

Diabetes and Care for Complications:

Retinopathy, Neuropathy and Foot Complications

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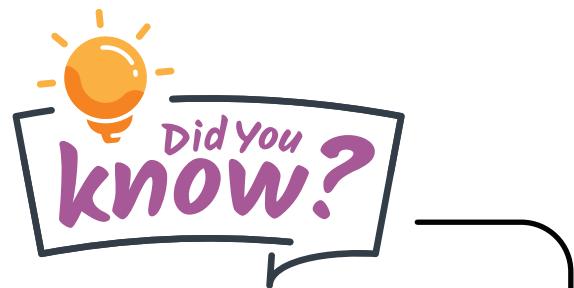
Introduction

Diabetes is a complex disease and without proper management can result in serious health problems over time. Diabetes is characterized by sustained high blood glucose (sugar) levels. When diabetes isn't well managed, it can damage nearly every body system, including the eyes, kidneys, heart, liver and nervous system. This damage can be prevented or minimized through lifestyle changes, watching for warning signs, attending regular clinical visits and following medical advice.

Below are some complications of diabetes, along with steps you can take to prevent or delay them.

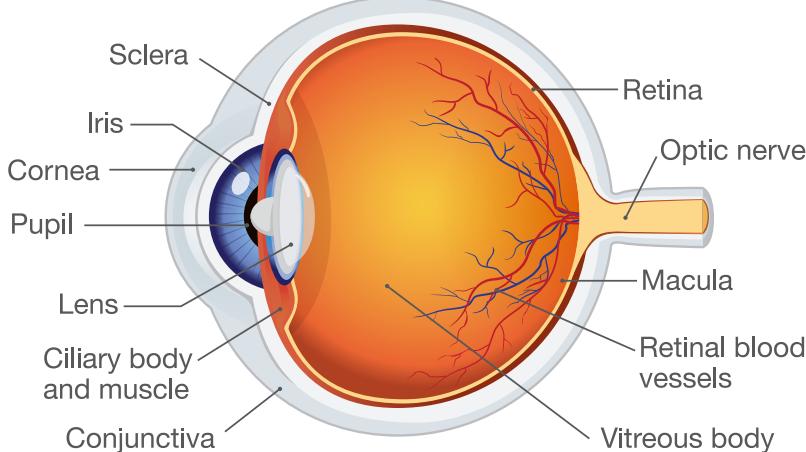
Diabetic Retinopathy

Inside your eye are layers of tissue that receive light and send signals to the brain. These layers form a structure called the retina, which is essential for your vision. Diabetic retinopathy is a condition caused by damage to the retina's blood vessels in people with diabetes. Retinopathy can lead to blindness, therefore, it is important to be aware of this diabetes complication and take steps to prevent it.



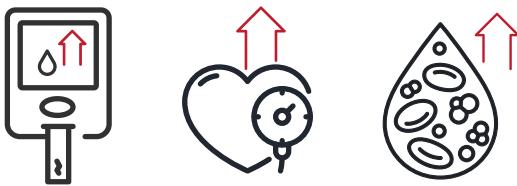
Diabetic retinopathy is the leading cause of blindness in American adults.

Diabetic retinopathy is caused by damage to the retina's blood vessels in people living with diabetes.



You may be at higher risk of retinopathy if you have experienced:

- High blood glucose levels
- High blood pressure
- High blood cholesterol



Other risk factors include a longer duration of diabetes, being a smoker and being pregnant with diabetes or developing diabetes during pregnancy (gestational diabetes).

People living with diabetes can prevent or delay the onset of diabetic retinopathy.

Making these simple changes can help prevent or delay diabetic retinopathy.

- Maintain your blood pressure at the level recommended by your provider
- Manage your blood glucose levels
- Manage your blood lipid levels
- Quit smoking
- Get physically active
- Get annual eye exam. Regular eye exams can find warning signs for retinopathy before symptoms are present.

How often should I have eye exams?

After an initial eye exam, you should have yearly eye exams from an eye doctor (ophthalmologist or optometrist).

Type 1 diabetes

Should have an initial eye exam within five years after the onset of diabetes.

Type 2 diabetes

Should have an initial eye exam at the time of diabetes diagnosis.

Impact of lifestyle changes to prevent or delay retinopathy.

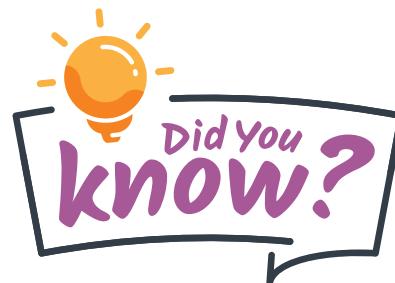
Lifestyle changes can prevent or delay the progression of diabetic retinopathy. Healthy eating and regular physical activity are associated with a lower risk of diabetic retinopathy.

Diabetic Neuropathy

Diabetic neuropathy is a complication caused by diabetes that can damage nerves in your body. The symptoms and severity of symptoms depends on which nerves are affected.

There are several types of diabetic neuropathy:

- Peripheral Neuropathy (most common)
 - Typically, happens in the feet and legs, and sometimes the hands and arms.
 - Symptoms may include pain, “pins and needles,” numbness and foot problems, such as ulcers.
- Autonomic Neuropathy
 - Typically, affects nerves that control heart rate, blood pressure, eyes, digestive system, bladder, sex organs and sweat glands. It may cause problems with the function of these organs.
 - This complication may cause a lack of any symptoms when a person has low blood sugar (hypoglycemia unawareness). This complication can be dangerous, because people with this condition may not experience warning symptoms of low blood sugar.
- Focal Neuropathies
 - Affects single nerves, for example, carpal tunnel syndrome, which affects a nerve in the wrist and cause numbness, tingling and pain in the hand.
- Proximal Neuropathy (rare)
 - Affects the hip, buttock or thigh, and may cause severe pain
 - Typically affects one side of the body



About half of the people living with diabetes have **diabetic neuropathy**.

Diabetic neuropathy is the damage to nerves in various parts of the body caused by diabetes.



You may be at higher risk of neuropathy if you have experienced:

- High blood glucose level
- High blood pressure
- High cholesterol
- Advanced kidney disease
- Overweight or obesity



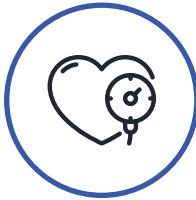
Other risk factors include a longer duration of diabetes and being a smoker.

People with diabetes can prevent or slow the progression of diabetic neuropathy.

The following strategies can help prevent or delay diabetic neuropathy:



Manage your blood glucose levels



Manage your blood pressure



Manage your blood lipid levels



Quit smoking



Be physically active



Practice foot care at home



Have regular doctor's appointments and discuss your symptoms

Screening for Diabetic Neuropathy

Type 1 diabetes

Assess for diabetic peripheral neuropathy five years after the diagnosis and at least annually thereafter.

Type 2 diabetes

Assess for diabetic peripheral neuropathy starting at diagnosis and at least annually thereafter.

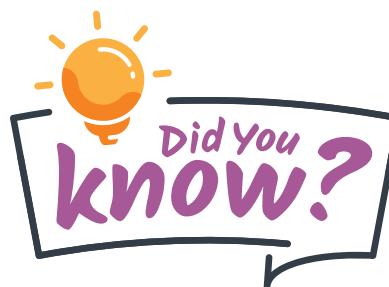
Impact of lifestyle changes to prevent or delay neuropathy

Lifestyle changes can delay or prevent diabetic neuropathy. Eating a healthy diet, being physically active, and maintaining a healthy weight can improve symptoms of neuropathy.

Foot Complications

Diabetes can cause foot ulcers, leading to amputations. Several factors increase your risk of diabetic foot complications:

- High blood glucose levels
- Peripheral neuropathy
- Foot deformities, such as bunions
- Corns or calluses
- Prior ulceration or amputation
- Smoking
- Kidney disease
- Retinopathy

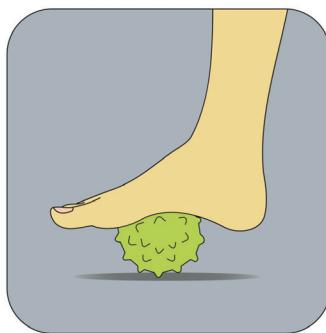


Foot care is important to prevent diabetic foot ulcers and amputations.

Tips for foot care:

Numbness in your feet, because of nerve damage, could prevent you from noticing cuts or injuries to your feet. Therefore, it is important to practice regular foot care to prevent foot complications.

- Check your feet daily for ingrown toenails and sores.
- Keep your feet clean. Wash your feet daily and dry them completely.
- Trim your toenails straight across and smooth any sharp edges.
- Wear shoes and socks, or slippers, to protect your feet.
- Get moving to stimulate blood flow in your feet.
- Work with your healthcare team. Ask your healthcare provider about foot-friendly activities that are best for you.

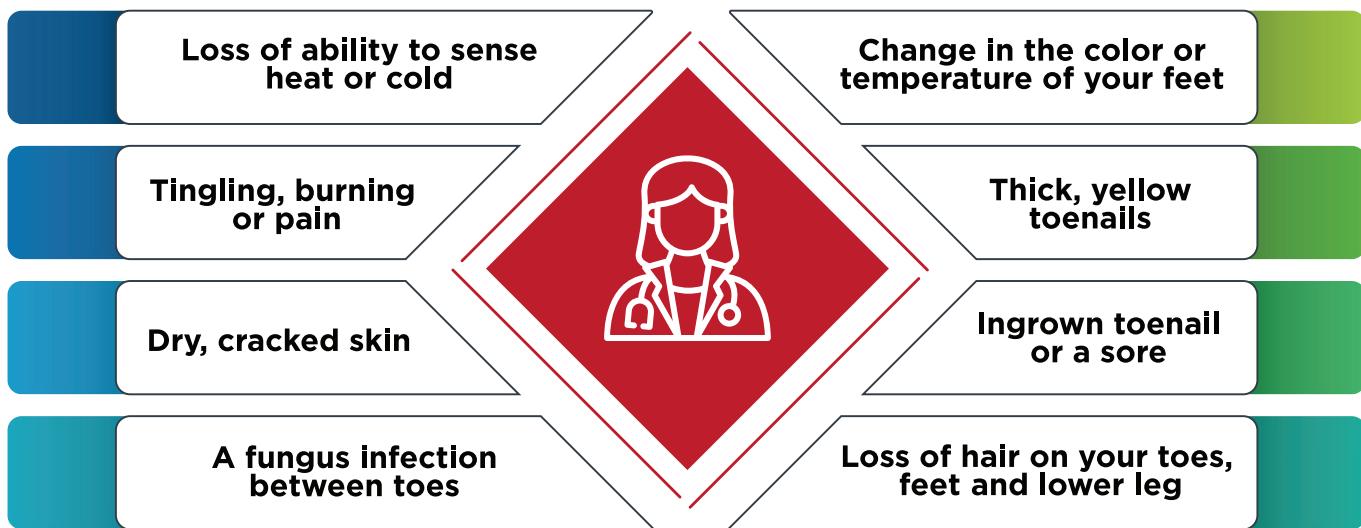


CARE OF THE LOWER
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IN DIABETES

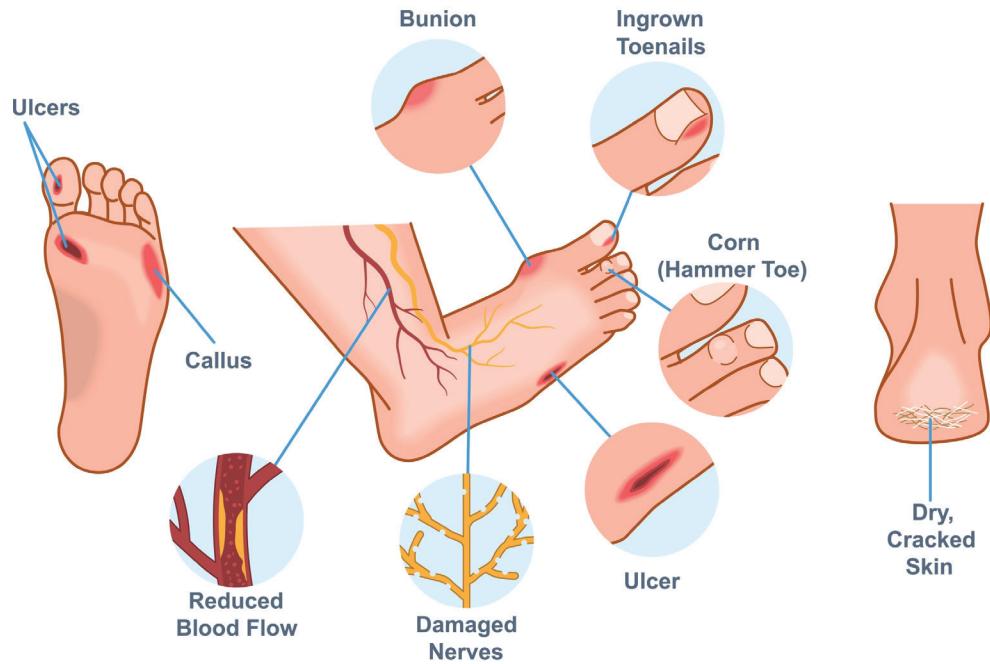


When to see your doctor:

See your doctor if you have any of these symptoms:



DIABETIC FOOT



Recommendations

A thorough examination of the feet should be performed annually in all people with diabetes and more frequently in at-risk individuals.

All newly diagnosed people with diabetes and their families should receive education about foot care.

Conclusion

Diabetes can result in serious, life-threatening complications, such as retinopathy, neuropathy and foot complications. However, adopting a healthy lifestyle—including eating well, engaging in regular physical activity, managing blood sugar levels, maintaining a healthy weight, caring for your feet, and attending regular doctor's visits—can lead to improved health and longevity.

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