

## **Breathing Exercises for Optimal Brain Function: Course Notes**

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Your brain's ability to function normally depends on many factors. One factor that has gone unappreciated until recently is your ability to breathe deeply. Studies in Australia, Korea, Ireland and the United States found the more restricted your breathing capacity is, the more likely you are to lose cognitive function years later. Cognitive functions tested in these studies included attention, short-term memory, long-term memory and language ability.

On the other hand, exercises designed to improve breathing have been shown to improve attention, memory, coordination and brain wave activity. These exercises work especially well in conjunction with chiropractic adjustments, which have been shown to improve breathing capacity in several studies.

### **BREATHING EXERCISES**

Perform these exercises with reasonable effort. If they cause strain, pain, dizziness or any other disturbing sensation, please discontinue until you can consult with your health care provider.

#### **Brisk Walks**

A sedentary lifestyle leads to loss of breathing capacity, while exercise helps build lung volumes. The most helpful forms of exercise are those that cause your heart to beat faster and your lungs to work harder – aerobic exercise. For the athletically inclined, this can come from sports such as tennis, swimming, and running, but a brisk walk does the trick as well, and is practical for all non-disabled people.

#### **Balance, Lengthen and Breathe**

A slumped, compressed posture makes it difficult to get a full deep breath. It also makes it difficult to speak in a strong, assertive voice. Misalignments of vertebra (subluxation) leading to nerve irritation are more likely to occur, and tend to be aggravated if they already exist. All of these factors contribute to stress.

Take a moment to align your head with your shoulders, your shoulders with your hips, and take a deep breath. Ideally, this should be a full, diaphragmic breath. The posture that makes breathing easiest is the ideal posture for you in that situation. Do this several times per day. This is particularly important during stressful days.

### The Mirror Trick

This helps you remember the balance-lengthen-breathe sequence while driving. Before you start up your car, sit tall in the driver's seat. Adjust your posture and the driver's seat until you can most easily take a deep breath. Now, adjust the rear-view mirror. Whenever you slouch, your loss of rear vision will remind you to balance, lengthen and breathe. This is especially important during long drives and stressful commutes.

### Cat Stretch

On hands and knees, breathe in while raising your head and "tail". Then, breathe out while lowering your head and "tail". Stretch and breathe as slowly and deeply as comfort will allow. Try for at least 10 repetitions. This exercise improves the flexibility of your spine and rib cage while you perform deep breathing.

### Pursed Lip Breathing

To build strength, you have to work your muscles against resistance. Breathing muscles are no exception. Stand tall, with good posture, looking up slightly. Mildly tighten your buttock and Kegel muscles. To work your breathing muscles against resistance, purse your lips. As you breathe out, resist the outflow with your pursed lips, as if you were blowing up a balloon. As you breathe in, resist the inflow with your pursed lips, as if you were sipping the air through a straw. Try for at least 10 slow, deep breaths. *Variations:* If you are comfortable with pursed lip breathing while standing, try up to 10 breaths it while walking briskly. Alternatively, try 10 breaths while taking a hot shower.

### Alternate Nostril Breathing

Exhale completely. Close your right nostril (by gently pressing the right side of your nose with a finger), and fully inhale through the left nostril. Close your left nostril, and fully exhale through the right. With your left nostril still closed, fully inhale through the right. Close your right nostril and fully exhale through the left. Continue in this fashion, changing nostrils on exhalation. Focus your awareness on breathing slowly and deeply in a rhythm that feels natural. This exercise has meditation-like benefits for the brain. Begin with 10 breaths, increasing repetitions according to comfort.

## RESEARCH CITATIONS:

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## **THANK YOU!**

Your participation in today's class added value to the presentation. Thank you! Joining us today indicates your commitment to take responsibility for your health.

Drs. Masarsky and Todres of Vienna Chiropractic Associates wish to encourage your commitment to health and wellness. If you are not already under chiropractic care, we are ready to join your health care team. Your initial visit consists of an hour of personal time with one of our doctors, not an assistant. It includes a case history, chiropractic physical examination, and chiropractic adjustment if indicated. For further information on chiropractic care, or to reserve your appointment, call 703-938-6441.

## **THE CAT STRETCH**



