4. Evans P. The T4 syndrome: some basic science aspects. *Physiotherapy*. 1997;83:186-189.
5. DeFranca GG, Levine LJ. The T4 syndrome. *JMPT*. 1995;18:34-37.

6. Theisler CW. Post-traumatic thoracic outlet compression syndrome (TOS). *Am J Chiro Med.* 1990;3(4):141-151.

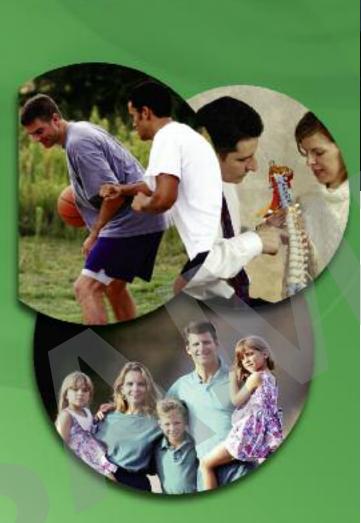
7. Liebenson CS. Thoracic outlet syndrome: diagnosis and conservative management. *JMPT*. 1988;11(6):493-499.

8. Harrison D, Caillet R, Betz J et al. A non-randomized clinical control trial of Harrison mirror image methods for correcting trunk list (lateral translations of the thoracic cage) in patients with chronic low back pain. Eur Spine J. 2005;14(2):155-162.

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Mid-back & Ribs



Bringing out the **Best** in you

Mid-back & Ribs



important?

structures. It's important to keep this "cage" in alignment and balanced. A misaligned rib cage can put unnatural pressure on its vital inhabitants affecting their proper functioning.

Mid-back & Ribs

What Is Chiropractic?

Chiropractic is a system of healthcare that releases a serious form of stress from your body: the subluxation.

Put your hands alongside your chest and sides and you can easily

feel your boney ribs. They wrap around your body from your front

to the back. In the front they attach to your breastbone or sternum

Ancient anatomists thought your ribs looked like the bars of a cage

there: your heart, lungs, major blood vessels, diaphragm and other

What is in that cage? Some very important organs are protected

and in the back they attach to your spinal bones or vertebrae.

so they called them, with their attachments, your "rib cage."

Subluxations are areas of structural weakness that irritate nerves; distort posture; weaken muscles, ligaments, cartilage and discs and cause spinal degeneration. Subluxations cause lack of energy and vitality, chronic fatigue and premature aging. But most seriously, an irritated nervous system causes dis-ease, or lack of health and wholeness, that results in a weakening of body harmony and lowered resistance to disease. With a subluxation in your body you may not be expressing your full potential-physically and mentally. This is especially true if you have a subluxation in your mid back/rib area.

Neck, Mid-back, Low Back, Sacrum And Coccyx

Your spine is made up of twenty-four vertebrae or spinal bones: seven in your neck (cervical vertebrae), twelve in your mid-back (thoracic vertebrae) and five in your lower back (lumbar vertebrae). At the bottom of your spine, under the 5th lumbar vertebra, sits the sacrum, a large triangular bone made up of five vertebrae. Under your sacrum is a tiny slip of 3 or 4 fused bones called the coccyx which is what's left of the human tailbone. All these spinal segments have curves.

Your Ribs

Attached to each side of your 12 thoracic vertebrae are ribs–24 ribs in all. On rare occasions a person may have 10 or 11 pair or even an extra set of ribs (usually seen in the lower neck–called "cervical ribs").

Nerves

A special group of nerves-the sympathetic nerves-exit between the thoracic vertebrae. These nerves help regulate your body's "automatic" functions: heart rate, breathing, digestion, body temperature, blood pressure, digestion and blood supply to your heart, lungs, kidneys, intestines, stomach, bowels, sexual organs, liver, spleen, pancreas and glands! These sympathetic nerves form a nerve chain (the sympathetic chain) that travels to your brain, ears, eyes and cranial nerves. Uninterrupted communication between your sympathetic nerves and your internal organs is essential for your resistance to disease, body function and overall health.¹⁻³

Thoracic or Mid-back Subluxations

Thoracic subluxations can affect your heart, lungs and other organs in your chest cavity, preventing the proper draining of lymphatic fluids from your head, brain, throat, chest, abdomen and legs. Subluxations can also

Thoracic subluxations can affect your internal organs, senses and even brain function! restrict your breathing, and can also affect your sympathetic nerves which influence the function of your internal organs, senses and brain itself!

Chiropractic has become the

largest drugless healthcare

profession in the world!

Two types of thoracic subluxations

have a special name: Thoracic Outlet Syndrome and T4 Syndrome.⁴⁻⁷

Thoracic Outlet Syndrome (TOS) affects your brachial plexus, a collection of nerves that go from your spine to your shoulders, arms and hands. TOS is characterized by pain in the head, neck or upper extremities, paresthesia (strange nerve pains) and other symptoms.

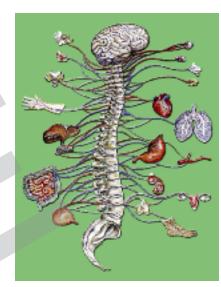
T4 Syndrome is caused by a subluxation of the 4th thoracic vertebrae and may include heaviness and swelling in one or both upper extremities; "creepy crawly" feelings of the shoulders, arms or hands; feelings of a tight band around the upper arm and feelings of heat or cold in one or both hands.

Because the sympathetic system can be involved, patients with these syndromes may feel heart-like pain in the chest and left upper extremity and think they are having a heart attack. These conditions can also be confused with Carpal Tunnel Syndrome.

Are You Subluxated?

When a thoracic vertebra becomes subluxated, the ribs and the sternum (breastbone) are affected. Some chiropractors adjust the ribs and sternum directly while others adjust the vertebrae so the connecting structures will then realign. Why not ask your chiropractor how he/she addresses this? In addition to ribs and sternum a thoracic (mid-back) subluxation can affect other parts of your spine. Your lower back and neck all are connected to the thoracic





Nerves that emit from your spinal cord exit between your spinal bones everywhere along the spine.

spine and depend on it for stability, balance and strength. $^{\scriptscriptstyle \rm B}$

When your chiropractor releases subluxations or spinal nerve pressure in this area the benefits can be both physically and psychologically profound. Everyone should see a chiropractor for a checkup to ensure their mid-back, ribs and the rest of their body are in proper alignment and balance.

References

1. Budgell B, Polus B. The effects of thoracic manipulation

on heart rate variability: a controlled crossover trial. *JMPT*. October 2006;29(8):603-610.

2. Iervasi G, Pingitore A, Landi P et al. Low-T3 syndrome: a strong prognostic predictor of death in patients with heart disease. *Circulation*. 2003;107:708.

3. Polkinghorn B, Colloca C. Chiropractic management of chronic chest pain utilizing mechanical force, manually assisted short-lever adjusting procedures. *JMPT*. February 2003;26(2):108-115.

Give your internal organs a healthy nerve supply with chiropractic.