

3 Steps to “Stay in Your Spine” This Winter

By Margot McKinnon

We have a saying at BODY HARMONICS that sums up how to help someone feel strong, centered, and ready for almost any activity or sport: “staying in your spine”. In the Fall/Winter season this becomes paramount as people strike out to participate in sports and leisure activities that require balance, coordination, agility, speed, endurance, not to mention strength and flexibility. The alignment and adaptability of the human spine plays a critical role in how we find and keep our balance, how we adapt to changing environments (think snow and ice), and how we perceive ourselves in space, so we can recover if we slip or fall.

In lay terms, “to stay in your spine” means staying upright and strong through the torso, hips and shoulders. In clinical terms, when we examine the relationship of one vertebra to the next, it refers to the appropriate amount of stiffness to keep the spinal segments stable and supple at the same time. It also means assessing the spine in terms of how the different regions move in relation to each other. From a practical perspective in a studio or gym environment, “staying in your spine” refers to how a trainer can help clients create optimal stability and mobility along the entire spine, so they can perform the way they want and reduce their risk of injury. When you distill “staying in your spine” down to how it feels, people report sensations of ease and buoyancy, natural uprightness and power.

Dividing the spine by region

From top to bottom the spine is divided by region into cervical, thoracic, lumbar, and sacral/coccyx. The cervical spine has seven vertebrae. C1 and C2 (or atlas and axis), make up the upper portion, while C3 to C7 make up the lower portion. The thoracic spine is comprised of twelve vertebrae that span the entire length of the rib cage. There are five vertebrae in the lumbar region, and the sacrum/coccyx are two separate clusters of fused vertebrae. The sacrum is wedged between the two pelvic halves and the coccyx forms the distal end of the entire spinal column. From the side view, the adjoining curves create a shallow S-like formation running from the skull to the pelvis.

Step 1. Training the cervical spine for better balance

Because the cervical spine holds the skull, a significant amount of stability is required here. The exception can be the top two vertebrae—C1 and C2. Unique in their design and functionality, C1 and C2 often need to be mobilized while the other segments need to be stabilized.

It is typical for people to be excessively mobile in the cervical spine, which in turn can lead to a forward head carriage. An excessive forward curve in either the upper or lower portions of the cervical spine may contribute to poor mechanics and poor support. This becomes problematic because one of our main balance centers resides in the cervical spine, within the suboccipital muscles that attach from the skull to C1 and C2.

Simply put, when a person lives with a forward head carriage, the entire balance system is thrown off, because the suboccipital muscles are not in the optimal position to carry the head on the spine. That does not bode well for the fine adjustments needed on the slopes or ice, and it can spell disaster for the person out for a winter stroll who hits a patch of black ice and cannot recover.

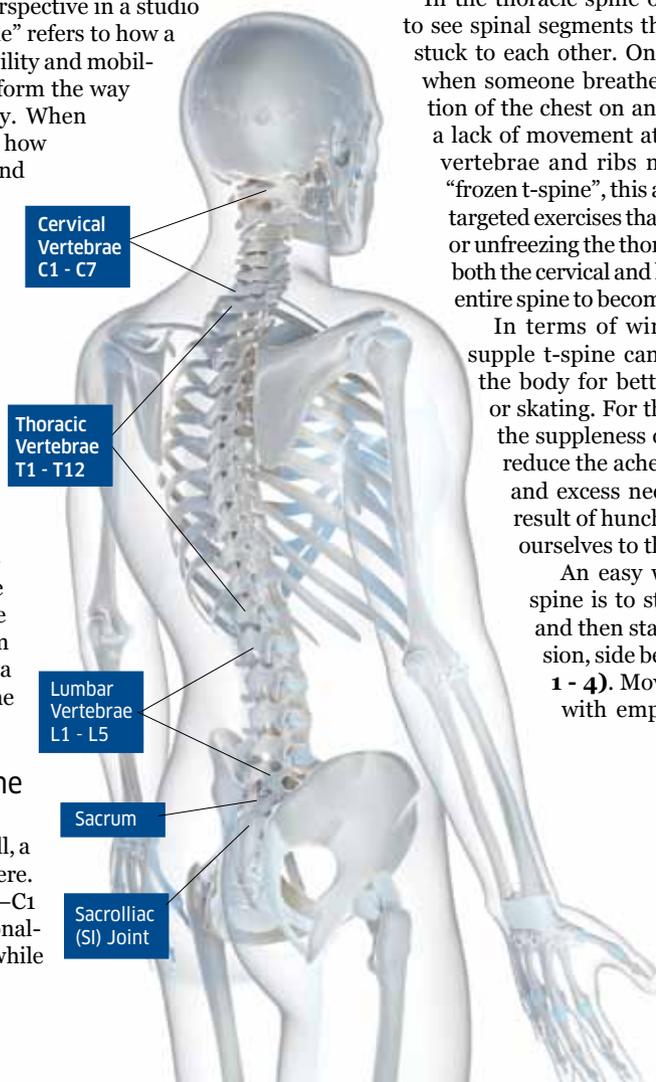
Two simple ways to mobilize C1 and C2 while stabilizing the rest of the cervical spine is to practice tiny head nods while lying supine. Then, look up and down and side to side using only your eyes, without moving your head.

Step 2. Unfreezing the thoracic spine

In the thoracic spine or t-spine, it is very common to see spinal segments that appear frozen and almost stuck to each other. One easy way to observe this is when someone breathes: if you see an upward motion of the chest on an inhalation, it often indicates a lack of movement at the back where the thoracic vertebrae and ribs meet. Otherwise known as a “frozen t-spine”, this area benefits enormously from targeted exercises that focus on mobility. Mobilizing or unfreezing the thoracic spine helps take stress off both the cervical and lumbar regions, and allows the entire spine to become more adaptive and resilient.

In terms of winter sports and activities, a supple t-spine can help create more torque in the body for better performance while skiing or skating. For those bracing against the cold, the suppleness of the thoracic spine can help reduce the ache between the shoulder blades and excess neck and shoulder tension as a result of hunching over when trying to close ourselves to the cold.

An easy way to mobilize the thoracic spine is to stand with hands on the head and then start moving into flexion, extension, side bending, and rotation (**images 1 - 4**). Movements should be controlled with emphasis on articulation of the



1. Flexion



2. Extension



3. Side Bending



4. Rotation



5. Side Plank



6. Quadruped Arm/Leg Reach



7. Neutral Bridge



vertebrae. The net result should be that the entire torso appears fuller and the shoulders settle down and back without effort. When taking a breath, the torso should expand in all directions without an upward heaving of the chest.

Step 3. Creating support in the lumbar spine

In the lumbar region, or lower back, stability is often lacking. Over time, this can result in all kinds of mechanical low back pain, disc issues, or other spinal conditions that will need to be managed over a lifetime. In the fall and winter with the uneven and slippery surfaces we encounter, stability in the lumbar region helps protect the lower back from becoming vulnerable. During winter sports like skiing, skating, and snow boarding, or even during a simple act of walking on snow and ice, we face unexpected jostles and minute adjustments in the spine as we navigate various terrain. With adequate lumbar stability, you do not even notice these adjustments. However, if your lower back is unstable, even the slightest perturbation can lead to pain.

Core training is a common approach for improving the lower back stability, but care must be taken. Unknowingly, the use of certain exercises renders hips immobile and this stress ends up destabilizing the lumbar region all over again. Training people with abdominal crunches comes to mind: while this exercise produces a six-pack and strength in the rectus abdominis, done poorly, it can destabilize the lumbar spine and refreeze the thoracic region. With a balanced approach that includes stabilization exercises for all the core systems (particularly the lateral and posterior), the lumbar spine can be effectively stabilized, while maintaining the appropriate amount of freedom in the hips and thoracic spine.

Some effective exercises include, but are not limited to, Side Plank, Quadruped Arm/Leg Reach (a.k.a Bird Dog), and Neutral Bridge (images 5 - 7).

Systematizing the training approach for better results

While it is important to understand the needs for each region of the spine, it is equally important to observe, assess, and train these regions in relation to each other to allow the entire system work as a whole. In a highly effective training session each region is addressed, while the overall stability and mobility continuum in the spine improves. It will make us feel strong, centered, and overall good both indoors and out as we gear up for the winter, and it is what “staying in your spine” is all about!

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