

Addressing Hiatal Hernia with

Myofascial Release

by David B. Blum

Many people are afflicted with hiatal hernias, and some people don't even know they have them. These individuals have transient symptoms other than the classic symptoms of heartburn and acid reflux. They may have such symptoms as unexplained mid-back pain, lower chest pain and rib pain.

Lines of tension

To understand the issues surrounding hiatal hernias, you first need to understand the anatomy involved. The trunk is divided into two sections: the thoracic region and the lumbar-abdominal region. The main separator is a large, fibrous, dome-shaped muscle called the diaphragm. It attaches to the lower ribs and the lower thoracic spine and is the primary muscle involved in respiration.

However, to provide access from the upper to the lower body, there are openings in the diaphragm—one for the aorta, one for the vena cava and the one we are going to focus on, called the hiatus, for the esophagus. The top of the stomach sits just below the hiatus.

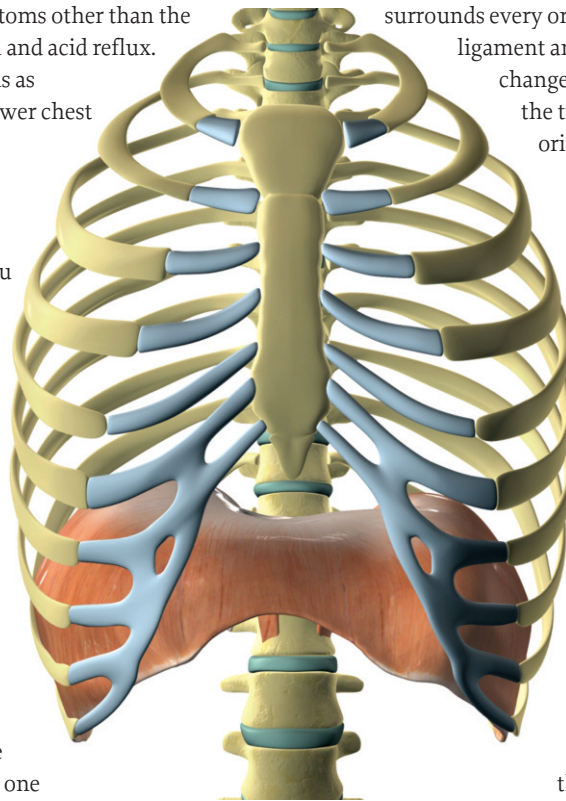
Surrounding all of this and everything else in the body is a type of tissue called fascia. This

is a connective tissue made largely of collagen and water, and it is normally very elastic. When injured, traumatized or inflamed, the fascia becomes more rigid. Since fascia surrounds every organ, nerve, muscle, bone, ligament and tendon, this can cause major changes in posture and mobility of all of the tissues, joints and organs near the original site at issue.

If this goes unchecked, lines of tension begin to spread across the body, usually in diagonal patterns. Often what we see is something as extreme as a postural change in the neck due to an injury to a leg many years before. The diaphragm, being at the center of the body, is often affected by fascial injury almost anywhere in the body.

Compromised contraction

There is a functional relationship between the diaphragm and the pelvic floor that is often not considered. When the diaphragm contracts for a breath, it pulls downward and lowers the pressure within the chest cavity, allowing the lungs to inflate. At the same time, the musculature of the pelvic floor has to pull downward to maintain a



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THE DIAPHRAGM: The diaphragm is the main separation between the thoracic and lumbar-abdominal regions of the trunk. If one does not use the diaphragm fully, it becomes more rigid and tight due to not continuously stretching out the fascia within and around the muscle.

Surgical repair causes a great deal of scar tissue and even more irritation, inflammation and trauma to the fascia.

constant pressure within the abdominal cavity. If this were to not happen, the organs within the abdomen would be compressed and damaged.

So because of this, if there is a problem with the pelvic floor musculature, such as after childbirth or with low-back issues, the diaphragm does not contract fully and the individual will need to use her accessory breathing muscles more to breathe. If one does not use the diaphragm fully, it becomes more rigid and tight due to not continuously stretching out the fascia within and around the muscle.

Now let's add to that some minor trauma or inflammation within the abdominal cavity that can cause the fascia around the organs to become stiffer and shrink. If this occurs around the stomach, the fascia can pull the stomach upward toward the diaphragm and can cause the top of the stomach to begin to migrate through the hiatus into the thoracic cavity.

Now you have what amounts to a tourniquet around the top of the stomach. This in turn will cause a slower emptying of the stomach contents into the small intestine, which then causes backflow of stomach contents up into the lower part of the esophagus. This backflow is known as acid reflux.

Since the lining of the esophagus is not the same as the stomach, this acid condition can cause damage to the esophagus. Early stages of this condition present as heartburn, and the condition will gradually progress over time if it goes untreated.

Transience

Traditional treatment would include medications to

decrease the stomach acid or surgical repair. The problem with the use of medications is they don't address the initial cause of the problem, only the symptoms. Also, reducing stomach acid will change how the digestive process occurs in the stomach and may make some foods indigestible. Surgical repair brings the stomach back down into the abdominal cavity, but causes a great deal of scar tissue and even more irritation, inflammation and trauma to the fascia, which can and often does cause recurrence of the problem.

When individuals have nonconventional or vague symptoms, such as unexplained back pain, rib pain, abdominal pain, pelvic pain, respiratory problems or trunk-flexibility issues, this problem often goes undiagnosed. It can be a transient problem where the stomach moves up and down through the hiatus but isn't fixed in place there.

Often the symptoms are worse when the client is undergoing physical or emotional stress and are lessened with rest and exercise. This makes hiatal hernia much more difficult to diagnose and is often misdiagnosed or considered to be psychosomatic.

The massage session

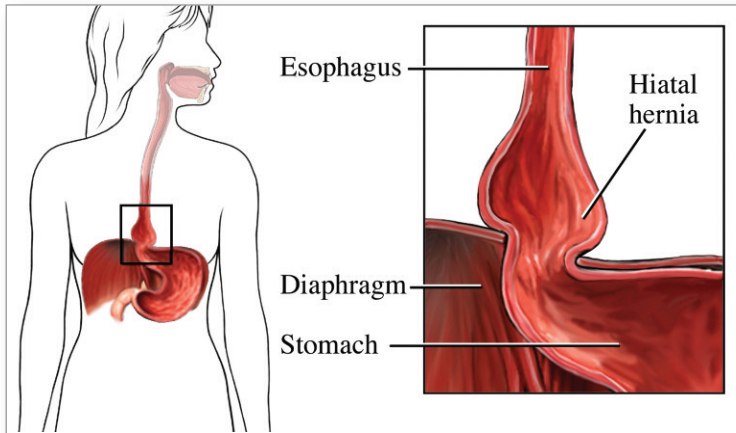
Clients with a hiatal hernia condition will present with a decreased mobility of the diaphragm on inspiration, particularly worse on the left side. There may be a decrease in lower rib mobility on inspiration as well.

If you palpate in the upper left abdomen, you will feel an abnormal firmness in the area of the stomach and diaphragm. There will most likely be trigger points palpable in the diaphragm as well as the abdominal

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obliques, rectus abdominis, quadratus lumborum and upper lumbar-lower thoracic erectors. There may be decreased trunk mobility and a postural shift with the trunk mildly laterally flexed to the left. If it has been going on for a while, there may also be additional postural issues



HIATAL HERNIA: The hiatus is an opening in the diaphragm. When nearby fascia becomes stiff or shrinks, it can pull the stomach upward toward the diaphragm and cause the top of the stomach to begin to migrate through the hiatus into the thoracic cavity.

in the upper thoracic area, scapular areas and cervical region as compensation for the mid-back changes. In extreme cases, there may even be pelvic rotation and lower extremity compensations as well.

My recommendation is to first do a thorough intake interview of the client followed by a full-body postural assessment as well as a palpatory examination of the abdominal and mid-back areas, focusing on—but not limited to—the left upper abdominal and left upper lumbar area.

Depending on what you find, you may do some functional testing of the trunk, such as side bending, trunk rotation, flexion and extension and drop-leg test, to rule in or rule out spinal complications. It is important to communicate with the client about his sensory responses to each position, movement and test that you do as you do it. This gives you a better idea of the source of the problem. Most often, the client will have a sensory issue, such as tenderness, tingling or pain, in or around the stomach area.

Myofascial release

My preferred method of treatment includes primarily myofascial release, such as that taught by John Barnes, P.T., to the diaphragm and around the stomach; visceral mobilization to physically assist the stomach to come down out of the hiatus; followed by kinesiotaping to hold the

fascial release and assist the fascia in continuing to release over time.

The tape is applied using an “I” cut and the base is placed at the anterior superior iliac spine on the left side. It is applied with tension in a diagonal line toward the stomach and anchored with no tension over the diaphragm. I often apply a myofascial taping over the diaphragm, both anterior and posterior, as well. This application places the base midline (anteriorly just below the xyphoid and posteriorly over the spine at the lower thoracic vertebrae) and applied with approximately 25-percent tension using a side-to-side jiggle going laterally and no tension on the ends.

I also teach the client or a family member in self-treatment and taping so that she can treat herself every day. (The nice thing about using kinesiotape is clients can continue to do myofascial release with the tape in place.)

I also work on the postural issues surrounding this problem to prevent recurrence as well as improve comfort. I generally have clients return in one to two weeks for a checkup and to review their home program as well as taping applications, if they are still necessary. After that, I see them on an as-needed basis.

Depending on the severity of the problem, it generally takes from two to six weeks to make a positive change; however, I have seen immediate relief in symptoms without recurrence after the first visit in a few clients.

First, assess

Take the time to do a thorough assessment of your client prior to treatment and you can be far more effective with the treatment itself. This is true for any client with any kind of complaint.

Your clients will know they have a problem but can’t always articulate what that problem is, and may not understand the physiology involved—so it is important to do your own independent assessment and not make any assumptions prior to treatment.

David B. Blum has 27 years of experience as a physical therapy assistant specializing in manual therapy and myofascial release. He has taught multiple manual therapy courses, including those in myofascial release and muscle energy techniques. Blum is on the faculty of Cortiva Institute of Massage Therapy–Tucson (www.cortiva.com) as an instructor, in addition to maintaining a private practice. 