

Take steps to healthier feet



Caring for your feet

A guide for people with diabetes to help maintain healthy feet

Contents

Your feet matter	3
Foot complications of diabetes	4
Know your own feet	6
Ten steps to healthier feet	8
What's involved in my treatment?	11
How will my wound be treated?	12
Prevent unnecessary pain and stress	14

Your feet matter

People with diabetes may be aware that they need to take special care of their feet but are unsure why. Learning how and why foot problems develop will help you take steps to prevent them. People with diabetes are at increased risk of foot problems¹. Hard skin fissures, skin cracks and minor injuries may present significant challenges. This booklet provides information about foot complications in diabetes. It also gives useful tips to improve your foot health, plus information and indicators to help you identify risks early.

By understanding how diabetes can affect your feet, and by learning how to spot those changes, you can take positive action to keep your feet healthy.

This booklet is for anyone with type 1 or type 2 diabetes, regardless of how long you've lived with it. Your family, friends, and/or caregivers may also find it useful.

The information in this booklet should not replace any information your health care professional gives you. However, it may help you to understand what they tell you.



Foot complications of diabetes

Over a long period of time, high blood glucose levels can cause damage to different areas of your body – this includes your feet and legs. A person with diabetes is at increased risk of developing foot conditions such as ulcers and tissue damage due to a combination of nerve damage (neuropathy) or peripheral obstructive arterial disease (poor circulation)². These, combined with other factors such as foot deformity, smoking, inactivity, inability to see your feet and being over 60 years old all raise the risk of developing ulcers.

Nerve damage (neuropathy)²

High blood glucose levels can cause damage to the nerve systems in your body, which stops important messages getting to and from your brain. The nerves in your body that are most likely to be affected are the longest ones – those that have to reach all the way to your feet and legs. Damage to your nerves is the factor most likely to affect your feet if you have diabetes.

Nerve damage is also sometimes called neuropathy. When it affects your feet, it can lead to the following:

- Damage to sensory nerves, which means that you start to lose sensation in your feet and are less able to feel pain, temperature and vibrations
- Damage to motor nerves, which can affect the muscles in your feet and cause the feet to change shape
- Damage to autonomic nerves which can reduce the amount of sweat that your feet produce, making skin very dry and prone to crack.

Peripheral arterial disease (PAD) or angiopathy²

Another important reason some people with diabetes develop foot problems is because high blood glucose levels can also damage blood vessels. This is called angiopathy, and can affect the blood supply (circulation) to your feet and legs. This may mean that less blood gets to your skin, muscles and tissues. Thus, skin may lack oxygen; the feet are at greater risk of injury and may heal at a slower rate.



Know your own feet

It's important to know what to look for and how to tell if there are any causes for concern. Inspecting your feet regularly will help you notice any early signs of damage. There are a number of different things to watch out for – these are the main signs.

Changes to blood supply (PAD)²

- Cramps in your calves
- Shiny, smooth skin
- Cold, pale feet
- Changes in the colour of your skin's feet
- Wounds or sores
- Pain in your feet

Changes to nerves (neuropathy)²

- Tingling or pins and needles
- Numbness
- Pain
- Sweating less
- Reddening in the feet; unusually hot to the touch
- Changes in your foot shape
- Hard skin
- Loss of sensation in your feet and legs
(e.g. being unable to tell what position they're in)



Footnote: If you are concerned that you may have any of the the symptoms listed, please contact your doctor, nurse, or podiatrist. This should be done urgently if you develop any wounds, sores, new swelling or discolouration.

Ten steps to healthier feet

1. Take care of your diabetes and your health³



Work with your health care team. Decide on a plan to manage your diabetes and help you set and reach goals for managing your blood sugar, blood pressure, and cholesterol. The team can also help you choose safe ways to be more active each day and choose healthy foods to eat. These actions can help reduce the risk of developing neuropathy and poor circulation and importantly can improve and maintain heart health. If you have foot problems, controlling your blood sugar can help the healing process.

2. Check your feet every day³



Watch out for cuts, blisters, cracks, calluses, corns, bruises, red spots, swelling, signs of fungal infection or a possible change in the toe's position. Use a mirror to see the soles of your feet or, if this is difficult, seek help from someone else. If you have corns and callus (thick patches of skin) do not remove these on your own. Report any problems to your healthcare team immediately.

3. Have your feet examined³



for sensitivity and pulses at least annually by a professional (such as a podiatrist). If your clinician identifies your feet as being at risk for ulceration, you should be examined more often.

4. Wash your feet every day³



with lukewarm water. Check the temperature of the water with your elbow or use a thermometer first (it should never be warmer than 37°C). The maximum bathing time should be between 3–5 minutes. Dry the feet carefully, especially between the toes.

5. Keep the skin soft and smooth³



Apply a thin coat of skin lotion over the tops and bottoms of your feet. Don't apply lotion or cream between your toes.

6. Trim your toenails regularly³



if you can see, reach and feel your feet. After washing and drying your feet, trim your toenails straight across and not too short. Buff the corners with a nail file. Do not cut into the corners, as this may create ingrown toenails. Have a foot specialist (such as a podiatrist) trim your toenails if you cannot see, feel or reach your feet. A specialist may also help if your toenails are thick or yellowed; or if your nails curve into skin.

7. Wear shoes and socks at all times³



Protect your feet. Do not walk barefoot, whether indoors or outdoors. Change socks daily and wear them with your shoes to prevent blisters and sores. Socks should be made of breathable material and natural fibres, such as wool or cotton. Use socks without constraining cuffs or seams (or with the seams inside out). Check inside your shoes for foreign objects before you put them on and make sure the lining is smooth.

8. Stay active to maintain healthy blood circulation⁴



Keep your feet fit – foot exercises should be part of your daily routine. It improves blood circulation and ensures mobility for your feet and ankles. Wiggle your toes for 5 minutes, 2 or 3 times a day. Move your ankles up and down and in and out. Be active each day, by walking, dancing, swimming, or going bike riding. If you are not very active, start slowly. When sitting, put your feet up and do not cross your legs for long periods of time. Give up smoking, it can damage your circulation.

9. Protect your feet from extreme temperatures³



Wear shoes at the beach and on hot pavements. You may burn your feet without knowing it. Keep your feet away from heaters and open fires; don't use hot water bottles or heating pads on your feet. Apply sunscreen to the tops of your feet to prevent sunburn. Wear socks at night if your feet get cold; and in winter, use lined boots to keep your feet warm.

10. Pick the right shoes³



Proper shoes are an important part of keeping your feet healthy.

- Buy your shoes in the late afternoon or evening, when feet are at their largest.
- Choose leather shoes without protruding seams. Avoid vinyl or plastic shoes, which don't stretch or breathe.
- Pick comfortable footwear with enough room for your toes. Avoid open-toed shoes.
- Break new shoes in by wearing them for short, 30-minute sessions. In between, remove them and check feet for any signs of chafing or other damage. Repeat this process, gradually increasing the wear time to an hour; until the shoes are comfortable enough to be worn all day.
- Avoid using shoes with pointed toes or high heels, as these put too much pressure on your toes.
- If you need more advice or help, consult an orthopaedic shoemaker.



Footnote: Check the insides of your shoes before putting them on.

What's involved in my treatment?

When treating foot problems, a multidisciplinary team is key in helping you achieve the best outcomes and success in therapy⁵. This may include medical professionals such as general practitioners, podiatrists, orthotists (specialising in shoes and orthoses), endocrinologists, and nurses⁵.

Be sure to ask your health care team to:

- Check your feet at every visit
- Check the sense of feeling and pulses in your feet at least once a year
- Show you how to care for your feet
- Refer you to a foot specialist (podiatrist) if needed
- Tell you if special shoes would help protect your feet



Footnote: Call your doctor right away if a cut, blister, or bruise on your foot does not begin to heal after a two days. Call the team urgently if it changes colour or becomes swollen or painful.

How will my wound be treated?

Dressing

Together, you and your healthcare professionals should agree on your treatment plan. This will include regular cleaning and applying a dressing that is suitable for your wound type. It should be a hypoallergenic, breathable dressing that should not damage the wound; in which case you may opt for one with a silicone coating (e.g. Mepilex^{®*}) which may be used together with a fixating tubular bandage (e.g. Tubifast^{®*}).

Debridement

In some cases, the treatment may also include debridement. This is the removal of hard skin or dead/infected tissue. Following debridement, the wound may appear bigger or bleed, but because it is cleaner, the healing process may be accelerated. Debridement can reduce the risk of infection and reduces pressure from the wound edges.

Relieving the pressure

Relieving pressure on an ulcer is an important part of your treatment plan. Any pressure from walking or footwear will slow down the healing process. There are many ways to relieve the pressure. Your podiatrist and orthotist (shoemaker) can discuss the best options with you.



Footnote: There may be other products more suitable for your needs. Please consult your healthcare professional.

Will I need special tests?

Sometimes tests may be necessary and may include:

- Swabs from the wound to identify the bacteria that might be causing infection
- Circulation tests on your legs and feet to ensure there is sufficient blood supply to heal the wound
- Different sensation tests such as vibration, feeling of pressure and reflexes
- Blood tests to measure your diabetes control
- X-rays or scans to help determine if there are any bone infections



WARNING – INFECTION

If you have any signs of infection in the feet such as: discolouration (usually redness), heat or swelling, increased discharge in the affected foot area, fever and/or chills, seek medical attention as soon as possible.



Prevent unnecessary pain and stress

Safetac® technology was invented in 1990 for one reason – to free patients from unnecessary suffering during their wound healing journey. It is now available in a wide range of dressings from Mölnlycke®.

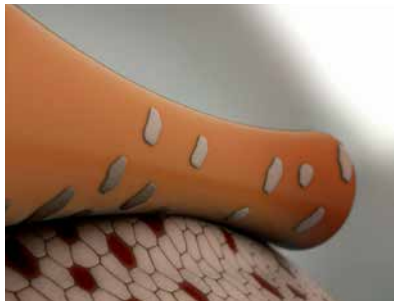
To date, Mölnlycke has sold well over 1.2 billion dressings with Safetac, helping millions of people to less painful wound healing.

Dressings with Safetac:

- Minimise pain at dressing change⁶⁻⁸
- Minimise damage at dressing change⁹
- Reduce stress and anxiety at dressing change¹⁰



Dressings that cause damage are painful to remove. This pain, and the anticipation of it, can cause physiological stress reactions that can delay healing. Dressings with Safetac have been shown in clinical studies to minimise pain and reduce stress reactions in patients with chronic wounds¹⁰.



Traditional adhesives only adhere to the top of the skin pores, and must stick harder to stay in place.



Safetac conforms to the skin's curves.

Ten steps to healthier feet



Take care of your diabetes and your health



Trim your toenails regularly



Check your feet every day



Wear shoes and socks at all times



Have your feet examined



Stay active to maintain healthy blood circulation



Wash your feet every day



Protect your feet from extreme temperatures



Keep the skin soft and smooth



Pick the right shoes

Proving it every day

At Mölnlycke®, we deliver innovative solutions for managing wounds, improving surgical safety and efficiency and preventing pressure ulcers. Solutions that help achieve better outcomes and are backed by clinical and health-economic evidence.

In everything we do, we are guided by a single purpose: to help healthcare professionals perform at their best. And we're committed to proving it every day.

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References: 1. Armstrong DG, et al. Diabetic foot ulcers and their recurrence. *New England Journal of Medicine*. 2017; 376:2367-75. 2. International best practice guidelines: wound management in diabetic foot ulcers. *Wounds International*, 2013. 3. Ousey K, Chadwick P, Jawien A, Tariq G, Nair HKR, Lázaro-Martínez JL, Sandy-Hodgetts K, et al. Identifying and treating foot ulcers in patients with diabetes: saving feet, legs and lives. *Journal of Wound Care* 2018; 27(5 Suppl 5b) 4. American Diabetes Association. *Diabetes Care* 2018 Jan; 41(Supplement 1): S38-S50 5. World Union of Wound Healing Societies (WUWHS), Florence Congress, Position Document. Local management of diabetic foot ulcers. *Wounds International*, 2016. 6. White R. A multinational survey of the assessment of pain when removing dressings. *Wounds UK* 2008;4(1):14-22. 7. White R, et al. Evidence for atraumatic soft silicone wound dressing use. *Wounds UK* 2005;1(3):104-109. 8. Zillmer R, Agren MS, Gottrup F, Karlsmark T. Biophysical effects of repetitive removal of adhesive dressings on peri-ulcer skin. *Journal of Wound Care* 2006;15(5):187-191. 9. Waring M, Biefeldt S, Matzold KP, Butcher M. An evaluation of the skin stripping of wound dressing adhesives. *Journal of Wound Care* 2011;20(9):412-422. 10. Upton D, et al. Pain and stress as contributors to delayed wound healing. *Wound Practice and Research*, 2010.

Find out more at www.molnlycke.com

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