



Foot Care

How can diabetes affect the feet?

Diabetes can affect the feet by either damaging the circulation to the feet or the nerves to the feet.

Healthy feet are constantly supplied with blood by the heart. Arteries deliver blood to the feet and veins return blood back to the heart. The blood carries oxygen and nutrients to muscles and cells and then removes carbon dioxide and waste products.

Diabetes may cause arteries and veins to narrow, leading to poor blood supply to and from the feet. This is called "poor circulation". When arteries and veins are damaged, the supply of oxygen and nutrients to the feet and removal of carbon dioxide and waste products from the feet are greatly reduced. This can result in feet being more prone to infection following an injury and lead to slow healing. Pain may also be experienced with poor circulation, especially if the arteries are damaged.

Healthy feet have many nerves sending messages to and from your brain. This includes the pain feeling when you hurt your foot. Over a long period of time, diabetes may sometimes damage this healthy system. Nerves may not work as effectively, losing feeling in your feet so that you may not feel your foot being injured. At the same time some people may feel pain from damaged nerves, often described as walking on broken glass. This is known as "peripheral neuropathy." The early warning signs include tingling or pins and needles in the feet, starting in the toes.

What are the golden rules for foot care?

PREVENTION IS BETTER THAN CURE

Caring for your feet is important, especially if you have diabetes. Follow the guidelines below to keep your feet in top condition:

- Inspect your feet **daily**, after your shower as you dry your feet is a good opportunity. Look for any redness, swelling, blisters, corns, calluses or cuts. If you have difficulty reaching your feet, use a mirror or have someone look at them for you. If you find a problem, see your doctor or podiatrist as soon as possible.
- As part of your diabetes management plan, ensure your feet are routinely checked either by a podiatrist, GP or educator every 6-12 months.
- Use tepid water to clean feet. It is **not** necessary to soak your feet but if you choose to, **DON'T** soak for long periods as this actually dehydrates the skin.
- If dryness is a problem, use a water-based cream such as sorbolene. Other creams may contain urea, such as eulactol and these are good for people with very dry skin. Use on the feet and heels BUT not between the toes.
- Don't use talcum powder.
- Avoid walking barefoot to reduce the risk of foot injury.
- Cut toe nails straight across and gently file rough edges. Never cut nails shorter than the end of your toe and don't cut down the sides of the nail as this may leave jagged edges, causing ingrown toenails which will cause an infection.

- Wear clean socks or pantyhose every day. Make sure they fit. Avoid using socks with prominent seams, which may rub and cause blisters. Avoid wearing garters, knee high stockings or socks with tight tops as these may “ring bark you” and cut off the circulation to your feet. Choose where possible socks that are a wool, cotton or wool/cotton blend as they will absorb moisture from your feet.
- Wear good fitting shoes that are not too tight or too loose.
- **Don't smoke** – smoking further reduces blood supply to your feet.
- Peripheral vascular disease (poor circulation).
- Peripheral neuropathy (nerve damage).
- Foot ulcers or open sores.
- Active skin conditions, examples include tinea, psoriasis or eczema.

If a person with diabetes is unsure whether they have any of the above conditions then they should have a foot examination before undertaking a foot spa. Diabetes foot examinations are available from podiatrists, diabetes educators, and general practitioners.

Other helpful hints for better foot care

- Maintain good control of your **3B's** Blood glucose levels, Blood pressure and Blood cholesterol by being physically active, enjoying a healthy eating plan and managing stress. Review your **3B's** with your team, do you need to change your medications?
- Turn on electric blankets before bed and turn off when getting into bed, do not use hot water bottles or heat bags.
- Do not ‘toast’ your feet close to heaters, as you may not be aware of burning your feet.
- Wear bed socks or well fitted slippers if cold feet trouble you.
- Don't use ‘home cures’ or over the counter preparations on corns, calluses or warts as they can burn the surrounding skin and an ulcer can develop. See your doctor or podiatrist for appropriate therapy.

If you have a foot problem, seek help immediately from your doctor or podiatrist.

Before undertaking a foot spa it is recommended that the person with diabetes makes enquiries about what the foot spa involves. There are some therapies which may be best to avoid, these may include:

- Use of very hot water
- Use of harsh soaps, topical lotions and creams
- Direct application of undiluted essential oils
- Lengthy periods of immersion in water
- Abrasive therapies

If there is any doubt about the above guidelines, it is recommended that the person with diabetes speak directly to a health care professional to seek individual advice.

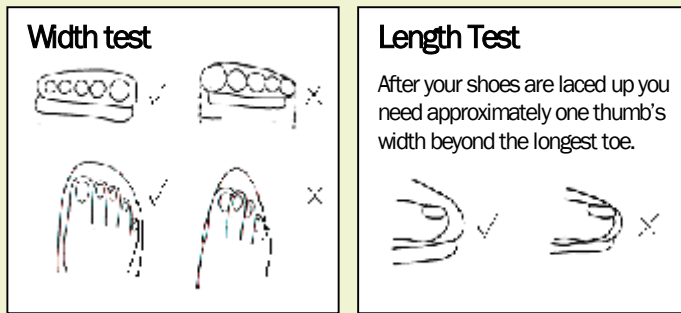
Tips for foot spa use

‘Tips for foot spa use’ provided by Virginia Bower, Chief Podiatrist, Royal Perth Hospital 2005.

People with diabetes may use foot spas safely providing there is no evidence of any of the following conditions in the feet:



Features of a Good Shoe



- **Heel Counter** – Firm heel counter required – provides heel stability and support. Helps reduce cracked heels
- **Heel Height** – No greater than 2.5cm. Broad base gives greater stability.
- **Sole** – Should be reasonably firm throughout and flex or 'break' across the ball of the foot. Rubber composition provides shock absorption.
- **Toe Box** – Deep and wide enough to allow toes to spread naturally
- **Length** – Approximately one thumb's width beyond the longest toe.
- **Fastenings** - Laces, buckles or Velcro to ensure snug fit and prevent foot fatigue.
- Ensure shoes are not the cause of foot problems; they should be professionally fitted and broken in slowly, check both feet carefully after wearing for blisters or skin irritations.
- **Always** check inside your shoes before putting them on, for things like stones, insects, nails or rough areas, which may damage your feet.
- Shoes which do not fit properly or have been known to cause injury **must not** be worn.
- **Upper and lining**- leather is best. Perforations allow for the passage of air.

Foot wear

It is important to choose appropriate footwear especially when you have diabetes. **Appropriate footwear does not mean expensive footwear.** Shoes provide important protection from injury. The guidelines below will assist you to pick the best shoes for your feet:

- Wear comfortable, well-fitting shoes.
- You should not buy shoes sight unseen and without trying them on first.
- Your feet should be professionally measured for length, width and depth ensuring shoes are fitted accordingly. Toe cramping should be avoided and a thumb's width from the point of the longest toe to the end of the shoe is recommended.
- As feet tend to swell during the day, the best time to try on new shoes is **late afternoon**.
- Walk around the shop when checking the fit, noting any pressure areas. Make sure the heel remains well seated in the shoe and does not slip up and down and remember that carpet will make them feel more cushioned than they really are.
- Often one foot is larger than the other therefore it is important to try on both shoes before you buy. The size should fit the larger foot and use an insole for the smaller foot.
- Expensive shoes are not necessarily well fitting shoes, concentrate on individual features.
- They should fit well in the shop **before** you buy. Don't depend on shoes "stretching" – they may not. Shoes that are too big can be just as harmful as shoes that are too small or tight.
- Leather uppers prevent heat loss and act as an insulator in cold weather. Leather holds its shape well and allows moisture produced by the foot to pass through the surface. Rubber or crepe soles provide greater shock absorption and stability and are slip resistant for safety.
- Your shoes should be appropriate for the occasion. Sports or walking shoes are the ideal shoe for daily wear. Slippers provide no foot support and should be worn only to keep feet warm when sitting. High heels, pointed toes and other fashion styles should preferably not be worn but if they are they should be limited to short periods only, they will contribute to corns, calluses and bunions.

What if you suffer with peripheral neuropathy?

There are different treatments for dealing with the pain of peripheral neuropathy; no one treatment will suit everyone. It is important to find which suits you, and it may be a combination of treatments:

First it is important to have good control of your 3B's, Blood glucose levels, Blood pressure and Blood Cholesterol. In consultation with your doctor or podiatrist find a treatment that helps you. Some of the treatments available include:

Non medication treatments:

- Cream Zostrix HP (used for shingles) applied to the area 2-3 times a day.
- Surgical adhesives such as Op Site and Fixamul or Hyperfix can be applied to the painful area. The adhesive comes off after frequent washing. It can then be applied again. NB it is extremely important that this option is prescribed by your podiatrist or doctor after your skin has been assessed suitable for this.
- Lycra stockings or socks. These are not pressure stockings. Something in the lycra material can help ease the pain
- TENS or nerve stimulators, must be used under medical supervision
- Acupuncture

Medication treatments:

- Evening Primrose oil capsules has been prescribed by some specialists.
- Antidepressants have been used to relieve chronic pain by changing the chemical message the brain receives so that it is no longer a pain message. They reduce the pain, and may also have a sedative effect.

- Antiepileptic drugs also may change the chemical message of pain so that the brain does not register pain in the foot.

What are some of the early warning signs of circulation problems?

- Delayed or poor healing
- Thin pale or red skin
- Shiny skin
- Cold feet
- Hairless legs
- Dried or cracked skin

If you have any of these warning signs then see your doctor and podiatrist.

There are different treatments for dealing with circulation problems.

First it is important to have good control of your **3B's**, Blood glucose levels, Blood pressure and Blood Cholesterol. Then in **consultation** with your doctor or podiatrist find a treatment that helps you. This may include medications, protective footwear or surgery.

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