

Who is at Risk to Fall



While all senior citizens are at risk of falls and fall related injuries, there are demographic, genetic and even social factors that place individuals at greater risk. Based on these factors as well as medical and personal risk factors a person's individual risk of fall or their propensity to fall can more accurately be predicted by healthcare and safety professionals using proper fall risk assessment tools.

Seniors who are white men have the highest fall-related death rates, followed by white women, black men and black women. It is believed that men are at this higher risk because men also suffer from the most illnesses and diseases as they age. Men are also more prone to strokes, heart attacks and most neurological diseases than are women. However just because women generally fall less than men, it does not mean that statistically they are at less of a risk of fall related injuries than their male counterparts. To the contrary, women have 2-3 times as many hip fractures as men; in point of fact some women have a 1 in 7 chance of hip fracture during their lifetimes. Older women—especially Caucasians and Asians are at a greater risk of hip fracture than men.

The oldest of the old, Seniors 80+, experience more falls and more fall related hip fractures and head trauma than seniors 65 to 79. Also, the mere fact that we are living longer as seniors has dramatically increased the number of serious fall related injuries. In fact, fall-induced traumatic brain injuries among seniors 80 and over increased by 60 percent from 1989 to 1998.

General health and physical condition can greatly impact the likelihood that a senior will experience a fall. Declining balance, gait, and muscle strength can also be factors that increase the likelihood of falls. For example, seniors who are unable to stand on one leg for more than five seconds are twice as likely to experience falls than those seniors who can stand on one leg for 10 seconds or longer.

Other factors can also increase the risk of falls including; nutrition, hydration, and daily medication regimen. Users of multiple prescription and over-the-counter drugs are at a higher risk of falls. In addition socialization factors also play a role in falls. For example elderly people who live alone are twice as likely to fall than those who reside with a spouse or other loved one. In general people who remain more socially engaged with the outside world are less likely to fall than those who cut themselves off from daily human interaction and outside events.

Medical Risk Factors:

Extensive research documents a number of substantial medical risk factors that contribute directly to falls that senior citizens experience. Some medical risks can be reduced with treatment while others cannot be reduced due to the nature of the problem be it an illness or genetic issue. However, studies also indicate that making seniors aware of these medical risks as part of a comprehensive program can reduce the risk of falls whether the actual medical risk is substantially reduced or not.

Ninety percent of the 350,000 hip fractures that occur each year in the U.S. are the result of a fall. In greater than 70% of these cases there have been 2 or more medical risk factors present such as (bone disease) osteoporosis, high blood pressure or cardiac irregularities or disease. By the year 2050, there will be an estimated 650,000 hip fractures annually; nearly 1,800 hip fractures a day. Reduction of medical risk factors as part of a comprehensive fall prevention program could substantially reduce this estimate.

Women are the primary sufferers of osteoporosis, which greatly contributes to their increased risks of falls. Women have two to three times as many hip fractures as men, and white, post-menopausal women have a 1 in 7 chance of hip fracture during a lifetime. The rate of hip fracture increases at age 50, doubling every five to six years. Nearly one-half of women who reach age 90 have suffered a hip fracture.

Women with Osteoporosis

Bone is a living tissue composed mainly of calcium and protein which provides strength. Bone is constantly reforming (remodeling) as calcium is added to your bones and absorbed by your body. Osteoporosis or "porous bone" develops when bone calcium is no longer replaced as quickly as it is removed, making the bone brittle. Each year, more than 1.5 million Americans have fractures related to osteoporosis.

Factors that contribute to osteoporosis are aging; physical inactivity; decreased levels of estrogen, especially associated with menopause; heredity; excessive cortisone or thyroid hormone; smoking; excessive alcohol intake; and inadequate dietary intake of calcium and vitamin D.

Height Increases Risk

The risk of hip fracture for women 5'8" or taller is twice that of women who are under 5'2." Studies show that women who have broken their arm in the past have an increased risk of breaking a hip. Among people age 50 and older that fall, women have two to three times as many hip fractures as men.

Substantial Medical Risk Factors

- Falls within the past 2 years
- Cardiac arrhythmias (irregular heartbeat)
- High blood pressure, blood pressure fluctuation.
- Cancer that affects bones.
- Depression, Anxiety
- Cognitive Impairments, Alzheimer's disease and senility.
- Postural Hypertension
- Lower extremity impairment
- Arthritis
- Diabetes
- Foot Problems
- hip weakness
- Balance / Gait / Mobility issues.
- Neurological impairment
- Strokes / Parkinson's disease history
- Multiple Sclerosis.
- Urinary and bladder dysfunction.
- Vision or hearing loss.

- Side effects of medicine.
- Poly-pharmacy (taking more than 4 Medications)
- Medication non-compliance

Medication Side Effects – A Major Medical Risk Factor

Older people experience adverse events from medications three times the rate of younger people. While older people make up 13% of the population they account for over 50% of the deaths and 40% of the hospitalizations due to adverse medication events (Stratton 2002).

The increased risk of adverse reactions to medications by older people is a result of many things including; too many medications, drug-drug interactions, increased sensitivity to medications with age and diseases often associated with aging further increase sensitivity to medications.

The older that we become the more sensitive we become to medications and thus we experience an increased risk of an adverse event from medications. In other words a 75 year old is more sensitive than a 65 year old and an 85 year old is more sensitive than a 75 year old and so on.

Side effects are more prevalent in certain classes of drugs and the risk of falls increases substantially depending upon the amount (dosage), number (of prescriptions) and type of drugs taken.. Medications that are used to treat pain, anxiety, insomnia or depression are especially sensitive. They can increase the risk of falls and accidents as well as causing changes in how clearly a person thinks and processes.

ResponseLink offers information for general educational and informational purposes only. This information is not intended as a substitute for advice, treatment, or recommendation from health care professionals. The information is not exhaustive and does not cover all fall related ailments, physical conditions, or their treatment. It is important to follow the advice of your doctor and other

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