



COMPLICATIONS IN **TYPE 2 DIABETES**

WHY DO THEY ARISE? WHAT COMPLICATIONS MAY OCCUR?
HOW CAN WE PREVENT THEM?

Living as normal as possible

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REASONS FOR COMPLICATIONS

Type 2 diabetes is a chronic disease characterised by elevated blood glucose levels, often associated with overweight or obesity, high blood pressure and high cholesterol levels.

Sub-optimally controlled diabetes can lead to numerous complaints in several organs:

- ✓ Eyes
- ✓ Kidneys
- ✓ Heart
- ✓ Peripheral nervous system of the lower extremities
- ✓ Diabetic foot

Type 2 diabetes can be treated with antidiabetics and/or insulin combined with a healthy lifestyle, balanced diet and regular physical exercise.

Diabetes control



The "measure" of good control is the glycolised haemoglobin value, also called HbA_{1c} value, which should be checked about four times a year and should not exceed the value determined by the doctor.





WHAT COMPLICATIONS CAN ARISE?

A constriction of the small and large arteries, micro- and macroangiopathy, is the main reason for complications in diabetes.



Smoking can exacerbate these effects due to the vasoconstrictive effects of nicotine.

THE MOST COMMON SEQUELAE INCLUDE:

Diabetic retinopathy

Diabetic retinopathy is a disease of the retina of the eye. It is perfused by numerous small veins that supply the cells with nutrients. This makes the retina susceptible to vascular damage that can occur as a result of diabetes. However, early detection can often prevent development of severe visual impairment.

Diabetic nephropathy

Diabetic nephropathy is characterised by the excretion of protein in the urine, also known as microalbuminuria, which can lead to a deterioration of kidney function over time.

Macrovascular complications

These complications involve mainly the large blood vessels of the heart and the blood vessels of the brain and lower limbs, which conditions can lead to heart attacks, strokes and lower leg pain during prolonged walking (intermittent claudication).

Diabetic neuropathy

Diabetic neuropathy is the result of nerve dysfunctions in the legs and manifests as burning, tingling and numbness, especially in the feet. In some cases this can also lead to nightly pain or to pain sensation disorder.

Diabetic foot

This complication results from the other complications. This usually occurs when a neuropathy with sensory disorders and/or circulatory disorders caused by overly constricted blood vessels is already present. The feet require special care, as even minor injuries can lead to major problems if not treated.

CAN I PREVENT DIABETES COMPLICATIONS?

Fortunately, countermeasures and treatment are possible:

1

Keeping blood glucose levels as close to normal as possible reduces the risk of complications. The attending physician will clarify which blood glucose and HbA_{1c} values you should aim for.

2

Control of blood pressure and cholesterol with the help of the diabetes team and the doctor with diet, regular exercise, and medication if necessary.

WHAT EXAMINATIONS ARE NECESSARY?

The following tests are usually performed on patients with type 2 diabetes:

- ✓ Check of the HbA_{1c} every three months
 - ✓ Neurological check of sensory function in the legs once a year
 - ✓ Examination for foot complications at least once a year
 - ✓ Eye examination once a year (with examination of the ocular fundus)
 - ✓ Examination of the kidneys once a year (urine is tested for protein excretion)
 - ✓ Regular check of cholesterol levels
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A FEW SIMPLE MEASURES FOR OPTIMUM DIABETES CONTROL:

Maintain a healthy lifestyle:

- ✓ Lose excess weight
- ✓ Healthy diet and regular physical activity
- ✓ Alcohol in moderation
- ✓ Stop smoking: Smoking increases the risk of arteriosclerosis, damages the lungs and can cause cancer

You can contribute a lot:

- ✓ Take prescribed medication regularly
 - ✓ Regular monitoring of blood glucose, HbA_{1c}, blood pressure and cholesterol
 - ✓ Undergo diabetes tests or the tests prescribed by the doctor at least once a year
 - ✓ Regular examination of the feet
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The sooner complaints are recognised, the sooner they can be treated successfully. Contact your attending physician if you have the impression that something is wrong between follow-up examinations.



HOW DO I PROTECT MY FEET?

Good foot care is very important:

- ✓ Do not walk barefoot on hot surfaces
 - ✓ Wear sandals on the beach, even in the water
 - ✓ Do not wash your feet with water that is too hot
 - ✓ Dry feet thoroughly, especially between the toes
 - ✓ Ensure early detection of small wounds by examining your feet carefully every day
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Contact the diabetes team or your doctor immediately if you notice small abrasions, blisters, or colour changes on your feet.

Trim toenails carefully to avoid small injuries, which may heal poorly. Avoid sharp objects and use emery board nail files. Seek professional foot care if necessary.

Choose new shoes carefully:

- ✓ They must be comfortable on your feet. Make sure shoes are in good condition, do not pinch and have no seams that could cause injury.
 - ✓ Do not wear rubber shoes or heels over 4 cm high.
 - ✓ Leather shoes with anti-slip soles and lower heels are preferable.
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