

DIABETES AND FALLS

Nikita Sowma, MD

What is diabetes?

Diabetes is a disease that happens when your blood sugar is too high.

Glucose (sugar) is your body's main energy source. When you eat, your blood glucose rises. Some foods that can raise your blood glucose too much are:

Sweets • Bread • Fruits • Rice • Potatoes → These are **high carbohydrate** foods.

Usually, your body makes a hormone called **insulin** to help breakdown glucose. When you have diabetes, glucose does not break down because ...

1. ... your body does not make insulin (**Type 1 diabetes**).
2. ... or your body does not make enough insulin (**Type 2 diabetes**).

FALLS: How do they happen? And how can it impact your life?

With aging, you are more likely to fall.

Many falls do not cause injury. The ones that do can result in broken bones, or even a head injury. These injuries can make it hard to do your daily activities or live on your own.

Even if you are not injured, you may become afraid of falling. This fear may cause you to be less active.

There are several reasons why falls happen as you get older. The more risk factors you have, the greater your chances of falling.

- You may have difficulties with walking and balance.
- You may have vision problems.
- If you are not doing your daily activities, you may become weaker. This increases your chance of falling even more.
- You might become slower to react, making it more difficult to break your fall.
- Your bones become more fragile and break (fracture) more easily, as you get older.
- Your ability to think clearly may decrease. This might be a side-effect of your medication.



How does diabetes play in a role in falling?

Diabetes affects the whole body and causes many complications. **Some complications of diabetes can increase your risk of falling** including:

HYPERGlycemia (HIGH + blood glucose) causes nerve damage and decreased blood flow throughout your body. This can result in:

Neuropathy (nerve damage)

Nerves send information from your feet to your brain. Damage to these nerves means that information is lost, making it harder to stand or walk, even on flat surfaces. This is a **MAJOR** reason why people with diabetes have a high risk for falls.

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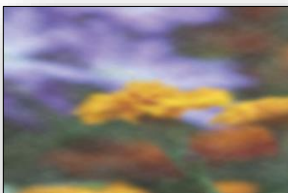
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Diabetic Retinopathy

Retinopathy (nerve damage in the eye)

Damage to blood vessels that nourish the retina, the light-sensitive part of the eye that allows vision. The resulting condition (retinopathy) is the **leading cause of vision loss in people with diabetes.**



Cataracts

Cataracts

As we age, there is already an increased risk of developing cataracts. **People with diabetes are at an even higher risk for cataracts.**

Cataracts is a “clouding” of the lens (part of the eye that allows focus). It can cause a glare of bright lights or vision loss.

HYPOglycemia (LOW + blood glucose) may happen if you are diabetic and take many medications, increasing your risk of falling.



HYPOglycemia

Low blood glucose levels can leave you feeling woozy and confused, putting you at risk of falling.

Beware of these symptoms:

- Feeling shaky
- Sweating, chills, and dampness
- Irritability or impatience
- Confusion
- Feeling lightheaded or dizzy
- Hunger
- Nausea
- Feeling weak/having no energy
- Blurred/impaired vision
- Headaches
- Coordination problems, clumsiness



Each person's reaction to low blood glucose is different. Know your signs and symptoms!

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Comorbidities (having more than one medical condition or disease)
Some common comorbidities are:

Hypertension (high blood pressure) • Stroke • Heart disease • Overweight/obesity • Hyperlipidemia

The more medications you take for your comorbidities, the higher your risk for falling. This may be because of harmful side effects or interactions between your medicines. Some medications cause balance problems, light-headedness, or may weaken your bones.

PREVENTION: How to prevent falls if you have diabetes?

1. Control your blood glucose.
 - Take your medications, as prescribed. ***Never take medications prescribed for someone else.***
 - Eat a low-sugar, low-carbohydrate diet.
 - This will help keep your blood glucose from getting too high.
 - If you have low blood glucose levels often, eat snacks frequently and check your levels often.
 - ***Tell your doctor about these low levels.*** They may need to change your medications.

Check your blood glucose BEFORE taking insulin to prevent HYPOglycemia (LOW blood glucose).
2. See your ophthalmologist (eye doctor) regularly.

Get your eyes checked by an eye doctor **at least once a year**. Update your eyeglasses, as needed.
3. Make sure you have good lighting at home, especially if you have poor vision.
4. Wear shoes that fit you properly.
5. De-clutter your home.
 - Install handrails in the bathroom. Use a non-slip mat in the tub/shower.
6. Use a cane or walker, if necessary.
7. Exercise! It helps with balance.

Do Strength and Balance Exercises to help make your legs stronger and improve your balance (Example: Tai Chi).



Exercise for better balance!