

Trunk call - aligning the upper body

In seating we spend much of our time concentrating on the pelvis and its stabilisation. This is important, as the first stage of seating, since the pelvis is what we sit on. However, getting the trunk right is equally important, since therein lies our core physiological functions of breathing, digestion, cardiovascular activities, bladder control, etc, on the one hand, and the management of further extremities, on the other – i.e. the arms and head. Without the latter being controlled, everyday activities are compromised.

To control the trunk, we have posterior supports at the pelvis, and along the spine with a back support. Anteriorly, we have chest and shoulder supports to help keep us from tipping forwards. The area I'd like to cover in more detail in this article is lateral supports. Lateral support at the pelvis is useful in helping to stabilise the pelvis, but where we can have the most effect is around the thorax, where we have ribs that we can support against, and also use as levers to straighten the spine where it has a scoliosis to be corrected.

To manage a scoliosis we should look to find the apex of the curve along the vertebrae. In the thoracic area, each vertebra will have a rib coming off it: from the apex of the curve, find the rib that attaches to it and follow it round to where it ends up laterally. In a normal rib cage this will be somewhat lower down the body than the relevant vertebra.

To use a lateral support to correct the curvature, make sure the support is positioned to push along the rib in the direction of the apex vertebra. Thus the lateral pads need to be mounted in a way that allows them to be rotated to exert their forces in the correct direction – for example, the Stealth Full Surface Contact option does this admirably (Figures 1 and 2). If the pad is vertical, it will push the rib in the wrong direction, and make the scoliosis worse. As a further note, if managing a scoliosis, then it is unlikely that the lateral support pads will be at the same height, since the points of control will need to be at different heights on either side of the body.



Figure 1. Displaced relationship of lateral rib position to its vertebra of attachment in a scoliotic spine. (Source: Wikipedia)

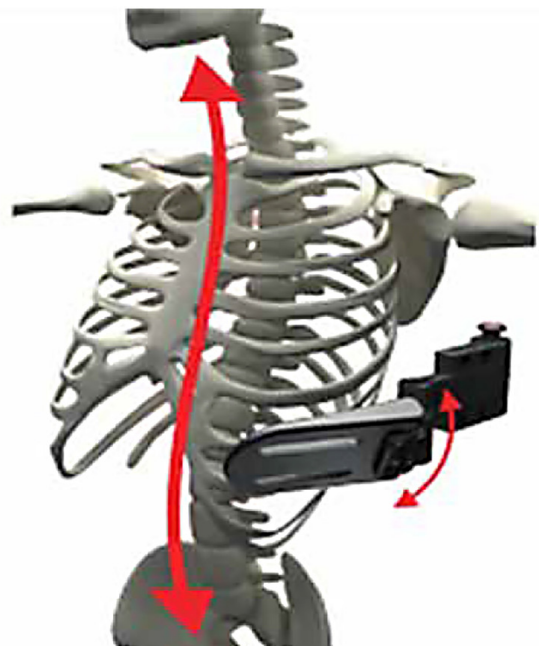


Figure 2. Rotation of lateral support needed to apply force along the rib towards apex of curvature