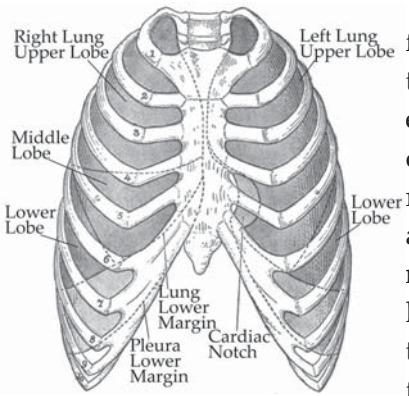
Self-Care for Sticky Lungs

The domed diaphragm divides our torso, with digestive organs below it and lungs above. We can sense our lungs and encourage repair after illness or injury.

Healthy breathing is a relaxed symphony of movement. On inhalation, the diaphragm widens and flattens downward. Each rib traces an arc up and out like a bucket handle. The spine gathers to support the ribs. The lungs, anchored at the top near the collarbones, extend easily along the chest walls to fill the increased space, pulling in a fresh breath.

On exhalation, the diaphragm releases back into a dome. The ribs return down and in. The spine lengthens. The lungs slide back up to their initial position, expelling air.*



Lungs with ribs, front view

Lung structure. The lungs fill the full thickness of the torso from front to back, and extend from collarbones to diaphragm, whose dome rises as high as the sixth rib and the bottom of the sternum. The lungs have three lobes on the right and only two on the left to make room for the heart (see figure).

In a growing embryo, the

* Brief MRI video of breathing from Tatiana Kuzhelkova. https://youtu.be/u-O8CgkCW1I

intestines and stomach develop first. The esophagus (food tube) grows up from the stomach, and then turns back down to become the trachea (windpipe). At the level of the fourth ribs, the trachea divides to become the two bronchi to the lungs, which divide again to become the secondary bronchi that enter each lobe, and then continue dividing to develop into the tiny bronchioles and alveoli where oxygen exchange occurs. Blood vessels and nerves grow in tandem with the developing bronchial tree. See figure "Respiratory system" on page 167.

Slippery membranes. The inner chest wall is coated with a membrane called the parietal pleura. The lung lobes are covered with a similar membrane called the visceral pleura. A layer of slippery interstitial fluid between the two membranes allows them to move along each other as needed.

The individual lobes can also slide along each other. This allows us to twist our torso without straining delicate lung tissue.*

Sticky adhesions. When the body repairs an injury, extra fibers might attach between adjacent membranes, creating an adhesion that locally sticks them together, restricting smooth motion. Extra fibers can also connect within tissue to create a contracture, restricting elasticity. Lung adhesions and contractures can result from an impact to the torso, or by breathing air contaminated with industrial by-products, car exhaust, tobacco smoke, forest fire smoke, or other pollutants. Adhesions can also result from acute and chronic illnesses such as bronchitis, pneumonia, Covid-19, asthma, and emphysema.

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* Lung anatomy and treatment information from Jeffrey Burch, "Manual Therapy for Lung Rehabilitation," online class April 14 and 16, 2020.

When adhesions or contractures impede inner sliding, nerves detect the strain, and muscles tighten protectively in the area to keep lung tissue from tearing. Our "bad" posture, chronic muscular knots, or lack of flexibility might be caused by a deeper restriction.

Gentle separation. Where tissues have stuck together, we can gently encourage separation of adhesions to restore healthy movement.

Note: If you currently have or are recovering from an acute illness or injury, allow several weeks of healing before attempting to release adhesions. Your body is busy and does not need additional input. If you have a chronic condition that causes fragile bones, blood vessels, or lung tissue, such as osteoporosis, vascular Ehlers-Danlos Syndrome, or emphysema, consult your doctor and be cautious with this technique.

Get comfortable. Find a position where your torso is comfortably supported, lying down or sitting against a back rest or standing against a wall or closed door. Check in with your body's needs. Perhaps you need a drink of water or a bathroom break before continuing. Loosen tight clothing. Add pillows for support and a blanket if you feel cold.

Sense into your hands, along each finger and palm and back of the hands. Give each hand a little massage, and sense both the giving and receiving hand. Invite your hands to be warm and relaxed.

Breathe. As you settle in, bring your attention to your breathing. Observe quietly, riding along with the in-breath and out-breath. Notice where your body moves with breathing, and where it is still. Notice what feels flexible, and what feels stiff. Slowly move your attention along your front from collarbones to the bottom of your ribs, around to the sides,

and along your back. Sense from the inside, and with your eyes, and with your hands resting on your body.

Relaxed touch. Let a hand move to an area over your lungs that wants attention, perhaps somewhere that feels immobile, stiff, or tender. If nothing specific calls to you, choose a place on one of your sides, since they often receive less attention than the front or back.

Let your relaxed hand sink in to contact skin, muscle, and bone, and sense for the inner chest wall and lung underneath. You can turn so your body weight pushes your ribs into your hand. For example, if you are touching your right side, turn to lie on your right side. Alternatively, you can put a weight on your hand such as a book or a yoga sandbag so it can sink in while remaining relaxed. The area you are touching might feel tender, but it should not hurt so much that you tense up. If it hurts, lighten your pressure or choose a different spot.

Breath adds movement. With your hand as an anchor, your relaxed breathing provides movement to gradually stretch and release adhesions. Ride along with your breath for a while, resting into your hand. Check that your hand is relaxed, rather than pushing or tensing.

You might feel some unwinding, where the impulse toward motion comes from the place that is releasing. Allow movement to arise from the inside, rather than imposing a stretch or pull from the outside. Allow sounds to arise as well.

Stay with this spot until you feel done, or until you get a sign of release like a deeper breath or sigh, twitches, increased movement with breathing, or a wave of emotion. It can be both a relief and a challenge to breathe more freely and take up more space. Grief and other emotions can flow

more easily with more room to breathe.

When one adhesion releases, another one might become more evident. You can follow your inner sense to a new spot and repeat the process: make contact, rest your body weight over your hand, and allow your breath to add gentle movement. After three or four releases, give yourself some time to rest before getting up.

You might feel increased lightness, spaciousness, ease, and flow. You might feel sore where something is newly moving. (A bath with Epsom salts can help.) Or, it might feel like nothing much changed. Over the next few days, increased movement in one area allows other areas to work themselves free. You might notice improved mobility in your back, shoulders, or neck. You might notice that your voice is more full or has a wider range.

Time to adapt. Give your body plenty of time to adapt, and wait a couple of weeks before addressing any further adhesions. Gradual change is more comfortable and sustainable.