



ELITE

Personal Training and Fitness Solutions

# HEALTH TOPIC OF THE WEEK

## 5/8 - Reduce Stress Through Diaphragmatic Breathing

### Introduction

Everyone is affected by stress. It's a global epidemic that can derail our mental and physical well-being. This article explores the use of diaphragmatic (belly) breathing as an effective tool to manage stress.



### What is stress?

Stress is a common feeling we get when we feel under pressure, overwhelmed or unable to cope. Small amounts of stress can be good for us and motivate us to achieve our goals. But too much is dangerous. Excessive stress impacts our mood, job performance, and relationships. Ultimately, it jeopardizes our mental and physical health. Stress attacks from many directions. Common culprits are environmental factors, health issues, difficult relationships, financial setbacks, job insecurity, or family discord. Having just one of these issues is bad enough, but often we face multiple problems at the same time. That is a sure-fire recipe for extreme stress.



### What is the stress response?

The stress response is how your body reacts to stress. We experience both physiological and psychological reactions. Physiological responses to stress arise from activation of the sympathetic nervous system (SNS) through the secretion of a hormone called cortisol. Results include an increase in respiratory rate, heart rate, and systolic and diastolic blood pressure. Our stress response can be acute, delayed, or long term. The sympathetic nervous system response is pro-inflammatory. As we discussed in our lengthy series on inflammation, this condition is linked to many chronic diseases, both physiological (hypertension cancer, cardiovascular disease) and psychological (anxiety, depression, social dysfunction substance abuse and even suicide).



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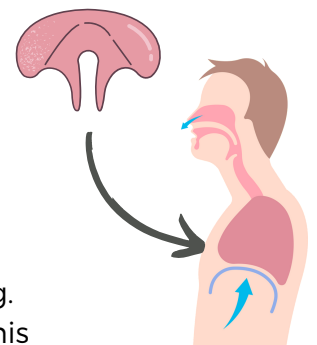
## How serious is stress?

- In a study of over 115 million people conducted in the US by the Robert Wood Johnson Foundation in conjunction with National Public Radio and the Harvard School of Public Health, over half of all adults surveyed acknowledged they had a major stressful event in the past year. Seventy-two percent of those surveyed regularly experienced financial stress, and 60% reported job-related stress.
- The International Labor Organization's 2016 report on workplace stress noted that 272 billion was lost in productivity from work-related stress, and 242 billion was lost to health care costs in Europe.
- In the US the cost of stress to employers is around 300 billion. Identifying evidence - based stress reduction interventions that are low cost and easy to implement and that can be self-administered is essential to overall treatment and management of this epidemic.



## What is diaphragmatic (belly) breathing?

This process involves breathing deeply and expanding the lungs into the diaphragm rather than using the abdomen or ribcage alone. Picture how babies breathe. You'll notice their entire stomach and diaphragm moving in and out. Practice breathing like a baby and maybe you'll sleep like one, too.



The diaphragm is a dome-shaped muscle at the base of the lungs. Although you may not be aware of it, your diaphragm plays an important role in breathing. When you inhale, your diaphragm contracts (tightens) and moves downward. This creates more space in your chest cavity and allows your lungs to expand. When you exhale, the opposite happens. Your diaphragm relaxes and moves upward into the chest cavity.

Diaphragmatic breathing focuses on slowing the breath rate by using a process such as counting the breaths while expanding the abdomen and inhaling deeply through the nose, pausing, then contracting the abdomen and exhaling slowly and completely through the mouth.

## Research on diaphragmatic breathing

Research studies confirm several benefits to diaphragmatic breathing:

- Ma et al. concluded that diaphragmatic breathing decreased breathing rates and salivary cortisol.
- Joshi et al. showed that this breathing invention lowered systolic and diastolic blood pressure.
- Sundram et al. found a significant difference in perceived stress levels over time for the group that was prescribed the diaphragmatic breathing technique.



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## Additional benefits

- Decreased muscle tension
- Increased blood oxygenation
- Boosted energy and motivation
- Improved concentration
- Strengthened immune system
- Aided with diarrhea and constipation

inhale  
exhale



## Steps in diaphragmatic breathing

Now to the all-important aspect of this article: Implementation!

- 1.) Sit or lie in a comfortable place. Close your eyes if you want.
- 2.) Place one hand on your chest and one hand on your abdomen. The bottom hand should do the moving. The top hand should remain still or only move as the bottom hand moves.
- 3.) Inhale through the nose for about 4 seconds, feeling your abdomen expand. (You may feel slight tension the first few times you inhale.)
- 4.) Hold your breath for 2 seconds.
- 5.) Exhale very slowly and steadily through your mouth for about 6 seconds. The mouth should be relaxed.
- 6.) Repeat for 5-15 minutes.

Build up your breathing minutes every week. Don't give up. It may take several repetitions to get it right, but you will gradually build up concentration and endurance for this technique.

## When to do diaphragmatic breathing

Ideally, this form of breathing should become part of your daily routine to stay calm. I suggest several times a week. Definitely put it to use when life gets highly stressful. Don't let chronic stress jeopardize your health when you can do something about it!

This simple breathing technique costs nothing and is easily learned. When practiced regularly and implemented properly, diaphragmatic breathing is a powerful tool. In dire straits it could even save your life.

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SCAN ME

## Bottom line

- Shallow, upper chest breathing is part of the typical stress response.
- Our stress response can be reduced by consciously breathing using the diaphragm.
- Abdominal breathing helps to control the nervous system and encourages the body to relax, bringing about a range of health benefits.

I'm happy to share this effective stress relief option. It sure beats other options like hitting the bottle, and I don't mean the carnival game! Thanks for reading. I encourage you to incorporate diaphragmatic breathing into your daily routine. Until next time!



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## References

Hopper, Susan I.1,2; Murray, Sherrie L.1,2; Ferrara, Lucille R.1,2; Singleton, Joanne K.1,2. Effectiveness of diaphragmatic breathing for reducing physiological and psychological stress in adults: a quantitative systematic review. JBI Database of Systematic Reviews and Implementation Reports 17(9) 1855-1876. September 2019. | DOI: 10.11124/JBISRIR-2017-003848

Joshi, Anurag et al. 'Stress Management through Regulation of Blood Pressure Among College Students'. 1 Jan. 2016: 745-752.

Ma X, Yue ZQ, Gong ZQ, Zhang H, Duan NY, Shi YT, Wei GX, Li YF. The Effect of Diaphragmatic Breathing on Attention, Negative Affect and Stress in Healthy Adults. Front Psychol. 2017 Jun 6; 8:874. doi: 10.3389/fpsyg.2017.00874. PMID: 28626434; PMCID: PMC5455070.

Sundram BM, Dahlui M, Chinna K. "Taking my breath away by keeping stress at bay" - an employee assistance program in the automotive assembly plant. Iran J Public Health. 2014 Mar;43(3):263-72. PMID: 25988085; PMCID: PMC4419163.

Diaphragmatic Breathing for GI Patients | Michigan Medicine (uofmhealth.org)

Learning diaphragmatic breathing - Harvard Health



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