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Prevention: How can older people who live at home reduce their chances of falling?



Not every fall can be avoided. But there are several things that can reduce the risk, like getting rid of hazards around the home, stopping use of unnecessary psychotropic medication, or practicing sports such as Tai Chi. Which of these measures benefit older people – and which can be more harmful – mostly depends on your individual state of health.

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Falls can happen at any age. But because a broken bone can have serious consequences for health, it is worthwhile especially for this age group to prevent falls as much as they can.

Every year up to 3 out of every 10 people over the age of 65 have a fall (30%). The rate for people living in nursing homes is even higher. Luckily, most of these falls are minor, and there are no serious consequences. Only sometimes is there a bruise or abrasion that requires medical attention. Fewer than 1 in 10 falls causes a broken bone (10%). It is the case, though, that people who have already had one fall generally are at greater risk of falling again.

There are numerous measures for avoiding falls – but not all are equally well-suited for all people. On the contrary, which particular measures can benefit older people depends mostly on their individual state of health.

Latest research on prevention of falls

Researchers from the Cochrane Collaboration looked into what older people can do to prevent falls. The Cochrane Collaboration is an international research network that analyses trials and studies on medical issues.

Because people who are living in a nursing home or are temporarily staying at a hospital are generally more health-impaired than others, it makes a difference if a measure intended to prevent falls is meant for a home environment or for use in a nursing home or hospital. This has been taken into account by researchers in their analyses by analyzing trials with people living at home and those with people staying at the hospital separately.

We will be reporting here only on the trials done with older people living at home. The researchers found and analyzed a total of 111 research studies with over 55,000 participants. The men and women in the trials were at least 60 years old, and many of them were between 70 and 80.

The risk of falling can be lowered

Various interventions proved useful in the trials. Training programs with different exercises were able to lower the risk of falling, and even prevent some broken bones. The exercises were intended, for example, to improve balance, strengthen muscles or to increase stamina. Tai Chi – also called shadowboxing – also made falls less likely in several trials for people who trained regularly. Yet only relatively healthy people who participated in the trials on physical exercise in the first place. Because of this, it is not clear whether people who have more serious health problems such as Parkinson's, limitations of movement as a result of a stroke, or highly impaired vision can benefit from it – or whether their risk of falling could be increased by engaging in physical exercise.

In some trials doctors, nurses, physiotherapists and occupational therapists analyzed individual risk of falling for older people and then recommended preventative measures based on their findings. They checked, for instance, whether the participants had amblyopia (commonly called lazy eye) or other health problems that would increase the risk of falling, and whether they could benefit from wearing glasses or using a walker. These interventions proved helpful.

In one study “snow chains” designed for shoes were tested. These chains are fixed on the sole of the shoe and are intended to prevent you from slipping on smooth surfaces, much as conventional snow chains do for cars. This aid also helped to prevent falls.

What people with certain health problems can do

People who have symptoms such as restlessness, sleeplessness, anxiety or fatigue sometimes turn to psychotropic drugs. But some psychotropic drugs – for example sleeping tablets and sedatives from the benzodiazepine group – increase the risk of falling for older people. Trials show that stopping use of these drugs step by step is an effective intervention for preventing falls. It is not always easy to stop taking these drugs because they can become addictive after a few weeks, even at low dosages. If you mostly have problems sleeping and you do not want to resort to sleeping tablets, you can read more information about other options for getting a good night's sleep here (URL: <http://www.informedhealthonline.org/index.411.en.html>).

Typical falling hazards around the home can be

especially problematic for those with poor eyesight. Finding and getting rid of these hazards can lower the chance of a fall. Some trials also show that people who have cataracts can lower their risk of falling by having the cloudy lenses replaced in an operation so that they can see better.

People with certain types of arrhythmia (irregular beating of the heart) could benefit from having a pacemaker, making them less prone to falls.

What else could help

There are even more measures and interventions for avoiding falls, for instance dietary supplements with vitamin D intended to strengthen the muscles. But the research on such supplements is inconclusive. You can read more about this in our fact sheet (URL: <http://www.informedhealthonline.org/index.203.en.html>).

Even though there is a lot you can do to prevent falls, not every fall can be avoided. That is why it is important especially for older people and people with osteoporosis to know how they can strengthen their bones to protect themselves. We have put together a list of means and ways of doing this here (URL: <http://www.informedhealthonline.org/index.423.en.html>).

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Glossary

Cochrane Collaboration

The Cochrane Collaboration is an international network of thousands of researchers and others. They work together in teams called Cochrane Review Groups to answer questions about health care by doing systematic reviews of evidence. To achieve this, the members of the Collaboration have developed systems and methods for systematically finding and analysing the results of trials of health care interventions. The goal of the Cochrane Collaboration is to help patients, health care practitioners and others make more informed decisions about health care. You can read more about the Cochrane Collaboration at their website.

psychotropic drugs

Psychotropic drugs are medicines that are used for psychological conditions such as depression and anxiety.

pacemaker

Heart or cardiac pacemakers are small electronic devices implanted under the skin. They are connected to the heart by special wires. Pacemakers measure whether or not the heart is beating regularly and at the right speed or pace. They use electrical impulses to get the heartbeat back into normal rhythm if there is a problem.

stroke

A stroke (also sometimes called brain attack, or apoplexy, which is Greek for “struck down”) is an acute condition where the brain does not get enough oxygen. It is most commonly caused by a blood clot that has travelled through the bloodstream and is blocking blood vessels in the brain. In rarer cases bleeding in the brain may also result in a stroke. Depending on which part of the brain is affected, there may be paralysis of either all or certain parts of one half of the body, facial nerve impairment, vision problems, trouble balancing and severe problems speaking. A stroke is a medical emergency: the parts of the brain that are affected need to be supplied with oxygen as quickly as possible, to avoid the death of more brain tissue. The risk of having a stroke is greater for older people and people who have hypertension or chronic arteriosclerosis.

dietary supplement

Dietary supplements (also known as food supplements or

nutritional supplements) are concentrated vitamins, minerals, trace elements, fibers and/or other substances that are intended to supplement the diet. Advocates of dietary supplements claim that they have a certain, often preventive or strengthening effect on the body. They are available as capsules, pills, powder or ampules, for example. From a legal point of view, dietary supplements rank among foods and therefore – as opposed to medications – do not need official approval. More information is available on the website of the German Federal Institute for Risk Assessment (Bundesinstitut für Risikobewertung, BfR): [To the BfR website \(in English\)](#)

fatigue

Fatigue is a term used to describe paralyzing mental and physical exhaustion that may also be accompanied by heightened emotional sensitivity. In contrast to usual tiredness, fatigue only responds to rest or sleep to a very limited extent.

Sources

IQWiG health information is based on research in the international literature. We identify the most scientifically reliable knowledge currently available, particularly so-called “systematic reviews”. These summarize and analyze the results of scientific research on the benefits and harms of treatments and other health care interventions. You can read more about systematic reviews and why these can provide the most trustworthy evidence about the state of knowledge here (URL: <http://www.informedhealthonline.org/index.61.en.html>) . The authors of the major systematic reviews on which our information is based are always approached to help us ensure the medical and scientific accuracy of our products.

Gillespie LD, Robertson MC, Gillespie WJ, Lamb SE et al. Interventions for preventing falls in older people living in the community. *Cochrane Database of Systematic Reviews*: Version 2009, Issue 2. CD007146 [PubMed summary (URL: <http://www.ncbi.nlm.nih.gov/pubmed/19370674>)]

The German Institute for Quality and Efficiency in Health Care (IQWiG)

The German Institute for Quality and Efficiency in Health Care (IQWiG) was established by legislation to provide evaluations of the effectiveness, quality and efficiency of healthcare services. This includes the assessment of medicines as well as the publication of health information for consumers and patients.

Evidence basis of our health information

Our information is based primarily on systematic reviews of the effects of health care. Systematic reviews are necessary to gain an objective picture of health care. In order to do this, a clear question is formulated. Researchers then find all the relevant studies that could answer this question. They then evaluate those studies.

You can find a list of the evidence and other scientific literature on which this information is based at [**www.informedhealthonline.org**](http://www.informedhealthonline.org)

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