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Sternum-Specific: The Hidden Key

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The sternum may be the hidden key that frustrates many chiropractors from assisting their patients with rib and vertebral subluxations and respiratory ailments.

You remember the sternum from anatomy class, that bone in front of the chest that is comprised of the manubrium, the body and the xiphoid. Functionally attached to the manubrium is the clavicle and the cartilage of the first rib. Between the manubrium and the body is the sternal angle. At the angle is a notch where the second rib attaches. The body has cartilage attachments for the second to the seventh ribs.

How It Moves

The sternum is moved up and down by being part of a function, but not initiating the function. Its movement relies upon the action of muscles, ligaments, vertebrae, viscera and lungs. Therefore, it may and does affect the ribs, which in turn may affect the vertebra, which in turn may affect posture and/or visceral components, which in turn will ... well, you get the idea. However, if it is not functioning properly in concert with the other components of respiration, it may be a subtle yet powerful hidden factor in your care for the patient.

How Can the Sternum Subluxate?

The sternum can subluxate in the combinations that it functions, or functional combinations and nonfunctional combinations (trauma). A nonfunctional combination may be the sternum being struck a blow or the sternum striking an object (steering wheel) or twisted in an unguarded movement without being touched. Fracture must be part of the differential diagnosis/analysis and treated as such. However, if the sternum was struck or struck something on the bias, a subluxation or fixation is likely. A good history is definitely needed.

The sternum can only subluxate or fixate in a rotational movement about the vertical axis (positive and negative theta z).

How to Motion Palpate the Sternum

Check the ribs for subluxation or fixation, the vertebrae and the musculature. The sternum absolutely needs to be evaluated by checking for "springiness" in both vertical rotational axial directions and all three parts: manubrium, body and xiphoid. First palpate where the ribs attach to the sternum, then palpate were the sternum attaches to the ribs. I use a slight continuing pressure while rocking my fingertip back and forth from the rib to the sternum and back again several times.

Tightness and/or pain is a sign of subluxation/fixation. This procedure tends to isolate which side of the articulation that needs to be adjusted by both your own input and the patient's report (pain, tenderness, saying "ouch!" or whatever). Be aware that both sides may need to be adjusted.

Now that I'm Aware of the "Hidden Key," How Do I Adjust It?

Sternal adjusting may be very painful to the patient, hence the chiropractor's attention must be focused and controlled. I believe that you should take a few seconds and reflect upon the adjustive technique or techniques that you use. Remember what they instruct on rib adjustment, then use a little less force. In my example above the angled force was applied to the right side of the sternum. The left side is the side of contact for the adjustment to reverse the action of the applied angled force.

I personally use my pisiform of the contact hand and the stabilizing hand braces the contact by a thumb to index finger web wrap around the wrist of the contact hand a la "hole-in-one." Obviously the adjustive force (impulse) applied is minimal compared to that of the hole-in-one. It may take more than one adjustment to the sternum depending on the severity and chronicity of the subluxation.

Summary: Some Clinical Implications

You must consider the sternum in any respiratory clinical aspect from emphysema to pneumothorax, rib fixations (either anterior or posterior), thoracic pain, visceral malfunction, scoliosis, posture, etc. The sternum may be the hidden key that frustrates many chiropractors from assisting their patients in holding the adjustments.

Good luck in your new knowledge!

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