

Spinal Bracing

Orthotic management of spinal disorders dates back at least to the Middle Ages. Some of the concepts underlying those primitive devices, notably three-point forces, remain valid today. Fabrication materials have progressed from metal and leather to light weight thermoplastics allowing many new designs and a new level of comfort for the patient.

Spinal bracing utilizes these primary objectives:

- Controlling back pain by limiting motion and unloading discs, vertebrae and other spinal structures by compressing the abdomen.
- Stabilizing weak or injured structures by immobilizing the spine.
- Providing three-point force systems to provide correction or prevent progression of a deformity.

The segment of the body that is being controlled generally classifies spinal bracing terminology. Sacroiliac (SIO), lumbosacral (LSO), thoracolumbosacral (TLSO), cervicothoracolumbosacral (CTLSO), cervical (CO) and cervicothoracic (CTO) orthoses. Control is described in terms of spinal flexion, extension, rotation and lateral bending.

Spinal orthoses are categorized as **flexible, rigid or semi-rigid**.

Flexible orthoses or corsets are prescribed for relief of [low back pain](#) associated with degenerative disc disorders, trauma, or postural deformities. Corsets are typically made of cotton and nylon materials. Corsets are used to de-weight spinal structures by increasing abdominal compression. Rigid stays and inserts can be added to restrict motion and act as a postural reminder. Most corsets are pre-fabricated and custom fit and modified to the patient's specific needs.

Rigid orthoses are commonly custom fabricated and provide the most support to the area being treated. A body jacket or TLSO controls motion in all planes. Depending on the goals of the TLSO, design can be modified accordingly. A two piece front and back design is commonly used post operatively for ease of application while a front or back opening single piece design is commonly utilized when treating [scoliosis](#). Velcro™ straps are most commonly used to fasten the closure on all orthoses today.

When indicated, orthotic management of the spine can be very successful. When orthotic care is needed, it is important that the health care professional providing these services is properly credentialed. An ABC certified orthotist has the highest minimum credentials in this specialized field. An ABC certified practitioner will use the prefix (CO) certified orthotist or (CPO) certified prosthetist/orthotist next to their name.



LSO Corset



Chairback Orthosis



Knight Taylor Orthosis



Cash Extension Orthosis



Jewett Extension Orthosis Spika



TLSO Body Jacket



TLSO Body Jacket



LSO With Hip