OPTIMAL HEALTH UNIVERSITY

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Chiropractic May Prevent Chest Pain

Chest pain, or angina, has many causes, including cardiovascular disorders, such as hardening of the arteries (atherosclerosis) or heart attack (myocardial infarction). However, many cases of chest pain have nothing to do with the heart or arteries. For instance, misaligned vertebrae or ribs that are slightly out of place can spark chest discomfort. Fortunately, chiropractic care may alleviate this type of chest pain.

What Type of Chest Pain Can Chiropractic Correct?

Studies show that chiropractic is most helpful in easing chest pain caused by dysfunction involving the bones and muscles of the neck or upper back (the cervicothoracic region). The technical term for this type of chest pain is cervicothoracic angina pectoris, or CTA.

There are three major origins of CTA: 1) misaligned vertebrae, 2) misaligned ribs and 3) strained muscles.

When spinal bones (vertebrae) move slightly out of place, the ensuing condition is known as *vertebral subluxation*. In some cases, this malady triggers chest pain.

Ribs may also slip slightly out of position, becoming subluxated, in turn



provoking chest pain. Ribs attach in the front of the body to the "breastbone" or sternum and in the back to spinal vertebrae.

It's easy to imagine how glitches in the rib/sternum (costosternal) joint may produce chest pain. After all, that joint is located in the middle of the chest! However, findings reveal that subluxations in the rib/vertebra (costovertebral) joint in the back of the body also appear to spark chest pain.

The study refuted arguments questioning whether the rib/vertebra joint has sufficient nervous system activity to generate chest pain. The analysis concluded that the costovertebral joint "has the requisite innervation for pain production in a similar manner to other joints of the spinal column." These findings support the theory that costovertebral joint dysfunction may incite back and chest pain (*J Manipulative Physiol Ther* 2000;23).

Strain to the muscles in the chest, neck or upper back may also spawn chest pain. This is often the case in whiplash injury.

The good news is that chiropractic care addresses all three of the major causes of CTA. Using gentle and safe maneuvers called *chiropractic adjustments*, Dr. Gravesen restores motion and alignment to subluxated vertebrae and ribs. Scientific studies demonstrate that chiropractic adjustments



also quell pain emanating from muscle tension.

Can Chiropractors Identify CTA?

Yes. Doctors of chiropractic like Dr. Gravesen are trained to differentiate CTA from angina that might be due to cardiovascular disease. However, doctors of chiropractic also urge patients with chest pain to undergo both cardiovascular and chiropractic evaluations. Both types of chest pain may occur simultaneously, with one type masking the other.

One study performed at a university hospital enrolled patients referred for heart testing because of known or suspected angina pectoris. A doctor of chiropractic examined the patients and diagnosed 18 percent of them with CTA. Cardiovascular testing was normal in 80 percent of patients diagnosed with CTA, compared with 50 percent of patients not diagnosed with CTA.

"An experienced chiropractor could identify a subset of patients with angina pectoris as having cervicothoracic angina," concludes the report (*J Manipulative Physiol Ther* 2005;28:303-11).

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Research Shows Chiropractic Alleviates CTA

Scientific studies support the use of chiropractic for chest pain. For instance, researchers Bradley Polkinghorn, D.C. and Christopher Colloca, D.C. suspected that some types of chest pain might be associated with rib/sternum (costosternal) subluxations. To investigate, they studied a 49-year-old man who withstood chest pain, shortness of breath and anxiety for four months (*J. Manipulative Physiol Ther* 2003;26:108-15).

According to the report, the patient received chiropractic adjustments to the spine of the upper back, as well as the joints connecting the ribs with the sternum.

"The patient responded favorably to the intervention, obtaining prompt relief from his symptoms. Sustained chiropractic care rendered over a 14week period resulted in complete resolution of the patient's previously chronic condition, with recovery maintained at nine-month follow-up."

"Although the possibility of myocardial involvement must be considered with all patients whose symptoms include chest pain, a musculoskeletal involvement, including costosternal subluxation complex, may be the underlying cause of the symptoms in certain patients," conclude the study's authors. "When this is the case, chiropractic adjustment may provide an effective mode of treatment." (*J Manipulative Physiol Ther* 2003;26:108.)

Another study looked at 275 individuals with angina. Of these, 50 were found to have pain that initiated in the upper back or neck (CTA). After these patients underwent four weeks of chiropractic care, 75 percent of them "reported improvement of pain and of general health." (*J. Manipulative Physiol Ther* 2005;28:654.)

According to the study, "the intervention performed was manual therapy according to chiropractic standards."

"This study suggested that patients with known or suspected angina pec-

toris and a diagnosis of CTA may benefit from chiropractic manual therapy," conclude the study's authors (*J Manipulative Physiol Ther* 2005;28:654-61).

Can Chiropractic Help Prevent Other Types of Chest Pain?

What's also intriguing about the above-cited study is that pain and general health improved in 22 percent to 25 percent of patients whose angina was not associated with CTA (*J Manipulative Physiol Ther* 2005;28:654-61). Does that mean that chiropractic care may ward off the type of angina linked with cardiovascular disease?

Regular chiropractic care permits individuals to remain active and obtain the regular exercise necessary to avert heart conditions.

In addition, chiropractic offers drugfree relief, enabling patients to avoid pain-killing medications — many of which boost the risk of cardiovascular disease.

And here's another way chiropractic may ward off cardiovascular disease: by preventing high blood pressure. High blood pressure (hypertension) is often the first manifestation of heart disease.

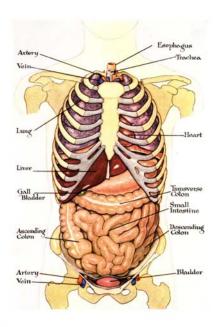
In one experiment, researchers divided 21 patients with hypertension into three groups. One group underwent chiropractic care, one group received placebo and a final group went untreated. Following care, blood pressure dropped among subjects in the chiropractic group, yet no change was evident in the other two groups (*J Manipulative Physiol Ther* 1988;11:484).

Another study evaluated 75 students with normal blood pressure. An experimental group underwent chiropractic adjustments, while a control group did not receive adjustments. Researchers recorded blood pressure prior to and immediately following treatment. Blood pressure decreased significantly in experimental participants but not in controls (*J Manipulative Physiol Ther* 1988;11:261-66).

Research also indicates that chiropractic adjustments may increase muscle strength and cause muscles to function more efficiently. Although research is lacking in this area, scientists speculate that, because the heart is a muscle, it may also benefit directly from chiropractic care. However, this hypothesis has not yet been tested with scientific studies (*JVSR* 2004;3:1-13).

Don't Ignore Chest Pain

In the case of CTA, chest pain may have a simple solution: chiropractic adjustments. However, angina may also be indicative of a severe cardio-vascular concern. If you endure chest pain, don't gamble with your health. It's vital to determine the root of your discomfort. Don't delay having a complete cardiovascular examination as well as a chiropractic evaluation.



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