

Aquatic Balance Training on Improving the Physical Condition and the Fall Risk Among Elderly

Eduardo Martínez-Carbonell Guillamón

Health Science BSp&ExSc MSc MSPT, Spain

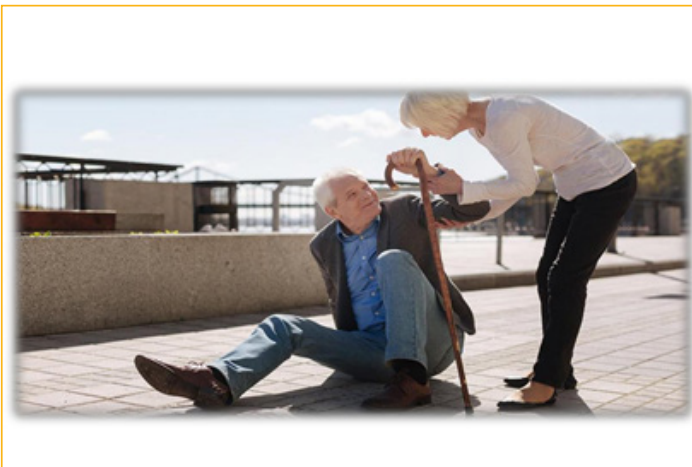
Corresponding author: Eduardo Martínez-Carbonell Guillamón, Health Science BSp&ExSc MSc MSPT, Spain.
E-mail: eduardomartinezcarbonell@gmail.com

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Introduction

Approximately 30% of people aged over 65 years will fall at least once a year and 15% at least twice a year and this risk increases with age (Tinetti, 2003).



Research shows that detection and improvement of predisposing modifiable risk factors as balance can reduce the rate of future falls (Shrerrington et al., 2011)

Aquatic exercise provides a low-impact and low-weight bearing environment here individuals can exercise balance safely. The risk of falling is eliminated, and therefore an individual can concentrate on making physical improvements following the professional instructions



Figure 1: Horizontal jump with one leg. Mobilization of lower limbs.

Research objective

Assess the use of the aquatic environment to improve the balance condition of older adults. Identify the best aquatic balance exercises to reduce the fall risk in older adults



Figure 2: Unipodal balance. Mobilization of lower limbs.

Methods

Aquatic Exercise	Water Based	Hydrotherapy
Physical Exercise	Physical Function	Exercise
Elderly	Older Adults	Aging

Table 1: Databases and search terms.



Figure 3: Reduction of the support base.

Inclusion criteria
Functional Independence
No pathologies
People between 60-80 years old
Studies that introduce balance exercises in their programs
International databases in the research field

Table 2: Inclusion criteria



Figure 4: Gravity center movements without the help of upper limbs.



Figure 5: Vertical jump with both legs.



Figure 6: Vertical jump with two legs and visual field reduction.



Figure 7: Center of Gravity Movements With the Help of Upper Limbs.

Sources: Martínez-Carbonell Guillamón, 2019; Sanders, Takeshima, Rogers, Colado y Borreani, 2013; Kim y O'Sullivan, 2013; Elbar et al., 2013; Javaheri, Rahimi, Rashidlamir y Alikhajeh, 2012; Alikhajeh, Moghaddam & Moghaddam, 2012

Conclusions

Aquatic environment is presented as beneficial in order to improve balance in the elderly being able to contribute positively the fall prevention.



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