

Benefits of the Pilates Method in Preventing Elderly Falls



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Abstract

The proportion of the elderly population has increased considerably in the world; this requires the transformation of public health policies for the coming decades. One of the major health problems of the elderly population is falls, responsible for injuries, days of hospitalization and low functional independence capacity. Different studies have revealed the effects of Pilates practice on the prevention of falls in the elderly. The method is well accepted by the elderly population and able to increase levels of muscle strength, flexibility, balance, functional mobility, body awareness, confidence in balance, reducing fear of falls.

Keywords: Pilates; Aging; Falls

Short Communication

The proportion of the elderly population has increased considerably in recent decades. It is estimated that in the year 2050, the world population presents 2 million people over 65: a population more susceptible to chronic and degenerative diseases. In the case of Brazil, for example, it is estimated that in 2050 it will have the fifth largest population in the world, 253 million inhabitants, and 9 million will be over eighty years old. Therefore, issues of human aging are a challenge for public policies on health and social development [1,2]. Human aging is considered as a process and not pathology [3]. This process determines a series of physical changes, which is followed by the progressive reduction of the functional capacities, necessary for the resolution of activities of daily living [4]. Although aging occurs differently for each person, it cannot be avoided. However, by adopting an active lifestyle, it is possible to prolong the years of life in a healthy way [5]. In this perspective, the regular practice of physical exercises presents itself as a measure of low cost, capable of increasing the physical condition of the elderly and, consequently, the functional capacity. In this perspective, the regular practice of physical exercises presents itself as a measure of low cost, capable of increasing the physical condition of the elderly and, consequently, their functional capacity. Through physical exercises, the elderly can expand their social network of friendships, avoiding isolation, depression, insomnia, increasing the perception of quality of life and well-being [6-8].

Among the sporting modalities advised for the elderly population and well accepted, is Pilates [9]. The method is composed of a series of exercises developed by Joseph Pilates in the 1930s. Pilates also called his method as “contrology”, because exercises seek control and awareness of body movement [10]. The exercises can either be practiced on equipment, regulated by a spring system, or on the ground, using only body weight. The conceptual basis of training consists of body-mind integration, achieved from functional challenges. Pilates corrects postural deficits by developing stability of the “powerhouse” muscles, a region that involves more internal muscles, located from the peripelvic region to the diaphragm. This set of muscles is especially responsible for postural control and stability of the body.

The Magnitude of Falls, Among the Elderly Population

According to the World Health Organization [11], approximately 28-35% of people 65 and older fall yearly, the rate increases to 32-42% among older people over age 70, being the most common case among women. The consequences of a fall can be serious, it is estimated that 10% of them generate soft tissue injuries, fractures and brain trauma, which is followed by days of hospitalization. In Brazil, for example, according to data released by the Ministry of Health on hospital admissions for the elderly by falls, between the years 2005 and 2010, 399,681 cases were identified [12]. The services for authorization of

hospitalization in this period was USD 132.821.221,69. These data demonstrate the need to develop actions to prevent falls in the elderly in Brazil.

Benefits of the Pilates Method to Preventing Elderly Falls

Systematic review studies [11,13], meta-analysis [14] and experimental [15,16] have shown the potential of Pilates exercises to prevent falls in the elderly. This is due to the following factors:

- a) Increased levels of muscle strength in the lower limbs, dorsal and abdominal muscles [17];
- b) Better levels of flexibility and stretching [18];
- c) Stimulation of the static and dynamic balance regulation system: visual, vestibular and proprioceptive apparatus [19,20];
- d) Improves gait pattern: increased speed of strides, length and cadence [21];
- e) Reduced fear of falls and increased confidence in balance [22].

In addition, in order for the risk of falls to be reduced to the maximum, physical exercise should be associated with fall prevention strategies [23,24], such as:

- a) Multifactorial assessment of intrinsic and extrinsic aspects related to falls;
- b) Single clinical evaluation: protocols and questionnaires;
- c) Educational interventions; and
- d) Actions to prevent falls at home.

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