



# Diabetes and foot problems

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Diabetes mellitus or diabetes is a chronic disorder for which there is no cure as yet. There are currently approximately 463 million people suffering from diabetes worldwide. It is expected that by 2045 this number will increase to 700 million. In most countries the number of people with type 2 diabetes is rising. 79% of adults suffering from diabetes live in low and middle income countries. The largest number of people with diabetes is aged between 40 and 59. We know that within this group one in two people has not yet been diagnosed with diabetes.

The figures available for Belgium are limited and incomplete, but it is estimated that type 1 and type 2 diabetes together occur in 8% of the adult Belgian population. Predictions indicate that by 2030 this will rise to 9.6% or one in ten adults in Belgium. These figures include known and unknown cases of diabetes (not everyone is aware that they have diabetes). Overall there are consequently more than 1 million Belgians with high blood glucose levels who qualify for prevention and potential treatment of diabetes and its complications.

People suffering from diabetes can develop various foot complications. The term 'diabetes foot' is used to refer to specific complications affecting the arteries and nerve endings (vascular and neuropathic) of the feet as a result of diabetes.

You can do a lot yourself to prevent problems with your feet. This brochure aims to help you do this.

The Multidiscipline Diabetes Footcare Team

# IMPORTANCE OF YOUR DIABETES TREATMENT

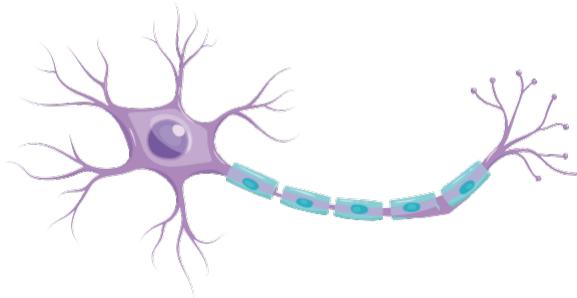
The aim of managing your blood glucose level successfully is to prevent diabetes complications in the long term. If your blood glucose level is managed properly, the risk of complications is small. Effectively managed diabetes is based on blood glucose levels between 80-150 mg/dl or an HbA1c of 7.0% or 53 mmol/mol.

In addition to a healthy lifestyle, medication, incretins and/or insulin are key aspects in the treatment of diabetes. They can prevent complications in the long term.

Complications can be classified into three groups:

- ✓ Neuropathic disorders
- ✓ Arterial disorders (heart, legs, brain, eyes, kidneys)
- ✓ Infections and foot problems

## NEUROPATHIC DISORDERS



Neuropathic disorders or diabetic neuropathy cause a number of problems:

- **Sensory neuropathy**

Is associated with reduced sensitivity to pressure, heat/cold and pain.

Vibration perception and position sense can also be impaired, which results in unsteadiness when walking, being more prone to falling, feeling of walking 'on air', etc.

- **Motor neuropathy**

Leads to atrophy and weakness of the internal foot muscles. It can result in a foot with hammer toes, a change in foot position or in foot mobility when walking.



- **Autonomic neuropathy**

Reduces perspiration and leads to dry skin and cracking, which could result in infection.



## ARTERIAL DISORDERS

### ① Of the heart and major arteries

People suffering from diabetes are at an increased risk of cardiovascular disease, e.g. a heart attack.



One of the main causes of heart and cardiovascular disease is atherosclerosis.

The following recommendations are made to lower this risk:

- ✓ Healthy lifestyle:
  - Healthy diet
  - Acceptable body weight
  - 30 minutes of exercise each day
  - Stopping smoking
- ✓ Managing the condition of the arteries (including cholesterol), if necessary with medication
- ✓ Strict blood pressure management, if necessary with medication

### ② Claudication

This disorder is caused by atherosclerosis in the lower limbs, resulting in a painful ache in the calf muscles when walking and not being able to walk as far.

With diabetes, atherosclerosis occurs more readily in the blood vessels below the knee. This contributes to diabetic foot ulceration and slows down the healing process.

### ③ In small blood vessels (eyes and kidneys)

Successful diabetes management has a positive impact on the small blood vessels.

As a preventive measure we also ask to perform an annual eye check and 24 hour urine test.

Foot problems usually occur due to a combination of the following causes:

- Wounds not healing due to high blood glucose levels.
- Circulation problems: insufficient oxygen supply to the wound.
- Reduced (pain) sensitivity as a result of problems with nerve endings.



You may not notice immediately that your foot is injured because you are less sensitive to pain or don't have any pain at all. The wound will also heal more slowly.

Prevention is better than cure and you can do this by taking a number of simple measures.

Prevention of foot problems starts with proper diabetes management, a healthy lifestyle and looking after your feet!

## INFECTION

Diabetic foot wounds are more prone to become infected and that is risky!

- ✓ It's important to clean, disinfect and cover any wound properly.
- ✓ With diabetes, an infection can very quickly (less than 12 hours) lead to severe problems.
- ✓ Consult your GP if you suspect that you have an infected wound.

## A FEW BASIC RULES TO PREVENT FOOT PROBLEMS

### WASH YOUR FEET DAILY

- Wash your feet but don't take foot baths to prevent weakening of the skin.
- Limit the water temperature to 37°C.
- Carefully dry your feet, also between the toes.



## INSPECT AND TAKE CARE OF YOUR FEET

- Have your nails treated regularly by a pedicure or podiatrist.
- Use a hard cardboard nail file rather than nail clippers or scissors.
- Don't use ointments or plasters to remove corns.
- Don't walk around barefoot or in socks, always wear slippers or shoes in the house.
- Apply a hydrating cream daily, but not in the spaces between the toes.
- Inspect your foot sole and the area between the toes daily.
  - ✓ Be alert to any change in colour (redness, blue, pale).
  - ✓ Check for calluses, corns or any change in the shape of your feet.



- ✓ Have corns removed as soon as possible by a specialist. Never attempt to do it yourself.
- ✓ Be alert to swelling or temperature differences between your feet.
- ✓ Wear your glasses if necessary and carry out the inspection in a well-lit room.
- ✓ If necessary, ask a member of your family or an acquaintance to help you, or use a mirror.

### WARM UP COLD FEET CORRECTLY

- Avoid burns from using a hot water bottle or cherry stone pillow.
- Use bed socks if necessary.



## PAY ATTENTION TO SOCKS AND SHOES

- Change socks every day.
- Preferably wear wool or cotton socks without holes or thick seams to prevent friction.



- Don't wear tight socks or shoes.
- Wear good quality footwear.
- Don't wear flip-flops or sandals.



## What should you be aware of when buying shoes?

It is advisable to remember the following recommendations when buying new shoes.

- 1 Shoes should preferably be bought in the afternoon, as your feet swell up during the day.
- 2 Choose a wide, high fitting shoe to provide enough space for the toes and leave room for insoles. If you are already using insoles, try the new shoes with the insoles in place.
- 3 Choose a smooth interior finish without perceptible seams.
- 4 Opt for a wide heel, maximum 2 to 3 cm high (no high heels).
- 5 Choose sturdy laces or a Velcro closure across the instep to ensure that the foot is secure and can't slide.
- 6 Check that the heel reinforcement is secure to prevent the heel from slipping in and out of the shoe.
- 7 Favour a sturdy sole and sufficient flexibility (heel flexes up at least 1 cm when the front of the shoe is pushed down).
- 8 Preferably choose leather shoes (leather can still be stretched if the shoes turns out to be slightly too narrow).

## CONSIDER YOUR SITTING POSITION

- Sitting with your legs crossed prevents proper circulation to the feet. It is advisable, therefore, to avoid sitting in this position.



**OK**



Washing daily with water and soap

**DEFINITELY NOT OK**



Having a foot bath



Having your feet looked after by a pedicure or podiatrist



Cutting your toenails yourself



Wearing sturdy slippers inside the house



Walking around barefoot



Choosing good quality, sturdy shoes, adapted to your feet



Wearing shoes that are too narrow or high heels

## OK



Changing your shoes and socks in good time



Wearing enclosed shoes with Velcro or laces



Using bed socks



Wearing socks in your shoes



## DEFINITELY NOT OK



Wearing worn out socks and shoes (higher risk of injury)



Wearing sandals or flip-flops



Using a cherry stone cushion or hot water bottle



Wearing shoes without socks.



# WHO CAN YOU CONTACT FOR FOOTCARE?

## AESTHETIC PEDICURE

Footcare mainly focuses on basic hygiene and cosmetic care such as cutting the nails and applying nail polish, removing calluses or corns, applying cosmetics to the skin of the feet, a relaxing foot massage, etc.

An (aesthetic) pedicure is not always adequately trained to look after high risk problem feet. If you suffer from diabetes, it's advisable to have your feet looked after by a dedicated, qualified care provider.

## SPECIALIST FOOTCARE

In addition to basic footcare, a specialist also provides additional skincare and deals with nail problems in order to prevent pain and other discomfort.

Nail problems such as fungal nails, ingrown toenails and skin problems such as painful calluses, cracked heels, etc. are also treated. Some footcare specialists have attended additional training specifically for the treatment of diabetes patients. They can only treat people suffering from diabetes who are not at an increased risk of foot problems.

→ To find a footcare specialist in your area visit [www.voetmagazine.be](http://www.voetmagazine.be).

## PODIATRIST

A podiatrist is a paramedic who has gained a Bachelor degree in higher education. Their tasks are more extensive than just footcare.

In addition to basic hygiene care, podiatrists can also provide therapeutic treatment to improve the functioning of the feet.

Podiatrists specialise in the normal and abnormal functioning of the lower limbs (joints, muscles and tendons) and the nails and skin of the feet.

They also play an important role in the treatment of the feet of patients with chronic diseases such as diabetes and rheumatism.

→ To find a recognised podiatrist visit the following website:  
[www.bvp-abp.be](http://www.bvp-abp.be)

## FOOTCARE AND PODIATRY REIMBURSEMENT

Obligatory health insurance never reimburses pedicure treatment. Some health insurance funds will issue a small refund via additional insurance cover. For further information contact your local health insurance fund.

Obligatory health insurance only reimburses podiatrist treatment for diabetes patients, subject to strict conditions.

## SUMMARY OF DIABETES CARE SYSTEMS

	Preliminary diabetes programme (VTD or care model monitoring of patient with type 2 diabetes)
<b>Rightful claimant</b>	<ul style="list-style-type: none"> <li>• Type 2 diabetes patient with or without medication who is not being monitored via a care programme or diabetes convention</li> <li>• No prediabetes</li> </ul>
<b>Supplementary conditions</b>	<ul style="list-style-type: none"> <li>• GMD obligatory</li> <li>• Annual extension of preliminary programme</li> </ul>
<b>Self-care material</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Podiatry only from foot risk 1 = neuropathy</b>	<ul style="list-style-type: none"> <li>• twice a year partial reimbursement with prescription from GP and indication of foot risk group</li> </ul>
<b>Reimbursement of standard share</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>

Type 2 diabetes care programme ZTD	Diabetes convention DC
<ul style="list-style-type: none"> <li>Type 2 diabetes patient with insufficient monitoring with maximum OAD or 1 or 2 insulin injections and/or incretin mimetics</li> </ul>	<ul style="list-style-type: none"> <li>Group A: type 1 diabetes</li> <li>Group B: type 2 diabetes with complex insulin therapy (3 injections/day)</li> <li>Group C: type 2 diabetes with elementary treatment and multimorbidity.</li> </ul>
<ul style="list-style-type: none"> <li>GMD obligatory</li> <li>Contract signed by patient, GP and endocrinologist</li> <li>Obligatory consultation: twice a year with GP once a year with endocrinologist</li> </ul>	<ul style="list-style-type: none"> <li>GMD obligatory</li> <li>Obligatory consultation: once a year with endocrinologist twice a year with diabetes instructors once a year check-up of the eyes, feet, kidney function peripheral neuropathy</li> <li>Obligatory number of blood glucose measurements</li> </ul>
<ul style="list-style-type: none"> <li>Only with insulin and/or incretin: Meter: 1 every 3 years Strips: 3x50 strips every 6 months Lancets: 100 items every 6 months</li> <li>Patient buys own pen needles</li> <li>Via pharmacy or home care store with prescription from GP</li> </ul>	<ul style="list-style-type: none"> <li>Amount of material is dependent upon which convention group</li> <li>(Partial) reimbursement of new techniques.</li> <li>Patient buys own pen needles</li> <li>Via the convention centre</li> </ul>
<ul style="list-style-type: none"> <li>twice a year partial reimbursement with prescription from GP or endocrinologist, with indication of foot risk group</li> </ul>	<ul style="list-style-type: none"> <li>twice a year partial reimbursement with prescription from GP or endocrinologist, with indication of foot risk group</li> </ul>
<ul style="list-style-type: none"> <li>Yes, but not in the event of a home visit</li> </ul>	<ul style="list-style-type: none"> <li>No</li> </ul>

# WHAT SHOULD YOU DO IN THE EVENT OF AN INJURY?



**1**  
Wash your feet with water and soap (also across the wound).

**2**  
Carefully dry your feet (also between the toes).

**3**  
Disinfect the wound (keep it as dry as possible, don't use ointment on your own initiative).

**4**  
Always cover the wound.



**5**  
Contact your GP and/or make an appointment with the diabetes footcare team.

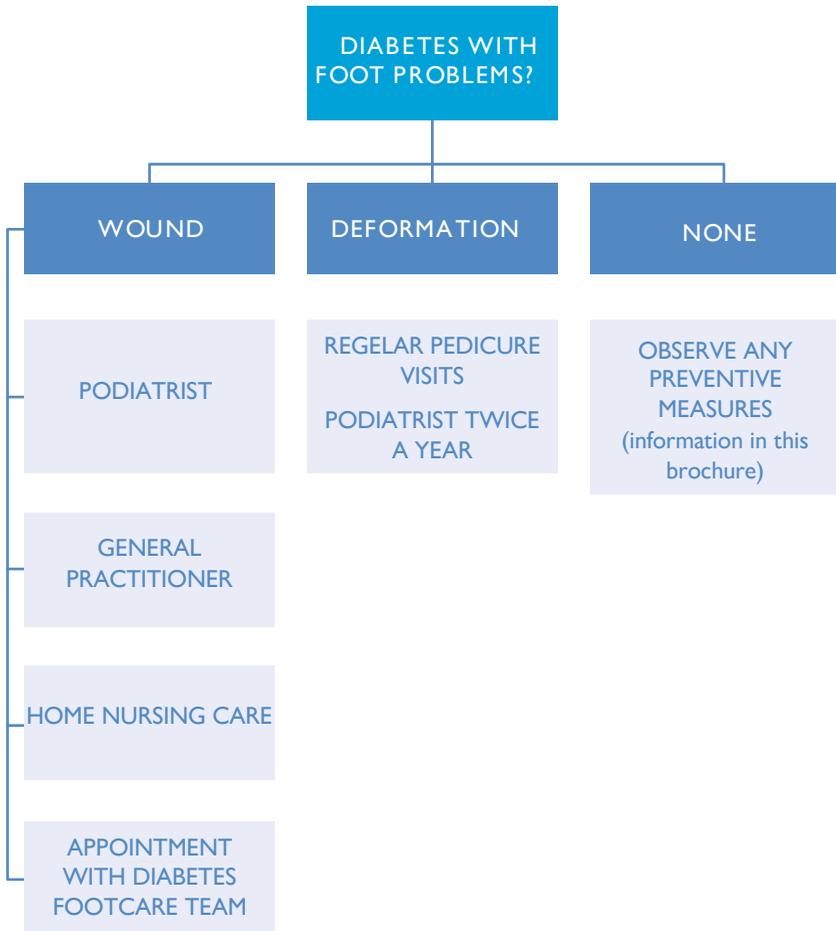


**6**  
If you are already wearing wound care shoes, keep wearing them until the wound has healed.



**7**  
Arrange home nursing care.

# WHO BEST TO CONTACT FOR FOOTCARE?



# THE UZ LEUVEN MULTIDISCIPLINARY DIABETES FOOTCARE CLINIC

## WHAT IS AVAILABLE AT THE MULTIDISCIPLINE DIABETES FOOTCARE CLINIC?

Diabetic patients can contact the footcare clinic for the following:

- ✓ Prevention and treatment of foot problems by a multidisciplinary team
- ✓ Tailor-made orthopaedic shoes, semi- orthopaedic shoes and orthotics
- ✓ Medically prescribed footcare by a podiatrist or wound care nurse
- ✓ Advice on footcare and shoes
- ✓ Referral to a podiatrist

## WHAT SHOULD YOU BRING TO A DIABETES FOOTCARE CONSULTATION?

- ✓ The shoes you wear most commonly
- ✓ Bandages and wound care products
- ✓ Blood test results from your GP
- ✓ Diary with glycemia measurements or your blood glucose meter

## WHO IS PART OF THE MULTIDISCIPLINARY TEAM?

### Coordinators:

- Vascular surgeon Dr. Sabrina Houthoofd

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  - Orthopaedic surgeons Prof. Dr. Giovanni Matricali  
Dr. Sander Wuite

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  - Diabetes instructors Katie Boussemaere  
Instructor team

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  - Podiatrists Ellen Busschots  
Jonas Osselaer  
Raksana Zargaryan

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  - Wound care nurses Leen Dox  
Noémie Vandewauwer

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  - Orthopaedic shoe technician: V!go shoes

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  - Nurses, orthopaedic practitioners and logistics staff of the E 103 surgery consultation unit

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  - On call
    - ✓ Endocrinologists
      - Prof. Dr. Chantal Mathieu
      - UZ Leuven endocrinology staff
    - ✓ Psychologists
    - ✓ Social services
    - ✓ Bleeding disorders and vascular disease
    - ✓ Plastic, reconstructive and aesthetic surgery
-

## FURTHER INFORMATION

### MULTIDISCIPLINARY DIABETES FOOTCARE CONSULTATION

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**When?** Every Wednesday by appointment only

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**Where?** Oranjestraat, gate 2, level 0  
Always check in upon arrival for a consultation

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**Making or changing appointments?** Tel. 016 34 48 50

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#### For urgent matters please contact:

- 
- Diabetes instructors: 016 34 34 75

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  - Podiatry consultation: 016 34 05 43  
or 016 34 35 83

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  - Wound care nursing team: 016 34 50 53

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  - Diabetes footcare consultation appointments: 016 34 48 50

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  - Diabetes footcare/vascular surgery secretariat: 016 34 68 50

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  - Orthopaedics secretariat: 016 33 88 27

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  - V!go shoes: 089 32 91 50
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E-mail: [diabetesvoetkliniek@uzleuven.be](mailto:diabetesvoetkliniek@uzleuven.be)

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