidence-based clinical practices, offering

knowledge that can strengthen preventive physiotherapy actions in the care of the elderly.

## **2. THEORETICAL FRAMEWORK**

### **2.1 Physiotherapy in the context of fall prevention in elderly patients**

In Brazil, Law No. 11,433/2006 created the National Day of the Elderly, establishing that the bodies

public entities responsible for coordinating and implementing the National Policy for the Elderly are

Those responsible for organizing and promoting events that value the role of the elderly in society. In addition

Furthermore, in the area of health, Consolidation Ordinance No. 2/2017 established the National Health Policy.

of the Elderly Person (as per Annex 1 of Annex XI) (Brazil, 2024).

Preventing falls in the elderly is a very important public health issue.

especially with the increase in life expectancy and the growth of the population over 60 years of age. According to

According to the World Health Organization (WHO), approximately 30% of people in this age group who are older

People over 65 suffer falls. These falls represent one of the main causes of problems.

health, deaths, and loss of abilities at this stage of life. In addition to the direct health effects, falls



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are strongly linked to loss of autonomy, increased hospitalizations and to  
A decrease in quality of life. All of this ends up generating high costs for healthcare systems.  
as well as for the families themselves (WHO, 2024).

In this context, physiotherapy appears as an efficient strategy for prevention.  
as for treatment. Research indicates that physiotherapeutic actions, such as exercises of  
Muscle strengthening, balance training, and motor coordination training are essential.  
to reduce the risk of falls and to improve the mobility and functionality of the elderly (Bertoichi  
et al., 2025).

Physical therapy is not only a way to prevent falls, but also plays a role.  
It plays a fundamental role in the recovery of elderly people who have suffered a fall. It helps in the restoration of  
functional capacity and the resumption of autonomy, contributing to the elderly person maintaining their  
independence and avoiding secondary complications (Mota et al., 2020).

Studying the effectiveness of physiotherapy in preventing falls is fundamental to developing...  
Interventions that are backed by solid scientific evidence. This knowledge is very important.  
important for creating more efficient and accessible health programs, in health units as well as  
Through community actions, we can expand prevention and offer health support to the elderly in different ways.  
environments and also seek physiotherapy practices that are more accessible. In this way,  
Older adults from diverse social backgrounds can benefit from these interventions, helping to reduce  
the effects of falls and promoting a better quality of life for this population (Lima et al.,  
2021).

Furthermore, by analyzing how the elderly themselves perceive the benefits of the interventions  
In physiotherapy, it is observed that the patient's active involvement in their rehabilitation process is...  
A key factor for the success of the treatment. This is because this involvement strengthens the bond.  
between the professional and the patient, in addition to encouraging changes in habits. As a result, there is a  
Increased adherence to treatment, which directly impacts the elderly person's positive perception of the condition.  
effectiveness of physiotherapy and its contribution to the preservation of his health and well-being (Oliveira;  
Silva, 2020).

Patient safety has become a major concern due to the number of  
incidents that occur in healthcare services. Therefore, the World Health Organization created the  
The World Alliance for Patient Safety has defined six international goals with the aim of  
Reducing errors and improving the quality of service and addressing falls is the sixth goal, aiming to recognize the...  
patients who are more likely to fall and take steps to prevent accidents, such as guiding the  
Patients and their families, and installing protective barriers to reduce the risk of injuries from falls, these goals are  
also followed by the Unified Health System (SUS) (Lopes).  
et al., 2025).

### 3. MATERIALS AND METHODS

The methodology used to prepare this work is a descriptive study and This was an exploratory qualitative study. A literature review was conducted, primarily composed of... Choosing a topic and selecting publications, followed by transcribing the works that address the topic. with the aim of gathering and analyzing scientific studies that address the role of physiotherapy in Fall prevention in the elderly. This type of research has allowed us to understand the evidence already available. available on the subject, contributing to the construction of a more informed perspective and updated.

The searches were conducted on academic digital platforms such as LILACS, SCIELO, Virtual Health Library and periodicals. For the research of the study, the following was carried out: An exploratory review of 38 publications resulted in the selection of 16 for its elaboration, comprising the material The selected individual met the inclusion and exclusion criteria. The following keywords were used: Elderly. Physical therapy. Prevention. Falls.

The inclusion criteria were defined as publications that highlighted the theme, exclusively featuring women, with works published in full in English and/or Portuguese, in period from 2020 to 2025. Publications that were not exclusively related were excluded. with keywords and in other languages. publications dealing with other age groups, studies that do not address physiotherapy interventions, duplicate work in different databases, texts without access to full content and research focused on areas that do not directly contribute to the focus of the investigation.

### 4. RESULTS AND DISCUSSION

The literature review consisted of seven studies that aimed to evaluate effects of different types of physical exercises applied during physiotherapy assistance in Fall prevention in the elderly population. Information such as: author, year, title, objective, and results. The results are presented in Table 1.

**Table 1:** Analysis of different types of physical exercises applied during physiotherapy assistance in the prevention of falls in the elderly.

YEAR	AUTHOR	TITLE	OBJECTIVE	RESULTS
2023	BATIST THE; BOOK ENT	Intervention with balance exercises in the prevention of falls in the elderly: a literature review.	Demonstrate the Benefits of balance exercises in preventing falls in the elderly.	see that the practice of balance exercises is an efficient strategy and brings several benefits in preventing falls among the elderly, in addition to helping treat the consequences of these falls.
2021	COSTA; SILVEIR THE; WORLD	The importance of physiotherapy in preventing falls in the elderly –	Presenting the analyzed articles in a didactic way, thus facilitating analysis.	Physiotherapy protocols have proven effective in reducing the risk of falls, helping older adults to lessen the limitations caused by the physiological changes of aging, with

	M	Comparative review article.	This significantly improves	their quality of life.
2023 LOURENÇO et al.		Physiotherapeutic exercises in the prevention of falls in elderly individuals.	Identify the importance of exercise. Physiotherapeutic approaches in fall prevention among the elderly.	It was observed that regular physical activity among the elderly brings benefits. It became clear that hydrotherapy and kinesiotherapy are important in preventing falls.
2025 FINAMRE		Effectiveness of multimodal exercises in preventing falls in active older adults.	To evaluate the effectiveness of multimodal exercises in preventing falls in active older adults in the community.	Recent studies show that practicing these types of exercises frequently not only helps strengthen muscles, but also significantly improves body stability and gait. These changes are essential for maintaining functionality and preventing falls, especially in people who are part of a more vulnerable group.
2024 NALIN et al		Effective physiotherapy modalities in preventing falls in the elderly – a literature review.	To identify effective physiotherapy modalities for fall prevention and improvement of quality of life in the elderly population.	The text describes how resistance exercises, hydrokinesiotherapy, Pilates, dance, and virtual reality combined with conventional therapy have proven effective in improving balance and strength in elderly individuals in sessions lasting 40 to 60 minutes, 2 to 3 times a week.
2024 SOUZA et al		Physiotherapeutic approaches in fall prevention in the elderly.	Review the physiotherapy approaches used to prevent falls in the elderly.	Muscle strengthening and balance training reduce falls by up to 30%, improving the safety and confidence of older adults.

Source: Author, 2025.

According to Adura et al., (2023), aging is a natural process that gradually and irreversible, it affects the physical, cognitive, and sensory abilities of human beings. Among the changes The most common symptoms include reduced visual and auditory acuity, weakening of strength and... Muscle endurance, in addition to the consequent drop in overall performance, which directly impacts... in performing basic and instrumental daily activities. Visual and auditory limitations, Slower and more unsteady movements, decreased attention span, slower response to stimuli, Reduced learning capacity, overload, and difficulty in integrating information explain... The challenges faced by older people.

In Batista's study; Livramento (2023), he highlights that the regular practice of exercise Balance is very important, as it brings several benefits, such as improved balance in both both at rest and in motion, ease of walking, reduced muscle mass loss, In addition to increased strength, mobility, and functional capacity, all of this helps to reduce the risk of... falls and contribute to a better quality of life. With the guidance of a physiotherapist, this This practice can be even more effective in preventing accidents, helping to reduce dependence and empowering older adults to perform their daily activities more safely, without fear of falling.

In the study by Costa, Silveira and Mundim (2021), the physiotherapy professional has a role fundamental in preventing falls in the elderly. This is because it works to improve and maintain a person's functional capacity, helping to reduce limitations, disabilities, and dependence.



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which can arise with aging. He does this through guidance on the practice of physical activities, such as muscle strengthening, balance exercises, gait training and stretching.

Regarding the subject, Lourenço et al., (2023), analyzed that physiotherapy improves the Improving people's quality of life at all stages of life, helping to maintain healthy movement through kinesiotherapy exercises and the use of physical resources. It is especially useful in elderly.

Finamore's review (2025) limited its study to include elderly individuals aged 50 and over. Or rather, it suggests that exercise programs involving different modalities should be implemented to help prevent falls among older adults who are actively using the equipment maintaining. These programs should offer various types of training and be conducted at least twice several times a week, always accompanied by educational guidance. Furthermore, it is important that These actions must be carried out over a prolonged period so that the results are truly... effective.

Based on the literature review by Nalin et al., (2024), it is believed that the results related to muscle strength, balance, functional capacity, and physical fitness in older adults are linked to the frequency with which they practice these activities. In other words, it's possible to say that it's possible Prevent falls by strengthening muscles and training balance, regardless of the method chosen, provided that this practice is consistent.

A study conducted by Lima (2021) analyzed how resistance exercises can help to prevent falls in elderly people who are pre-frail or frail. The study showed that these training sessions They improve balance and increase strength — especially in the muscles — strengthen resistance Localized areas improve mobility and speed up walking pace. The author's recommendation was Perform resistance exercises in isolation or using resistance bands, body weight, or a ball. Swiss, which may or may not be combined with aerobic activities. This combination helps to improve It improves motor coordination and reduces the risk of falls among the elderly.

According to Souza et al. (2024), one of the main strategies is balance training, which involves exercises to challenge body stability and improve muscle response to imbalances. In addition, resistance and stretching exercises help maintain strength and Muscle flexibility, which makes the body better prepared to handle changes in position and It increases the functional mobility of the elderly. Kinesiotherapy is a technique used to improve the Control of movements and flexibility, while hydrotherapy offers a safe and controlled environment. Low-impact, perfect for exercise. This practice helps relieve pain and increase range of motion. range of motion.



## 5. CONCLUSION

After conducting this literature review and analyzing the studies, it became clear how physiotherapy is important to help prevent falls in the elderly. The results show that the protocols of Physical therapy really does help reduce the risk of falls. This information is quite valuable for healthcare professionals, especially physiotherapists, who work in fall prevention. They highlight the importance of using a multidisciplinary approach, where physical exercise is a fundamental part of prevention.

The role of physiotherapy in fall prevention involves an approach that includes different health professionals, in addition to having the support of family members and caregivers, forming a support network for the elderly. Because when an elderly person suffers fractures resulting from falls, the impact... It becomes apparent in various aspects such as social, familial, and economic.

The importance of preventing further falls was highlighted, and one way to do this is... practicing physical exercise. It is necessary that the exercises be performed regularly, even if they are short-lived. The results achieved go beyond muscle strength, Balance, ability to perform daily activities, and physical fitness in older adults. These conditions are provided through qualified professional guidance. Specifically, the physiotherapist will promote quality of life and independence for this population.

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Year V, v.2 2025 | Submission: 09/11/2025 | Accepted: 11/11/2025 | Publication: 13/11/2025

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