

# Diabetic Foot Ulcers

**D**iabetic foot ulcers are sores or wounds on the feet that occur in people with diabetes, a condition where blood sugar levels are abnormally high. If a foot ulcer goes untreated and does not heal, it may become infected. Because this may result in the foot needing to be amputated, preventing ulcers is very important. The January 12, 2004, issue of *JAMA* includes an article about preventing diabetic foot ulcers.

## WHAT CAUSES DIABETIC FOOT ULCERS?

- In people with diabetes, prolonged high blood sugar levels are linked with damage to the nerves in the feet. Nerve damage can cause loss of sensation as well as deformities of the feet. This nerve problem is called **peripheral neuropathy**.
- Foot problems such as calluses and hammertoes can cause high pressures on the soles of the feet.
- People can hurt their feet by repetitive minor trauma (such as prolonged walking) or a single major trauma (like scraping their skin, stepping on objects, immersing their feet in hot water, cutting their toenails inappropriately, or wearing ill-fitting shoes). Because of peripheral neuropathy, they may not notice such injuries, which can then lead to a diabetic foot ulcer.
- Poor blood flow to the feet is also common in people with diabetes, and this slows the wound healing process and increases the risk of infection and amputation.

## PREVENTION

- Diabetic foot ulcers can often be prevented by careful control of diabetes and proper foot care. It is important to control blood sugar levels in order to prevent peripheral neuropathy or to stop it from worsening.
- People with diabetes should check their feet, including the areas between the toes, daily for sores and cuts. They should see a doctor immediately if a foot problem develops. Those who cannot see their feet can use a mirror on the floor or a long-handled mirror.
- The feet, including the areas between the toes, should be kept clean and dry.
- People with diabetes should check the bath temperature with their hand.
- Toenails should be carefully trimmed with the contour of the toe, and sharp nail edges should be filed smooth. People with peripheral neuropathy should not cut their own nails, and a clinician, such as a **podiatrist** (doctor specializing in foot care), should evaluate them regularly.
- Footwear should fit properly to avoid friction or pressure. People with peripheral neuropathy should avoid walking barefoot and should check their footwear for foreign objects before putting them on.

## POSSIBLE TREATMENTS

- Seek appropriate professional care at the first sign of a foot problem.
- Avoid putting any pressure on the foot wound.
- Keep the ulcer clean and change the dressings regularly, as instructed by your doctor.

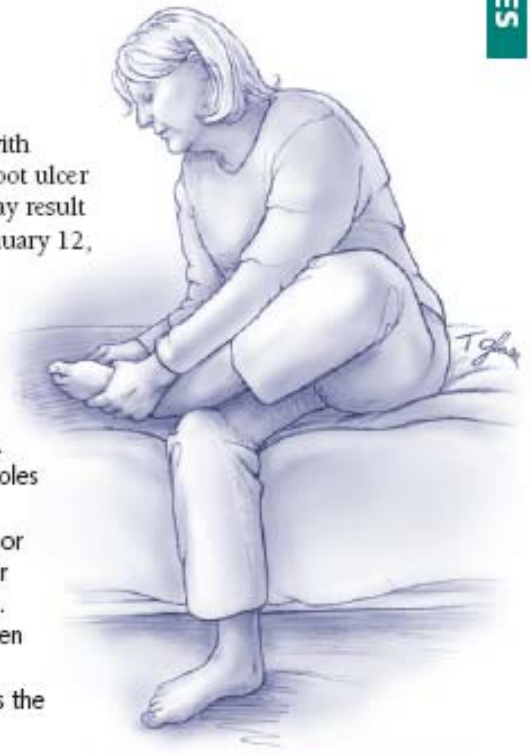
Sources: National Institute of Diabetes and Digestive and Kidney Diseases, American Diabetes Association, Centers for Disease Control and Prevention

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## FOR MORE INFORMATION

- National Diabetes Information Clearinghouse  
1-800-860-8747  
[www.diabetes.niddk.nih.gov](http://www.diabetes.niddk.nih.gov)
- American Podiatric Medical Association  
1-800-ASK-APMA  
[www.apma.org](http://www.apma.org)
- American Diabetes Association  
1-800-DIABETES (1-800-342-2383)  
[www.diabetes.org](http://www.diabetes.org)

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To find this and other JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at [www.jama.com](http://www.jama.com). Many are available in English and Spanish. A Patient Page on managing type 2 diabetes was published in the January 12, 2000, issue, and one on type 1 diabetes was published in the October 22/29, 2003 issue.

