

# Pain Control through Diaphragmatic Breathing

Consistent/chronic pain can often affect our nervous system and cause autonomic dysregulation/central sensitization.

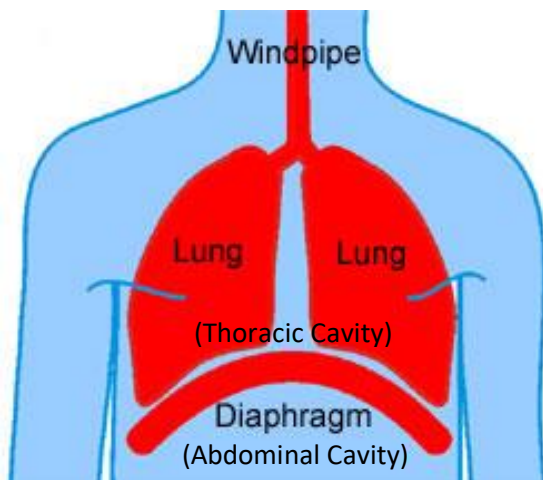
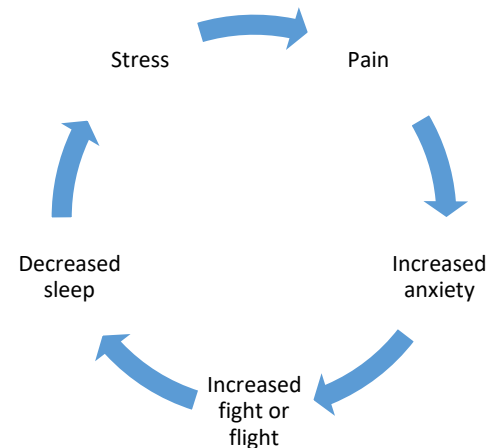
- Autonomic Dysregulation = the automatic functions of your body (nervous system) don't know how to regulate themselves appropriately.
- Automatic functions include:
  - Heart rate, blood pressure, temperature control, respiratory rate, digestion, muscle tightness, etc.
- The nervous system acts like a teeter-totter; when fight or flight is high, rest and digest tends to be low.
- Things that can cause fight or flight:
  - Stress
  - Pain
  - Anxiety
  - Lack of sleep
- Fight or flight generally causes:
  - Increased heart rate and blood pressure
  - Increased respiratory rate; while shutting off the diaphragm
  - Increased sweating
  - Increased muscle tension

A person should not feel like they are caught in fight or flight mode all of time (feeling of living on edge). This generally means that your nervous system needs a "reset".

Fight or Flight



Rest or Digest



## The "Reset" – Autonomic Quieting

Just like electronics need a reset, our bodies often need a reset when we are out of sync. One of the easiest ways to control that is through breathing exercises.

Breathing is the easiest of the automatic functions to control voluntarily. If you were asked to hold your breath or breathe faster/slower, you could.

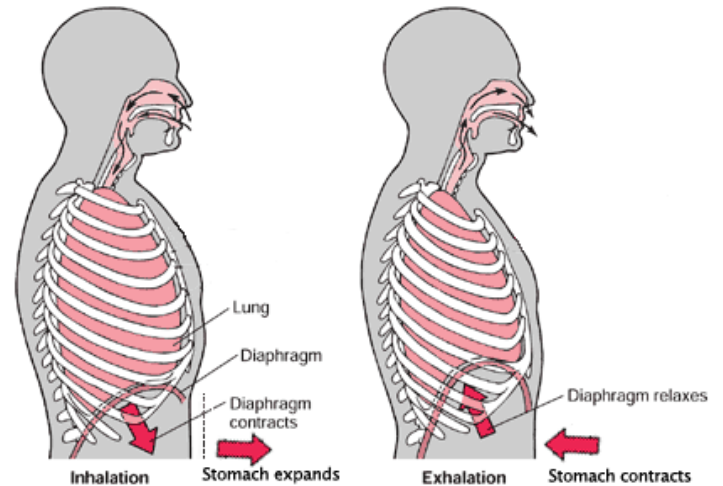
By breathing "appropriately" you can decrease your fight or flight response by increasing your rest and digest.

Breathing with your diaphragm will automatically slow the fight or flight, while massaging the nerve that stimulates rest and digest. This combination allows the "reset".

## Diaphragmatic Breathing

### Diaphragm Facts:

- Dome shaped muscle that separates the thoracic cavity from the abdominal cavity.
- It is the primary breathing muscle.
- With inhalation the diaphragm contracts into the abdominal cavity increasing the space of the thoracic cavity.
  - Search 3D Diaphragmatic breathing on youtube
  - Watch rib expansion



### Breathing Practice:

- Find a comfortable position, in a quiet room.
  - On your back with your legs propped up usually works best.
- Place hands on lower ribs, to encourage lower rib expansion (think of the youtube video).
- Also try one hand on upper ribs and one on lower ribs to see which ribs move first (lower ribs should move first).
- It may help to visualize air coming in through your mouth traveling to your hands placed at lower ribs.
- Remember your belly will move passively due to decreased room in abdominal cavity, but you're not trying to inflate your belly with air.
- You don't have to breathe deeply.

### Meditation and Relaxation with Breathing:

The last part of autonomic quieting is shutting off your brain and not letting the stress or pain interrupt your breathing "reset". It will impede your breathing exercises if you're sitting stressed the whole time while trying to relax.

Many medical professionals will walk you through guided meditation, but this can be somewhat stressful in the beginning when you're trying to relax and learn to change your breathing.

One of the easiest cues to clear your mind is to think of one simple thing (i.e. a color, candle flame, piano, etc.), something that is easy to focus on when your thoughts start to wander.

\*\*\*It is important to not get discouraged and to remember this is supposed to be a relaxing technique. Don't try and overthink it.