

ORGANIZATION NEWS

Information/Education Page

Falls Risk and Alzheimer Disease: A Patient Guide



What is Alzheimer disease?

Alzheimer disease is a common brain disorder in older adults that affects memory, thinking, and behavior. The symptoms usually develop slowly but become worse with time and can affect your day-to-day activities.¹

Am I at higher risk of falling after a diagnosis of Alzheimer disease?

Yes, you may be at higher risk of falling after a diagnosis of Alzheimer disease.²

Why am I at higher risk of falling if I have Alzheimer disease?

Alzheimer disease can affect your ability to make decisions or to organize your thoughts while performing your day-to-day activities. Also, due to Alzheimer disease, you might have trouble identifying and avoiding objects on the floor. These difficulties increase the risk of fall.³

How can falls harm me?

Falls can be dangerous and lead to injury and hospitalization. Fear of falling can make you scared of moving around or performing your day-to-day activities. When you move less, you get weaker and frailer, and you may need more help from others.² When your body gets weaker, you are at higher risk of falling and getting hurt.

What can I do to avoid falling?

Talk to your health care team about your fear of falling and ways to prevent falling. [Table 1](#) includes some tips and actions that you can use to

prevent falls. Share these recommendations with your health care team to find which ones are best for you based on your current health and physical abilities.

Who are the health care professionals who can help me reduce my chances of falling?

A team of health care providers works together to improve the quality of care for persons living with Alzheimer disease. Your primary care physician is the first contact person who can refer you to other health care professionals based on your health needs. Other health care professionals who can be part of your fall prevention plan may include the following:

- A physical medicine and rehabilitation physician can help you to improve your functional abilities and quality of life.
- A neurologist specializes in diseases of the brain and nervous system.
- A geriatrician specializes in the care of older adults with Alzheimer disease.
- A geriatric nurse practitioner provides medical care and assistance to carry out the treatment plan.
- A physical therapist provides help you to strengthen your muscles and improve your balance.
- An occupational therapist provides help you to make changes to your house such as mounting rails in your bathtub.
- A psychiatrist specializes in treating behavioral problems.
- A psychologist specializes in testing and treating memory and other mental functions.

Table 1 Recommendations to decrease falls

Recommendation	What Should I Do?	Why Should I Do?
Exercise often ⁴	<ul style="list-style-type: none"> • Try to exercise 4-5 times per week. • Try different exercises to find what you like most. • Walking, cycling, and swimming are particularly good for you. • Try to find supervised group exercise classes at your local gym or community center. 	<ul style="list-style-type: none"> • Exercising regularly will help to improve your muscle strength, balance, and coordination which can help to prevent falls.
Improve your nighttime sleep ⁵	<ul style="list-style-type: none"> • Limit daytime napping to 30 min. • Have a regular bedtime routine. • Avoid smoking, or drinking alcohol or coffee at least 2 hours before bedtime. • Limit fatty, fried, or spicy foods and carbonated drinks. These can all cause burning in your chest. • Expose yourself to sunlight during the day and darkness in the night to have a healthy sleep-wake cycle. 	<ul style="list-style-type: none"> • Sleep is important for physical and mental functioning. Improving sleep quality can decrease the risk of falls.
Strengthen your muscles ⁶	<ul style="list-style-type: none"> • Start with low weight dumbbells or barbells to strengthen your muscles while sitting. • Home strengthening exercises include marching in place, raising arms and legs, standing from a chair. • Use weight machines under supervision in your local gym or community center. 	<ul style="list-style-type: none"> • Weak muscles are a significant risk factor for falls. Muscle strengthening should be incorporated into falls preventive programs.
Pay attention to the effects of your medications ⁷	<ul style="list-style-type: none"> • Some medications increase your risk of falls such as medication to improve sleep, anxiety, depression, and high blood pressure. • Pay attention to your medications that affect your balance. • Talk to your doctor about the effects of medication on balance. 	<ul style="list-style-type: none"> • Some medications can affect your blood pressure, make sure to pay attention to your blood pressure to avoid falls, and talk to your doctor if you notice any changes in your blood pressure, walking ability, or balance.
Try complementary and alternative medicine ⁸	<ul style="list-style-type: none"> • Start with breathing exercises to relax. • Try yoga, qigong, or tai chi to improve your balance and mood. 	<ul style="list-style-type: none"> • Complementary medicine may help to reduce your stress, improve your core strength, and balance which will have an effect on reducing your falls risk.
Be extra careful when walking and talking ³	<ul style="list-style-type: none"> • Prioritize your balance or walking while talking at the same time. • Limit distractions when you are walking or standing, especially in crowded areas or challenging terrains. 	<ul style="list-style-type: none"> • Doing multiple tasks at the same time such as walking while talking may increase your falls risk.

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Table 1 (continued)

Recommendation	What Should I Do?	Why Should I Do?
Check your environment ⁹	<p>Flooring</p> <ul style="list-style-type: none"> ● Make sure before moving that the ground is not uneven or slippery. ● Keep floors and surfaces clutter free. ● Simplify your furniture arrangements to clear walking paths in your home. <p>Lighting</p> <ul style="list-style-type: none"> ● Use proper lighting in your house. ● Use contrasting colors in furniture and floors to make them easier to see (eg, dark furniture on a light floor). <p>Supports</p> <ul style="list-style-type: none"> ● Hold on to firm furniture if needed. ● Use stair rails, bath rails, and toilet rails (do not grab on to towel bars; they are not strong enough to support you if you fall). 	<ul style="list-style-type: none"> ● Home modifications can improve your task performance, independence, and safety, which will help to decrease your falls risk.
Ask for help when you need ⁹	<ul style="list-style-type: none"> ● Do not hesitate to ask help when you need it from your caregiver or health care provider. ● Use your cane, walker, or wheelchair as recommended by your health care provider. 	<ul style="list-style-type: none"> ● Asking for help when you feel unsafe to perform a task and using assistive devices may reduce your risk of falls.
Improve mental functioning ¹⁰	<ul style="list-style-type: none"> ● Use memory games such as matching pictures of people or animals with their corresponding names. ● Try to solve puzzles. ● Try to memorize short poems or songs. ● Take up a new hobby. ● Plan to visit museums, historical places, and zoos to learn new things. 	<ul style="list-style-type: none"> ● Impairments in mental functions including judgment, attention, or executive function may lead individuals to perform unsafe tasks or to perform tasks in a dangerous manner. These can increase your falls risk.
Be careful when standing up from your bed or chair ⁹	<ul style="list-style-type: none"> ● Changes in blood pressure can affect your balance. ● Get up slowly from a chair, couch, and toilet. ● Do not move too fast. ● Get enough fluids. ● Get enough nutrition during your meals. ● Talk to your doctor if you get dizzy or lightheaded when you are standing up. 	<ul style="list-style-type: none"> ● When you stand up quickly from a bed or chair your blood pressure drops down significantly. This can affect your balance and may lead to falls.
Eat healthy ¹¹	<ul style="list-style-type: none"> ● Eat a healthy diet rich in whole grains, proteins, fruits, and vegetables. ● Get enough fluids. ● Eat foods with healthy fats such as olive oil, avocado, and nuts. ● Watch your weight. 	<ul style="list-style-type: none"> ● Poor eating habits can be detrimental to skeletal muscle and bone structures, therefore, significantly contribute to increased falls risk.

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Table 1 (continued)

Recommendation	What Should I Do?	Why Should I Do?
Talk to your health care team about changes in your mood ¹⁰	<ul style="list-style-type: none"> • If you feel sad, hopeless, lonely, or lose interest in activities, ask for help from your health care provider. • Participate in a support group to seek help about your mood fluctuations. 	<ul style="list-style-type: none"> • Mood disorders can limit your mobility, worsen balance, and lead to falls.
Use proper footwear ¹²	<ul style="list-style-type: none"> • Check the fit of your footwear. • Use firm shoes with shoelaces. • Make sure the footwear is appropriate for outdoor conditions. • Do not walk in socks or slippers indoors. 	<ul style="list-style-type: none"> • Using unfitting footwears and slippers or walking in barefoot can affect your posture and balance and may lead to falls.
Stay socially active ¹³	<ul style="list-style-type: none"> • Participate in social activities with friends and family both at home and in your community. • Find some social daily routines, such as volunteering, participating in religious activities, or spending time with your loved ones 	<ul style="list-style-type: none"> • Social isolation has a negative effect on your physical performance and mental health. Participating in social activities can eventually help to reduce falls risk.

- A social worker provides hands-on assistance in creating a care plan, including home care.
- A dietician and/or nutritionist can guide on your diet and nutrition intake.
- A pharmacist provides education on how to take your medications as directed by your physician.

Is there any other information or resources?

If you would like to learn more about how to be safe and stop falling in Alzheimer disease, please visit the National Institute on Aging website (<https://www.nia.nih.gov/>) or the Alzheimer's Association's website (<https://www.alz.org/>).

Authorship

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References

1. Alzheimer's Association. 2018 Alzheimer's disease facts and figures. *Alzheimers Dement* 2018;14:367-429.
2. Ansai JH, de Andrade LP, Masse FA, et al. Risk factors for falls in older adults with mild cognitive impairment and mild Alzheimer disease. *J Geriatr Phys Ther* 2019;42:E116-21.
3. Goncalves J, Ansai JH, Masse FA, Vale FA, Takahashi AC, Andrade LP. Dual-task as a predictor of falls in older people with mild cognitive impairment and mild Alzheimer's disease: a prospective cohort study. *Braz J Phys Ther* 2018;22:417-23.

4. Ohman H, Savikko N, Strandberg T, et al. Effects of exercise on functional performance and fall rate in subjects with mild or advanced Alzheimer's disease: secondary analyses of a randomized controlled study. *Dement Geriatr Cogn Disord* 2016;41:233-41.
5. Eshkoor SA, Hamid TA, Nudin SS, Mun CY. The effects of sleep quality, physical activity, and environmental quality on the risk of falls in dementia. *Am J Alzheimers Dis Other Demen* 2013;28:403-7.
6. McGough EL, Lin SY, Belza B, et al. A scoping review of physical performance outcome measures used in exercise interventions for older adults with Alzheimer disease and related dementias. *J Geriatr Phys Ther* 2019;42:28-47.
7. Epstein NU, Guo R, Farlow MR, Singh JP, Fisher M. Medication for Alzheimer's disease and associated fall hazard: a retrospective cohort study from the Alzheimer's Disease Neuroimaging Initiative. *Drugs Aging* 2014;31:125-9.
8. Farhang M, Miranda-Castillo C, Rubio M, Furtado G. Impact of mind-body interventions in older adults with mild cognitive impairment: a systematic review. *Int Psychogeriatr* 2019;31:643-66.
9. Tzeng HM, Yin CY. Frequently observed risk factors for fall-related injuries and effective preventive interventions: a multihospital survey of nurses' perceptions. *J Nurs Care Qual* 2013;28:130-8.
10. Booth V, Hood V, Kearney F. Interventions incorporating physical and cognitive elements to reduce falls risk in cognitively impaired older adults: a systematic review. *JBI Database System Rev Implement Rep* 2016;14:110-35.
11. Suominen MH, Puranen TM, Jyvakorpi SK, et al. Nutritional guidance improves nutrient intake and quality of life, and may prevent falls in aged persons with Alzheimer disease living with a spouse (NuAD Trial). *J Nutr Health Aging* 2015;19:901-7.
12. Luk JK, Chan TY, Chan DK. Falls prevention in the elderly: translating evidence into practice. *Hong Kong Med J* 2015;21:165-71.
13. Lipardo DS, Tsang WW. Falls prevention through physical and cognitive training (falls PACT) in older adults with mild cognitive impairment: a randomized controlled trial protocol. *BMC Geriatr* 2018;18:193.