



# TLSO

## ▶ What is the Surestep TLSO?

The Surestep TLSO is a flexible, dynamic solution that works through compression to support the trunk. Circumferential compression helps maintain and regulate intracavitary pressures to improve posture, sensory input, motor skills, gait, speech, and breathing.

## ▶ How is it different?

Many other TLSOs either only provide compression (garments) or are made of thicker, more rigid plastic.



	Compression Garment	Rigid TLSO	Surestep TLSO
Circumferential Compression	Yes	No	Yes
Alignment Improvement	No	Yes	Yes
Sensory Input	Yes	No	Yes
Postural Control Improvement	No	No	Yes
Breathing Modifications	No	No	Yes
Control maintained with 3-point pressure systems	No	Yes	No

## ▶ What are the indications?

The Surestep TLSO is ideal for patients with:

- Hypotonia or hypertonia
- Poor trunk/posture control
- Neuromuscular scoliosis

It can be worn in a stander or seating system. It can also be combined with the Dynamic Cervical Orthosis (DCO) for those patient with poor head control.

It is appropriate for individuals across the gross motor skill spectrum:

- Sitting: Use the TLSO to free hands to play with toys, work on feeding, speech, and breathing.
- Walking: Use the TLSO to improve posture, symmetry, arm swing, energy expenditure, speech, and breathing.

## ▶ What modifications are available?

The Surestep TLSO is custom fabricated with several available modifications:

**Openings** of the TLSO can either be:

- Anterior
- Posterior (*ideally paired with the abdominal cutout and/or anterior gill modification*)

**Breathing** modifications include:

- Abdominal Cutout (*with or without a Gusset*) allow for diaphragmatic breathing. The gusset helps maintain compression on the abdomen. This cutout typically encompasses a g-tube, which allows for easier access.
- Lateral Gill Modification allows lower rib lateral movement. This allows the ribs and lungs to expand for increased air intake.
- Anterior Gill Modifications allows for anterior/superior chest translation during breathing.

**Accommodations** can also be made for Baclophen pumps and G-tubes.



# Breathing and Postural Control are Connected

It's important to take breathing into account whenever providing a TLSO. Patterns of breathing include diaphragmatic, lower lateral rib flare, and anterior/superior upper chest rise. It is common for patients with postural deficits and/or neuromuscular scoliosis to also have breathing deficits. Some patients may be primarily belly breathers, while others may be primarily upper chest breathers. Modifications on TLSOs not only allow a patient to breathe in their primary pattern but can also help enhance the breathing and/or postural work during therapy.