

Breathing

Meet your Diaphragm

- The diaphragm is a parachute-shaped muscle that aids in breathing.
- It is also what separates your lungs from...your guts (that is, it separates your thoracic cavity from your abdominal cavity)
- To find:
 1. Locate your bellybutton
 2. Poke up your front with your finger until you hit bone—that's your sternum.
 3. Now trace with both hands the contour of your lower ribs and end at your spine
 4. You have now traced the outer boundaries of your diaphragm: sternum, lower ribs, lumbar vertebrae.
- The diaphragm, like most every other muscle, contracts in only one direction—down.
- When it contracts downward, a few things happen
 - More room is created in the thoracic cavity
 - Your guts get squished down and out
 - Your pelvic floor is pressed down by your guts
- All of this is great for *inhalation* because now the lungs have room to expand and suck in air (imagine a sponge expanding after being tightly squeezed)
- When the diaphragm relaxes, it recoils (along with your guts and pelvic floor) and aids in exhalation.
- However (!), instrumentalists and singers need more exhalation power and control than the diaphragm can provide.
- The diaphragm does not contract upwards. It only relaxes upwards.
- So where do we get the extra help exhaling?
 - From our internal intercostals [muscles between your ribs (costae)]
 - From our internal and external obliques [side abdominal muscles]
 - From our rectus abdominus muscles [think “six-pack”]
- If we want to be masters of breathing its *those* muscles we must learn to control.

Did You Know...that hiccups are caused by spasms in your diaphragm?