My interest in the theme of ageing is due to my role as a physiotherapist for 10 years at ILPIs (Long-term Care Institution of the Elderly) at the Sociedade Beneficente Alemã (“German Beneficent Society”), which later changed its name to Lar Recanto Feliz. After a decade with these patients, 20 years ago, I started my own physical therapy practice and most of my patients are elderly women.

In general terms, Brazilian women live longer than their partners, facing the difficulties imposed by the ageing process without their spouses or companions (Ribeiro, 2006). The process brings some physiological changes that make them more vulnerable in certain aspects (ibid). Some of these are osteoporosis, osteodegenerative diseases, cognitive impairment, strokes, and postural balance deficit. One of the most common cases I work with is the rehabilitation of women after traumatic events caused by fractures, especially hip injuries.

When analysing hip fracture cases in the elderly, especially women, falls are commonly its leading cause (Ferretti et al., 2013) and occur more in women than in men in the same age group (Pereira et al., 2001).

Ribeiro et al. (2016) define fall as:

(…) an accidental event that results in the individual’s position shifting to a lower level relative to his or her initial position, with the inability to timely correct and support themselves on the ground. (…) For a fall to occur, there must be a disturbance of balance and a failure of the postural control system to compensate for this disturbance.

Falls may be related to factors commonly classified in the literature as intrinsic or extrinsic. The intrinsic ones are those resulting from the ageing process itself, diseases, and drug effects, that is, related to factors inherent to each patient. Extrinsic factors depend on social and environmental circumstances that pose challenges for older people (Fabricio et al., 2004), such as their homes and surroundings and places they frequent.
1. Table - Some of the main intrinsic and extrinsic factors contributing to falls in the elderly.

<table>
<thead>
<tr>
<th>Intrinsic Factors</th>
<th>Extrinsic Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>visual and hearing deficits</td>
<td>inadequate lighting</td>
</tr>
<tr>
<td>vestibular and proprioceptive disorders</td>
<td>slippery surfaces</td>
</tr>
<tr>
<td>increased reaction time to hazardous situations</td>
<td>no handrails in hallways and restrooms</td>
</tr>
<tr>
<td>decreased sensitivity of baroreceptors to postural hypotension</td>
<td>obstacles on the way (low furniture, small objects or wires)</td>
</tr>
<tr>
<td>musculoskeletal disorders</td>
<td>high or narrow steps</td>
</tr>
<tr>
<td>joint degenerations</td>
<td>loose or creased rugs</td>
</tr>
<tr>
<td>muscle weakness</td>
<td>inadequate shoes</td>
</tr>
<tr>
<td>sedentary lifestyle</td>
<td>very long clothes</td>
</tr>
<tr>
<td>psychological risks and emotional aspects</td>
<td>excessively high or low shelves</td>
</tr>
<tr>
<td>feet deformities</td>
<td>mistreatment suffered</td>
</tr>
<tr>
<td>specific pathologies such as cardiovascular, neurological, endocrine-metabolic</td>
<td>poorly maintained public road with holes or irregularities</td>
</tr>
<tr>
<td>Medication usage</td>
<td>Activities to be performed</td>
</tr>
</tbody>
</table>


It is essential to highlight the warning made by Ishizuka (2003) that psychological or emotional risk factors are not well studied, although being critical, such as depression, anxiety, dementia, fear of falling, etc.

**Individual Risk Assessment**

The association of intrinsic and extrinsic risk factors of each patient configures their individual risk. According to Simoni Soares et al. (2015), “the main risk factors for falls and fractures are: age, sex, psychotropic drug use, alcohol abuse, tobacco, osteoporosis, early menopause, physical inactivity, physical disability, loss of balance, loss of cognitive ability, and presence of co-morbidities.” As noted earlier, women are the group in which falls are most frequent. One of the causes attributed to it is their greater susceptibility in relation to men to the prevalence of chronic diseases (Souza et al., 2009). In addition, osteoporosis is the main factor responsible for the increase of femur fractures (Simoni Soares et al., 2015).

These factors are related to intrinsic components. Extrinsic factors, however, are the ones that most influence the increase and variation of individual risks between patients. In this regard, older people can do much to reduce this risk. Small attitudes can produce significant returns. Many fractures in their homes could be prevented with some simple care. This becomes more significant when we understand that over 70% of falls occur at home (Pereira et al., 2001).

In my many years of practice, I have experienced many stories of hip fracture. Ladies telling that they fell for going to the bathroom without turning the light on or, upon returning to bed, fell because it was dark, and they slipped as they lay down. Another patient who, having sat on a stool for lunch, dropped cutlery, and the seat moved while she was trying to catch it. She fell and fractured her hip. A third came out of the wet shower box and slipped on the floor, falling and fracturing the pelvis. I could mention many other cases that I still hear in my appointments. I firmly believe these cases could have been avoided with some simple guidelines and proper care in their homes.

Fortunately, in my practice, I have noticed a gradual change in the behaviour of people treated (Upper class). I see more and more attention on changing attitudes, abandoning habits such as physical inactivity, too much salt in food, and even switching to more suitable furniture, such as taller toilets, adding a bar in bathrooms, sofas and chairs with appropriate heights, implementation of indirect lighting on the way to the bathroom, abolition of the use of rugs and making greater space for circulation. All this to be able to live the ageing process healthily and maintain their...
functional capacity, independence, and autonomy.

**Take Home Message**

1. Family members should be alert and ready to help improve the environment within their seniors' homes.
2. Encourage and inspire the elderly person to start or continue the practice of physical activities that keep their muscles strong, respecting their personal tastes, making them feel active and motivated to leave the sedentary lifestyle, and the possibility of creating a circle of new social relations.
3. Search for places with the right environment and qualified professionals to support the elderly
4. Guide people who take care of the seniors simply and objectively about the various risk factors mentioned here that lead to fractures and how to avoid them.
5. Engage in conversations and pay attention to the psychological and emotional factors that can affect the daily life of the elderly.

My understanding is that rehabilitation should not only target the orthopaedic element, such as being able to walk again to resume Daily Life Activities (ADLs), but also guide our patients so that these always very painful and stressful events do not recur. Supporting them in restoring their self-esteem, self-confidence, and better quality of life is an integral part of our work and makes an immense difference in their lives.

**Original Abstract**

http://www.woncaeuurope.org/content/564-secular-trend-incidence-hip-fractures-spain-it-changing-0

**References**

Groups of women at high risk of hip fracture can easily be identified in primary care and offered treatment, with realistic prospects of hip fracture prevention. Discover the world's research. 17+ million members. Its clinical potential has recently been endorsed by the International Society of Clinical Densitometry Zysset et al. (J Clin Densitom 18(3):359â€“92, 2015). In vitro validation studies demonstrated the superiority of FEA over DXA for the prediction of ultimate load. We have assessed the acceptability of a method for screening for risk of future hip fracture in elderly women. After receipt of an initial response to a mailed risk-factor questionnaire sent out to 5,306 women, women were randomly assigned to active or control groups. The biggest risk factors for a hip fracture are osteoporosis and cognitive impairment.[2][3]. About one-third of elderly people living independently fall every year, with 10% of these falls resulting in a hip fracture.[4]. A serious injury that occurs mostly in elderly people and complications can be life-threatening.[5][3]. 5-10% of patients experience a recurrent hip fracture, with the mean interval between the first and second fracture being 3.3 years. Up to 20% of patients die in the first year following hip fractures, mostly due to pre-existing medical conditions. About 3% of hip fractures are related to localized bone weakness at the fracture site, secondary to tumor, followed by bone cysts, or Pagetâ€™s disease. Risk factors[edit | edit source]. In older women, TUG time predicts the risk of major osteoporotic fracture and hip fracture independently of clinical risk factors and bone mineral density, and has a substantial impact on fracture probabilities. Introduction The timed up and go (TUG) test measures physical performance and predicts falls in the elderly. Risk factors for falls such as immobility and previous falls also contribute to the risk of fractures in the elderly [14, 15]. Identifying individuals who will fracture based on BMD alone has low sensitivity [16]. Therefore, fracture risk calculators which incorporate clinical risk factors in addition to BMD have been developed in recent years. Among those, the fracture risk assessment tool FRAX is the most widely used [17].