

ottobock.

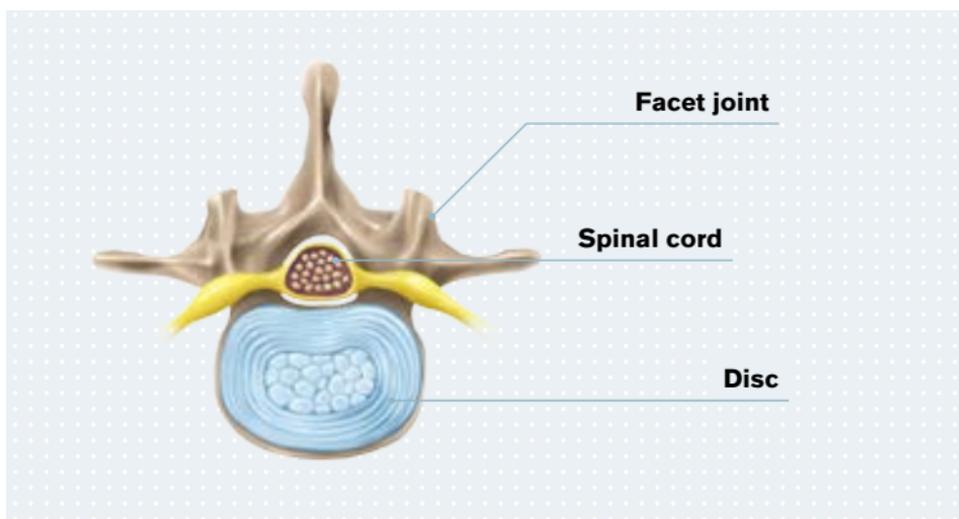
Your back in focus

Degenerative disc disease

Spinal stenosis



What is degenerative disc disease?



Degenerative disc disease occurs as a result of wear and tear to the cartilage that acts as a “cushion” between the vertebrae. Over time, it becomes thinner and more brittle. If there is a narrowing of the space between the vertebrae, this is referred to as spondylosis. In a herniated disc, the disc bulges (protrusion) or tears and the inner core pushes out (prolapse). And if a disc presses on a nerve or the spinal cord, it can cause a feeling of numbness or weakness, as well as being painful.

Causes

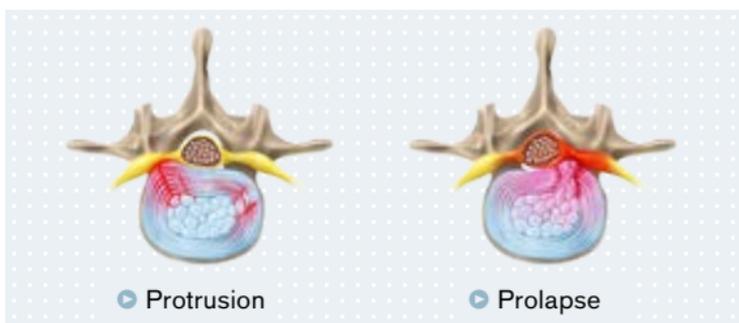
A certain degree of wear and tear of the discs is normal. The following factors can make these conditions worse:

- Genetic predisposition
- Being overweight
- A sedentary lifestyle
- Activities at work: prolonged sitting, lifting or moving heavy objects, bending, twisting, repetitive movements and constant vibrations can all result in damage to the spine.

Symptoms

Disc degeneration does not necessarily cause pain. The following symptoms may occur as a result of damage:

- Pain due to irritation of the weakened discs during movement. If the intervertebral disc bulges outwards, this can make the situation worse.
- Pain following physical activity or sitting for extended periods.
- Painful stabbing, throbbing or burning sensations that radiate into the legs.
- Stiff back
- Numbness or tingling in the limbs





What is spinal stenosis?

Spinal stenosis refers to a narrowing of the spinal canal, which leads to pressure on the spinal cord and nerves. These changes can cause pain and other symptoms. Stenosis can affect a small or large section of the spinal column. Degenerative changes occur in the spine as a result of the ageing process. The ligaments that support the spinal column become harder and thicker. The bones and joints can become deformed and compress the spinal nerves even further.



Most people do not experience any symptoms of age-related stenosis until they reach the age of 50 or so. However, individuals with hereditary spinal disease or a spinal injury may experience symptoms earlier.

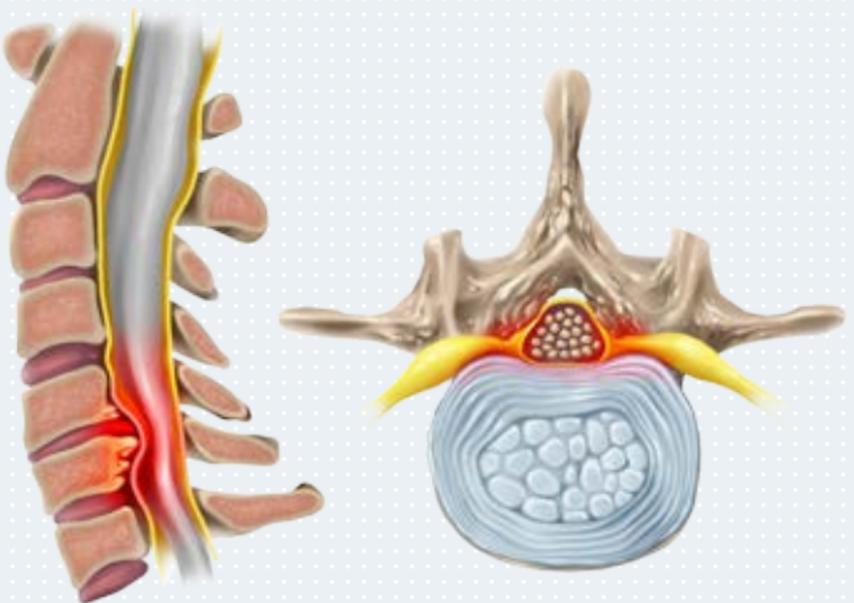
Causes

- Osteoarthritis
- Hereditary spinal diseases
- Disc degeneration or rupture (herniated disc)
- Abnormal lateral curvature of the spine (scoliosis)
- Other causes, such as tumours and injuries, diseases (e.g. Paget's disease, which causes bones to become weakened and deformed), calcification of the spine, etc.

Symptoms

Sometimes spinal stenosis does not cause any symptoms at all; sometimes symptoms occur only gradually and then get worse over time. You may experience the following:

- Neck or back pain
- Numbness or weakness, cramps or a painful burning sensation in the arms or legs
- Pain that radiates into the legs (known as sciatica), potentially making it painful to walk longer distances without resting
- In severe cases, problems can occur in the arms and legs or in the bowel and bladder



Treatment options

What are the treatment options?

As the disease progresses, a variety of treatment options aim to alleviate symptoms first and foremost and – as far as possible – address the causes as well. These range from manual therapy (physiotherapy), progressing to painkillers, to longer-term solutions such as wearing an orthosis.

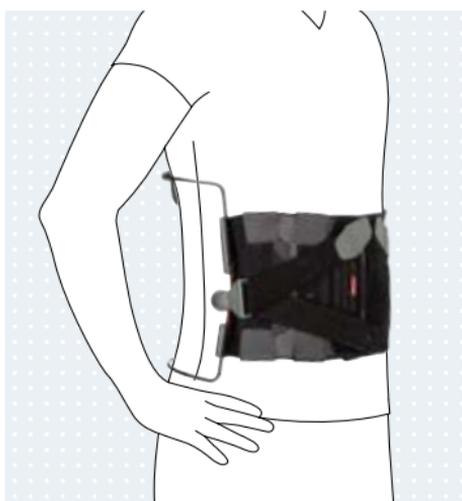
Usually, this will relieve pain to start with, but none of these treatment options can reverse the bone defects in the long term. However, innovative developments such as the Dyneva can promote stretching and strengthening of the stressed back muscles, resulting in increased activity.

Treatment options in more severe cases

When standard methods fail to relieve pain, or if additional symptoms occur – such as numbness in the legs, or bowel or bladder problems – your doctor will often recommend surgery.

However, if the symptoms are less severe or you are reluctant to resort to surgery, specialised orthoses can provide targeted support in day-to-day life.

Activation

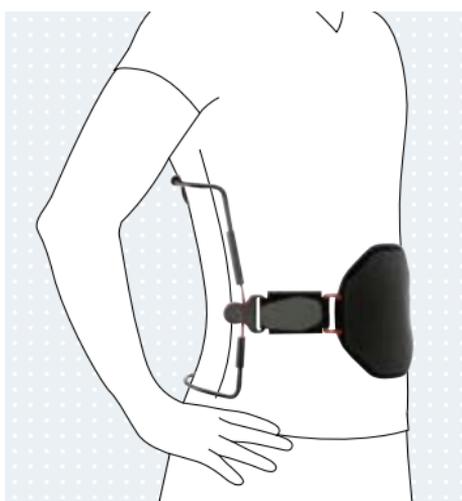


Dyneva

Art. no. 50R300N

Dynamic effect on the back muscles during movement

The Dyneva has a dynamic effect on the back muscles during movement. It stretches and strengthens them, thus relieving the facet joints. Pain during movement is reduced, and users can walk longer distances and increase their activity levels.



Dyneva light

Art. no. 50R301N

Dynamic effect on back muscles during movement

The Dyneva light works in the same way as the Dyneva. The slimmer abdominal section is an alternative option for some body shapes.

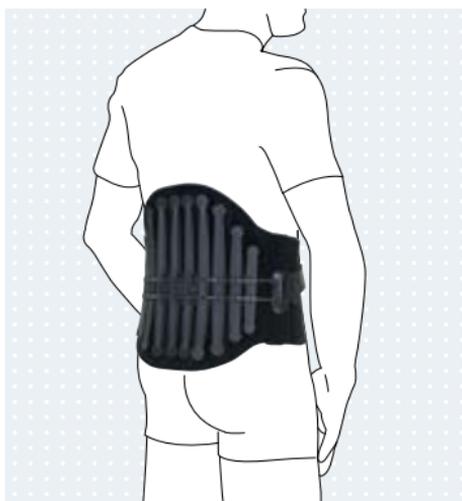
Notes on the Dyneva

You should gradually increase the length of time you wear the Dyneva to allow your muscles to become accustomed to the new movement. The brace only works when you're moving, which is why it is not recommended for use during activities while sitting. Suitable activities include walking, riding a bike, going shopping, etc.

After some time, the brace may no longer be required for certain indications. However, it can be worn again at any time if the situation deteriorates again.



Stabilisation

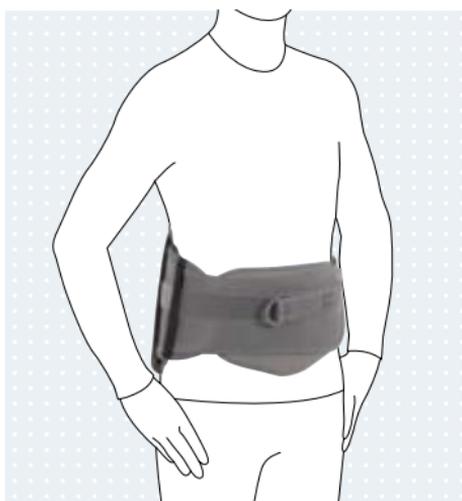


Lumbo Tristep

Art. no. 50R30N

Stabilises while mobilising

The brace supports the healing process thanks to the option of removing the stabilising elements in three stages. The patient's movement and mobility increase with every stage. Flexible support elements with new strap pockets and variable strap components ensure an excellent fit – and this is also enhanced by the recently added lateral wedges.

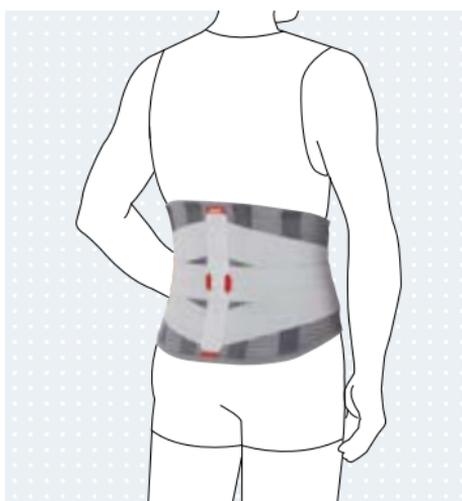


Smartspine LSO high

Art. no. 50R232

Relieves the lumbar spine

This brace provides a high degree of stabilisation while relieving pressure on the lumbar spine in cases where pain is acute. As well as providing pain relief, the unique pulley system offers the highest possible level of compression with minimal effort.



Lumbo Direxa Stable

Art. no. 50R54

High level of stabilisation

Thanks to its highly effective stabilising properties, the Lumbo Direxa Stable relieves pressure on the lumbar spine without becoming bulky.



Your specialist dealer will be happy to help you choose the right brace

Exercises you can do at home

Your doctor will prescribe a treatment plan to suit your particular back problem. You can also strengthen your back by supplementing this treatment with the following exercises, which you can do at home after consulting with your doctor.

Remember to breathe regularly and evenly during each exercise. Avoid holding your breath. Stop immediately if any movement causes pain. Some of the exercises are designed to strengthen your abdominal muscles, as strong abdominal muscles are always a prerequisite to a strong back. Just 5–10 minutes of exercise every day can have a positive effect on your musculoskeletal system. Enjoy the workout – it won't be long before you notice the results!

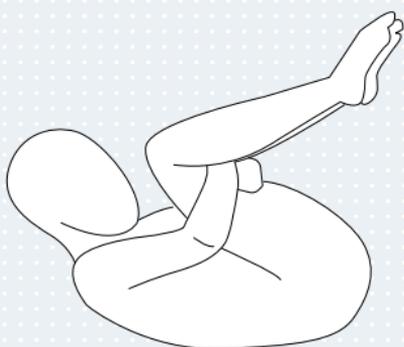
Principles of training:

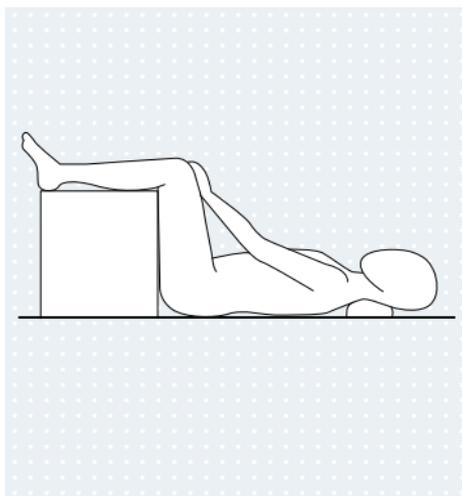
- Do these exercises only after consulting your doctor or physical therapist.
 - Integrate the exercises into your daily routine.
 - Observe the recommended time limits.
 - None of the exercises should cause pain or other problems.
 - If anything is unclear, ask your doctor or physiotherapist.
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Exercise 1: Bending exercise

Lie on your back and draw both knees up towards your abdomen. With your hands holding your thighs behind the knees, pull your knees as far as possible towards your chin.

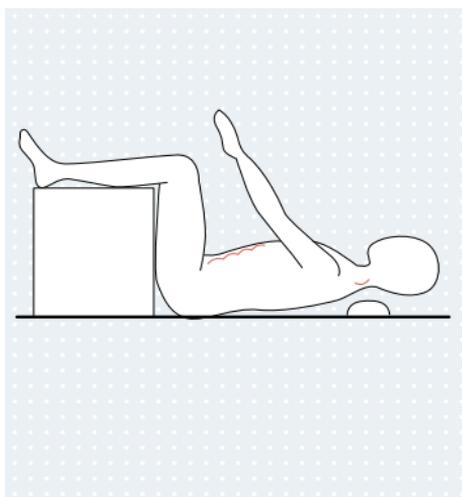
Hold this position for around 15 seconds and then return to your starting position. Take a short break, then repeat this exercise three times.





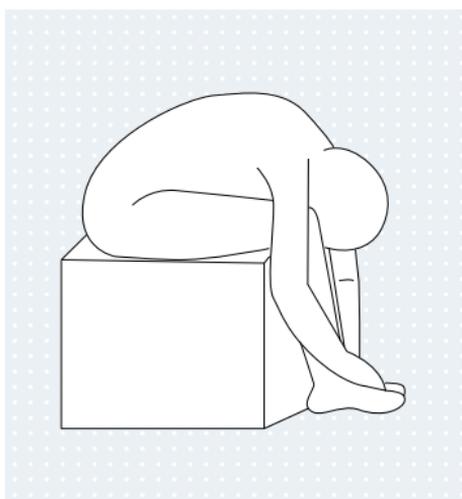
Exercise 2: Bending exercise

Lie on your back and place your legs on a chair or stool with your knees at a right angle. Make sure your knees are not touching. Lift your head and shoulders slightly off the floor and press both hands against your thighs for around five seconds. Don't forget to keep breathing regularly and evenly despite the effort this requires. Briefly lower your head and shoulders to the floor. Repeat this exercise 10 times.



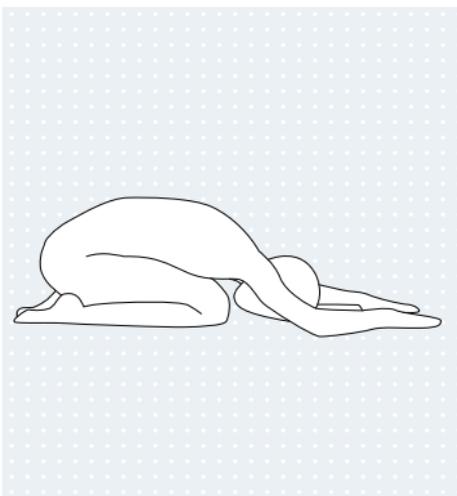
Exercise 3: Strengthening your abdominal muscles

Lie on your back and place your legs on a chair or stool with your knees at a right angle. Rest your arms on the floor to the sides of your body. Breathe in, drawing in your navel and pressing your lower back to the floor. Now breathe out and lift your head and rib cage so that your shoulder blades are off the floor and your arms are lifted. Breathe in and hold this position for a few seconds. Then, while breathing out, roll your upper body down, vertebra by vertebra.



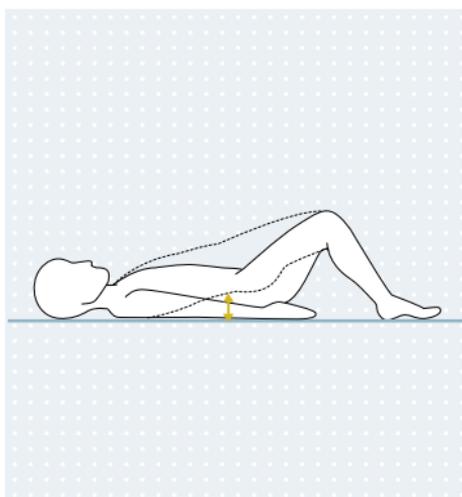
Exercise 4: Relaxing and stretching your back muscles

Sit on a stool with your knees slightly apart. Now draw your navel in, curving your back and slowly bending forward until your forehead touches your knees. Now bring your arms forwards, placing them lightly on your feet, and feel the stretch. Breathe in and out deeply six times. Finally, roll your upper body up, vertebra by vertebra, until you are sitting upright.



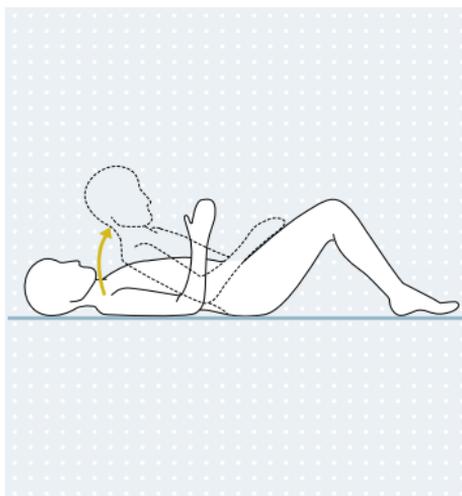
Exercise 5: Relaxing and stretching your back muscles

Kneel down and sit on your heels with your knees slightly apart. Now draw your navel in, lean and bend forwards slowly until your forehead touches the mat. Now bring your arms forwards and feel the stretch. Breathe in and out deeply six times. Finally, roll your upper body up, vertebra by vertebra, until you are in an upright sitting position.



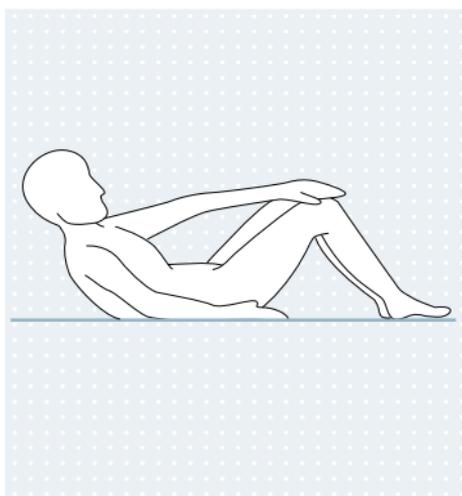
Exercise 6: Strengthening your muscles

Lie on your back and put your feet flat on the floor, shoulder-width apart, bending your knees as you do so. Now slowly raise your hips so your back is lifted away from the floor. Tighten your abdominal and gluteal muscles so that your back is straight. Hold this position for 15 seconds. Repeat the exercise three times.



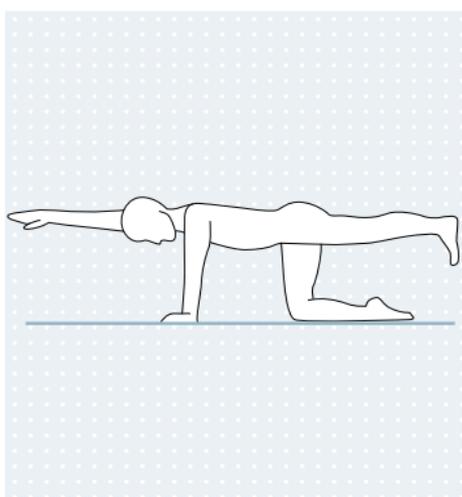
Exercise 7: Strengthening your straight abdominal muscles

For this exercise, lie on your back again. Bend your knees and place both feet flat on the floor. Gently raise your head and shoulders. Now press your hands against your thighs and maintain this position for 15 seconds. Try to press your navel into the floor. Repeat this exercise three times.



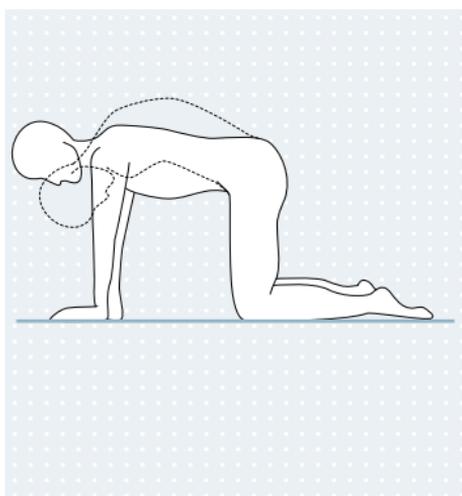
Exercise 8: Strengthening your transverse abdominal muscles

Lying on your back, raise your knees and put your feet flat on the floor. Lift your head and shoulders. Touch your right knee with your left hand. Hold this position for 10 seconds. Now relax and touch your left knee with your right hand. Again, hold this position for 10 seconds. Repeat the exercise three times.



Exercise 9: Strengthening your back and gluteal muscles

Get down on all fours. Extend your left leg out behind you, flexing your toes as you do so. Now raise and extend your right arm forward. Hold your arm, head, and leg parallel to the floor with your back straight. Hold this position for 10 seconds and then repeat the exercise with your right leg and left arm. Extend your right leg behind you and lift your left arm. Repeat the exercise three times.



Exercise 10: Flexing your spine and stretching the back muscles

Get down on all fours. Put your head on your chest and arch your back like a cat. Hold this position for 5 to 10 seconds. Raise your head again and hold it as an extension of the spine. Now press your spine down so that you have a hollow back. Once again, hold this position for 5 to 10 seconds. Repeat this exercise three times.

**Please contact us if you have any
further questions or would like more information.**

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