

Lumbo TriStep

Three Steps to More Mobility



Quality for life

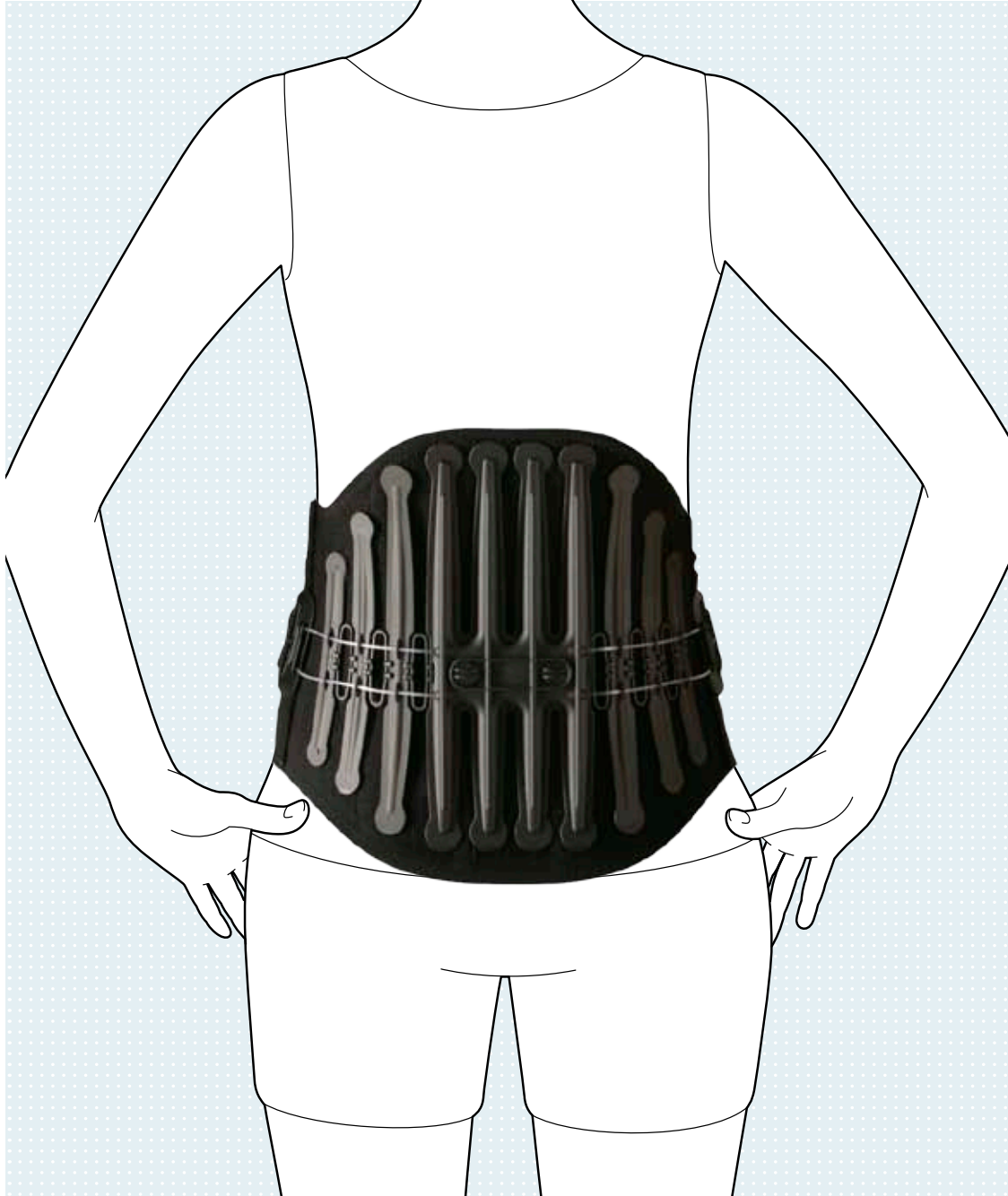
3 Phases for the Rehabilitation Process

Lumbo TriStep is a bridging orthosis with a mobilisation function. Its modular design adapts to three therapy levels, and enables the systematic rehabilitation of the lumbar spine. As the degree of support is reduced with each step of treatment, the patient's mobility is systematically increased. The aim of the Lumbo TriStep is to restore muscular balance in the lumbar spine.

Indications

The staged, targeted mobilization of patients is indicated, among other situations, in cases of severe to very severe pain as well as after a stabilizing surgery. The Lumbo TriStep orthosis is indicated in cases of:

- Post-operative stabilization of the lumbar spine (e.g. spondylodesis)
- Post-operative lordosis correction of the lumbar spine (e.g. after intervertebral disk surgery)
- Facet syndrome
- Lumbar vertebral canal stenosis
- Symptomatic stenosis of the lumbar intervertebral foramina
- Degenerative instability
- Spondylolysis/spondylolisthesis
- Prolapse of an intervertebral disk
- Follow-up treatment of vertebral body fractures of the lower lumbar spine L4/L5



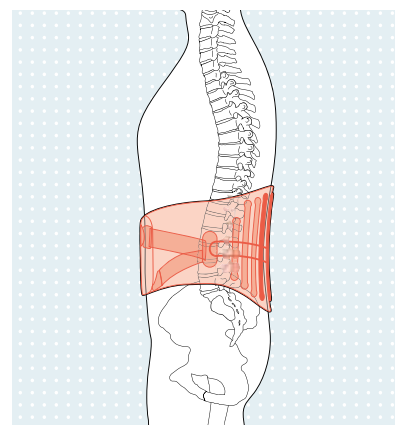
Effects

Step 1

Therapy goal

Protection and stabilization of surgically treated structures by stabilizing the lumbar spine and reducing lordosis.

During the phase of acute pain, it is of decisive importance to secure and stabilize the affected structures of the lumbar spine. By supporting the affected area, the Lumbo TriStep limits movement and creates a lordosis-reduced posture.

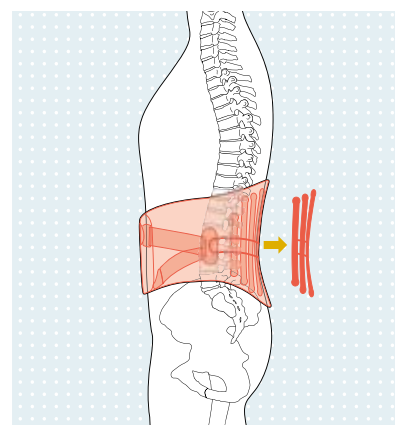


Step 2

Therapy goal

Stabilization of the lumbar spine and increased muscle involvement.

In this stage of therapy the Lumbo TriStep is adapted to the patient's improved condition. The bridging element is removed so that lordosis of the lumbar spine can be almost completely restored. At the same time the patient's freedom of movement is increased, which further stimulates natural muscle function.

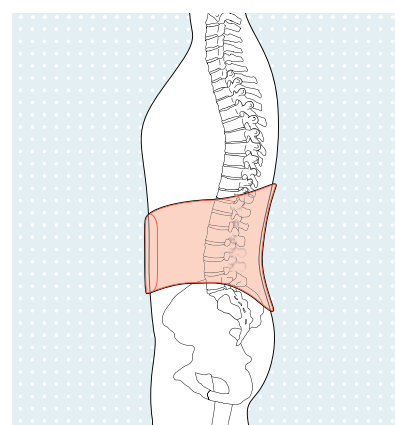


Step 3

Therapy goal

Muscular support as well as stabilization and integration of the lumbar spine.

With increasing muscle strength and activity the support element is now removed. The orthosis compresses and supports the muscles in the lumbar area. In this stage of therapy, a pad can also be used. The massaging effect of the pad improves blood circulation and stimulates muscle function.



Therapeutic Examples

The following examples show how the Lumbo TriStep can be applied to support the rehabilitation process. The surgical and non-surgical procedures described here, as well as follow-up treatment, are used as examples only and can vary from clinic to clinic.

Example 1:

Segmental fusions

Week 1 to 6

Post-operative mobilization:

- The Lumbo TriStep is applied while the patient is lying down.
- Physiotherapy plan with respiratory exercises, pneumonia and thrombosis prophylaxis.
- First mobilization on the second day at the bedside with isometric, muscular protection.
- From the third day, after removal of the Redon's drainage, unloaded sitting at an inclination of 45 degrees and support onto the scapulae can take place with the physiotherapist. Unloaded sitting should be limited to 12 hours a week.

Week 7 to 11

- After isometric muscle exercises during the first 6 weeks, the affected structures will be protected to such an extent that the Lumbo TriStep can be adapted to the enhanced, muscular protection and coordination.
- For continuing mobilization, reduction of the Lumbo TriStep to the second stage of stabilization.
- This decision must always be made by the surgeon and the treating physician.
- From the 7th week, physical therapy such as cryo- and thermotherapy and/or light massages can take place.

From week 12

- Complete reduction of the Lumbo TriStep after consultation with the treating physician and the therapist.
- Protection of increasing mobilization with the Lumbo TriStep.
- Isometric muscle tension exercises (especially for changing position)
- The Lumbo TriStep compresses and supports the muscles.

The surgeon, the treating physician and the physiotherapist must decide which degree of stabilization of the Lumbo TriStep is needed at which point in time.

Example 2:

Intervertebral disk surgery, surgery after vertebral canal stenosis

Week 1 to 3

- Isometric muscle tension exercises for changing position and while standing.

Week 4 to 6

- Isometric muscle tension exercises for changing position and while standing.
- It is not recommended that loads of more than 10 kg are lifted (physician's decision).

From week 7

- Mobilization can vary depending on the need and progression.
- With increasing loading, supporting elements of the Lumbo TriStep can be added again to protect the structures.



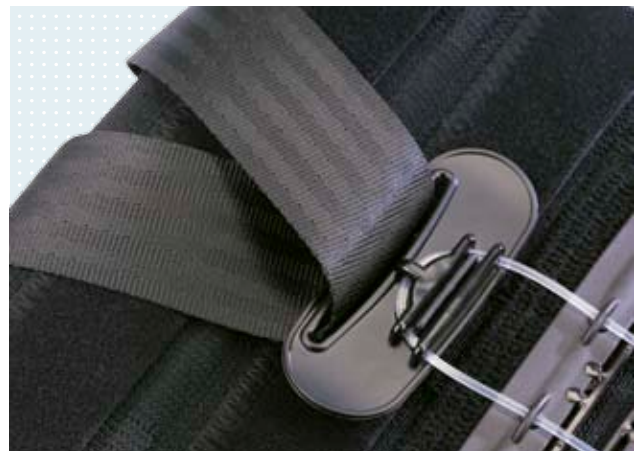
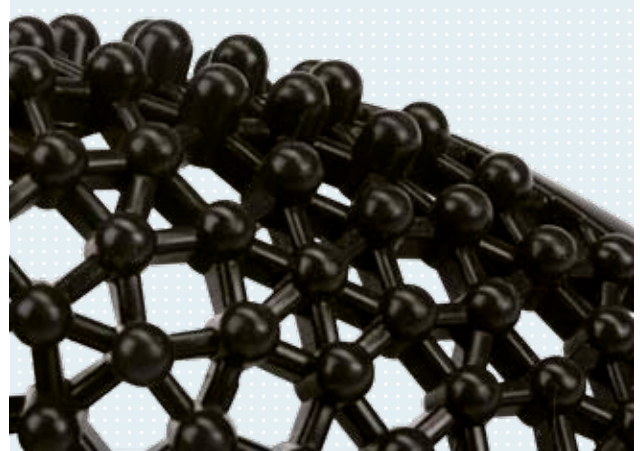
Features

With the Lumbo TriStep, functionality goes hand in hand with comfort.

The stabilization design, with a new kind of stay, is lightweight, stable and flexible. The individual elements create autoadaptive support, offering more resistance the more pressure is placed on them. Another new feature: The orthosis provides optimal compression thanks to insertable side components. During the last stage of therapy, a pad can be used that stimulates blood circulation as well as muscle function.

The particularly lightweight and slim design offers real comfort. Pocket grips, which are integrated into the abdominal closure, make the orthosis simple to apply. Adaptation and reduction of the Lumbo TriStep is made easily and quickly for each stage of therapy.

- Staged lumbar spine orthosis
- Bridging element in step 1
- Autoadaptive support stays (step 2)
- Particularly lightweight and slim design
- Quick removal and attachment of support elements without tools



Features and Advantages

Autoadaptive stay design with bridging and support elements

- The new stay design is extremely stable and at the same time lightweight and flexible. The individual elements are autoadaptive to better support the function of the body.



Side elements attached with hook and loop closures

- Side elements of different widths, which are attached with hook and loop closures, allow the circumference and amount of compression of the orthosis to be individually adapted.



2-zone fabric

- The 2-zone fabric of the Lumbo TriStep provides increased compression in the waist area.



Pad

- The pad can be used in the third stage of therapy. The massaging effect of the pad improves blood circulation and stimulates muscle function.



Pocket grips

- Pocket grips are integrated into the abdominal closure and make the orthosis easy and comfortable to apply.



Soft, flexible strap tensioners and strap holders

- The strap tensioners and strap holders attached to the abdominal closure are made of soft, flexible plastic and provide real comfort.
- Two strap tensioners are used to evenly tighten the bridging and support elements. A hook and loop closure easily attaches them to the abdominal closure.



Reinforced abdominal closure

- A reinforcement element is integrated into the abdominal closure to increase the compression on the abdomen.



Belt

Perlon cord

**Support
element**

**Bridging
element**

**Side elements
attached with hook
and loop closures**

**Mounting
adapter**



Adapting the Orthosis

Step 1

Structure of the Lumbo TriStep

Lumbar spine orthosis + support element + bridging element

Adaptation:

- Adaptation of circumference and compression by means of side elements that attach by hook and loop closure
- Remove the unneeded side elements (equally wide) on both sides (fig. 1).
- Reattach the abdominal closure parts.
- The red line serves as a guide.
- Length adjustment of the strap is made by means of strap tensioner (fig. 2)



Step 2

Structure of the Lumbo TriStep

Lumbar spine orthosis + support element

Adaptation:

- Release the mounting adapter (fig. 3) and remove the bridging element (fig. 4)



Step 3

Structure of the Lumbo TriStep

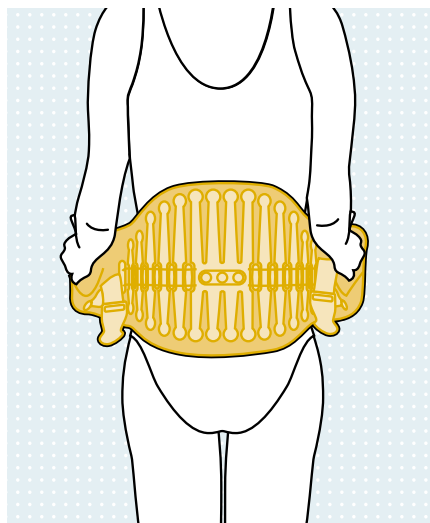
Lumbar spine orthosis + optional pad

Adaptation:

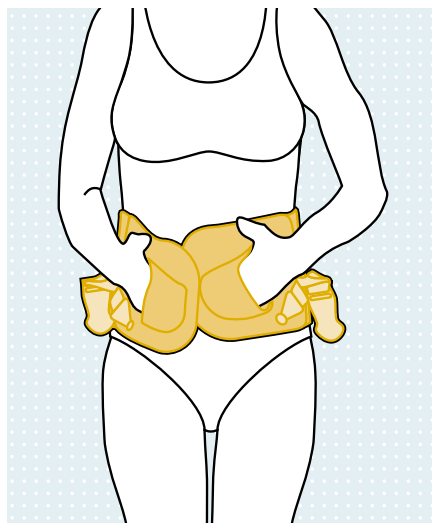
- strap holders, which are attached to the abdominal closure parts with clip rivets (fig. 5).
- Remove the support element including strap from the fabric (fig. 6).
- If desired, connect the pad to the intended area.



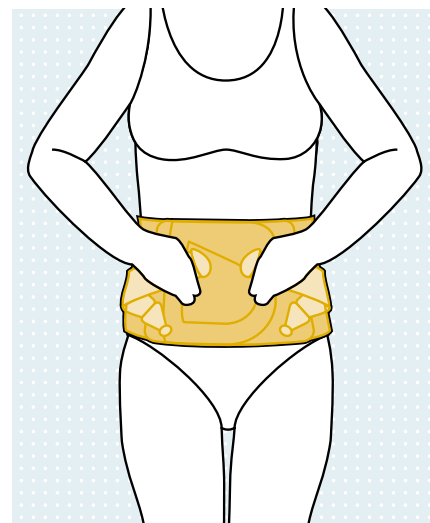
Applying the Orthosis



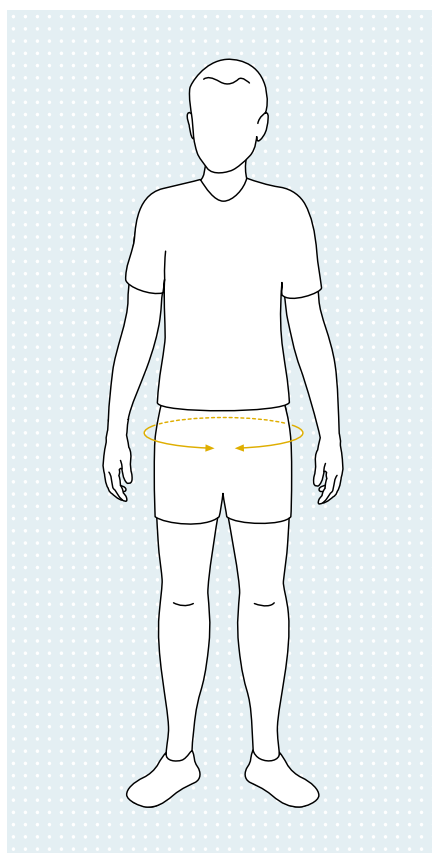
Apply the Lumbo TriStep such that the support element is positioned over the entire width of the back. The red line on the inner side of the orthosis must be down.



To close the Lumbo TriStep, put your fingers into the pockets of the abdominal closure. Pull the Lumbo TriStep with equal force on both sides to the front and pull the right part of the abdominal closure over and onto the left part.



Apply equal tension to the support elements on both sides using the strap tensioners. Attach the strap tensioners to the upper right part of the abdominal closure.



Size selection is based on pelvic circumference as follows:

Order no.	Pelvic circumference
50R30=S	65 – 80 cm
50R30=M	80 – 100 cm
50R30=L	100 – 125 cm

