

# **DIAPHRAGMATIC BREATHING APPLICATION TO AN EXERCISE ENVIRONMENT**

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## **INTRODUCTION:**

- Diaphragmatic breathing is a valuable way to increase intra-abdominal pressure, and this adds stability to your spine. <sup>1</sup> Step one in movement and daily function is to breathe with your diaphragm muscle, avoiding the use of the upper chest muscles. This happens naturally if you regularly train.

### **Start Position**



- Start on back relaxed in a comfortable environment
- Hips and knees bent may add comfort
- Sitting reclined is an option

### **Breathe In 1**



- The cones are landmarks for breathing
- Breathe in through nose, as possible
- Lower cone/abdominal moves first
- Lower cone moves 2:1 ratio upper cone

### **Breathe In 2**



- The hands are practical feedback tools
- Breathe in through nose, as possible
- Lower hand/abdominal moves first
- Lower hand moves 2:1 ratio upper hand

### **Breathe Out 1**



- Breathe out with pursed lips through your mouth, fully
- Let your muscles relax throughout entire body
- Imagine you are gently blowing out candles
- Imagine you are playing a flute

## STEP TWO: DIAPHRAGMATIC BREATHING WITH ACTIVITY

Step two in movement is to stabilize your pelvis with the external and internal obliques, transverse abdominus, multifidus, erector spinae and gluteal muscles.<sup>2</sup> This will happen naturally with a balanced and controlled abdominal contraction. The abdominals need to contract before the legs muscles. Diaphragmatic breathing needs to occur before the abdominals contract. Training is essential for reflexive memory.

**Exercise developed by Laura Cabrera, PT, COMT**  
**(Maintain the yoga block very still for maximum benefit)**



Balance the yoga block  
While using diaphragm



Raise one leg  
Keep the yoga block steady



Then raise other leg  
Alternate legs

### Higher Intensity



- Perform the marching as above, but start from this position
- Keep the yoga block from moving



Add opposite arm and leg



Add one leg, one arm up

## STEP THREE AND FOUR: DIAPHRAGMATIC BREATHING WITH HEAD AND NECK, AND SCAPULAR POSITIONING AND STABILIZATION

- Step three is to recruit your deep neck flexors, short stability muscles from your head to upper two cervical vertebrae. These are gentle contractions perceived as the downward part of a nod, with a feeling of making yourself "taller".<sup>3, 4</sup>
- Step four is to train the scapular muscles to retract and depress the scapula with arms at the side. Raising your arms requires diaphragmatic breathing, abdominal and neck control.<sup>5</sup>



- Nod gently into thumbs (thumbs placed underside of chin)
- Scapulas (shoulder blades) down and back
- Rest upper arms on chest if possible
- Thumbs straight and pain free resist to chin nod
- Add marching (optional)
- The key: train yourself to diaphragmatic breathe ahead of time

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