




Fast, Slow or Not At All

How to use **targeted breathing** to improve health and performance

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Not Everyone Believes in Breathing

Conscious manipulation of breathing usually disturbs the exquisitely regulated physiologic adjustments to exercise.


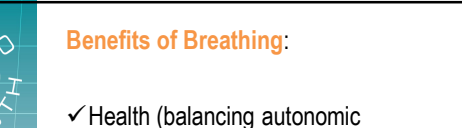
Attempts to modify breathing during running or other general physical activities is of no benefit to exercise performance.

During rest and all levels of exercise, a healthy person should breathe in a manner that seems most normal.

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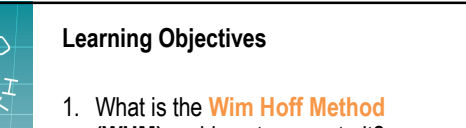

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Benefits of Breathing:

- ✓ Health (balancing autonomic nervous system)
- ✓ Digestion
- ✓ Flexibility
- ✓ Muscle Mass
- ✓ Strength
- ✓ Endurance


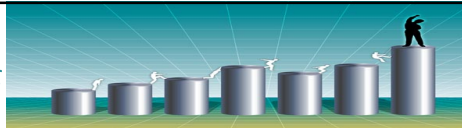
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Learning Objectives

1. What is the **Wim Hoff Method (WHM)** and how to execute it?
2. What are the science-based benefits and risks of the WHM?
3. What is the best way of integrating the WHM in the client's program?
4. Connections to yoga, Qi gong, muscle control and the most famous squat protocol ever.

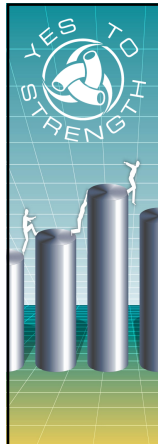
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What is the Wim Hof Method?

A special **breathing technique**, gradual cold exposure and third eye meditation. ⁽⁴⁾

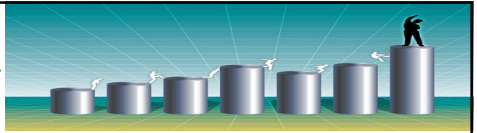
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1st Breathing Exercise:

- **Hyperventilate** for 30 breath's
- Exhale and **hold the breath** in an unforced manor until the feeling of a stimulus to inhale (2-3 min)
- **Inhale deeply** and hold the breath for 10 seconds
- The three steps listed above are performed three times.

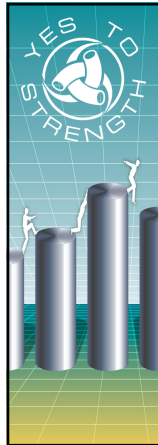
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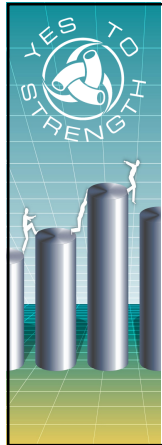
Physiology 101: Hyperventilation

is defined as **breathing in excess** of the metabolic needs of the body, eliminating more carbon dioxide than is produced, and, consequently, resulting in **respiratory alkalosis** (Respiratory alkalosis is a disturbance in acid and base) and an elevated blood pH. ⁽⁹⁾

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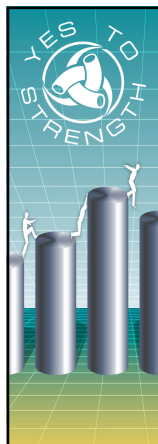
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Key Points: Hyperventilation ^(20, 21, 22)

- Lie down or sit. Relax.
- Inhale: Fill the belly, fill the chest.
- Exhale: Let go. Quickly. **No pause.**
- Relaxation in. Stress out.
- Let the mind follow the breath. **The whole body is breathing.**

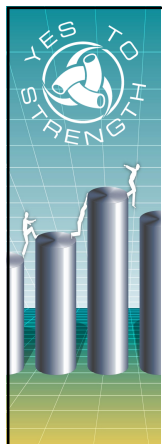
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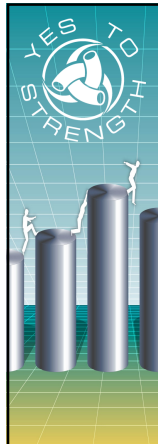
Key Points: Breathholding ^(20, 21, 22)

- Feel the heart beat.
- Feel the relaxation and **pulse throughout the body.**
- Duration will become gradually longer (subject to diurnal variation).

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Key Points: 2nd Breathing Exercise

- Deep inhalations and exhalations followed by breath holding for 10 seconds while **tensing all muscles of the body**
- Contracting all muscles of the body = Muscle Control Technique ⁽²³⁾
- Related 20 Rep Squat Routine.

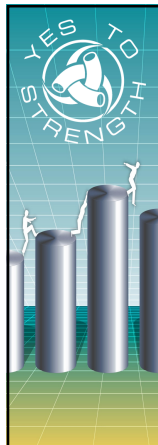
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What are the acute and chronic adaptations to the WHM?

WHM has been studied as **a whole**, with the inclusion of breathing techniques, cold exposure and meditation. The role of each component is not completely clear. ^(4, 5, 8)

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#1: Dampening of a **pro-inflammatory response**

- ❖ Hyperventilation/breath retention
- ❖ Epinephrine
- ❖ Increase in anti-inflammatory markers

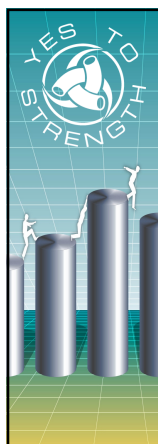
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Physiology 101 Chronic Systemic Inflammation

The **chronic activation of the innate immune system**. Inflammation is a biological response of the immune system that can be triggered by a variety of factors. These factors may induce acute and/or chronic inflammatory responses in the various organs potentially leading to tissue damage or disease. ⁽⁸⁾

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#2: Improved physical performance

- ❖ Hyperventilation/breath retention
- ❖ Alkalosis
- ❖ More work done before fatigue due to reduced pH


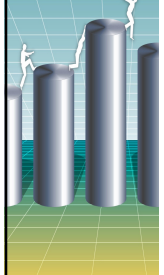
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Physiology 101: Catecholamines

Catecholamines can serve as neurotransmitters, hormones. ⁽⁷⁾ The general function is to mobilize the brain and body for action. Norepinephrine release is highest during situations of stress or danger, in the so-called **fight-or-flight** response. ⁽⁶⁾


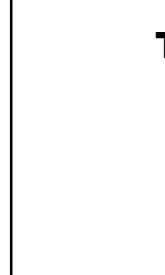
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Additional benefits

- Immune system support and whole body healing (**cranio-sacral** pump)
- Stimulation of endogenous growth hormone ⁽¹¹⁾

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**Deeper Cause
The Diaphragm**

*The **Diaphragm** should not be seen as a segment, but as a part of a body system. ⁽¹²⁾*


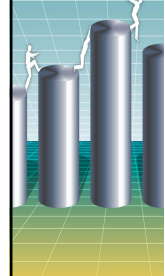
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What are the risks and contraindications to WHM?

According the Wim Hof website, the WHM may have the following **risks** and **contra-indications** ⁽¹⁾

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Risks

- **Fainting** from low oxygen concentration during the breath holding

Contra-indications

- Respiratory conditions
- Cardio-vascular conditions
- Medications


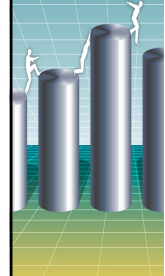
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How can WHM be integrated into the client's program?

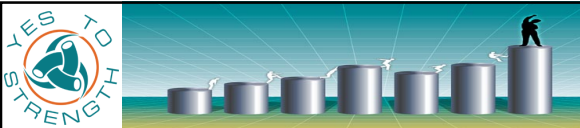
Who? - clients seeking **anti-inflammatory** effects or **performance** effects, including growth hormone release.

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1. Have the client do the WHM on **off days**.
2. Have the client do WHM right before key sets (for the performance enhancing effects)
3. Offer the client the 20 Rep Squat Routine.
4. Balance the WHM with slow breathing (end of workouts)

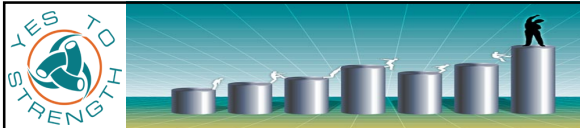
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Have the client do WHM right before key sets (for the performance enhancing effects)

A1. WHM 1 round Hyperventilation
A2. Exercise (breath retention phase)

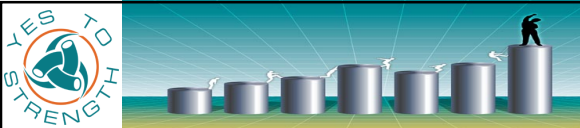
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SUPER SQUATS

HOW TO GAIN 30 POUNDS OF MUSCLE IN 6 WEEKS
By Randall J. Strossen, Ph.D.

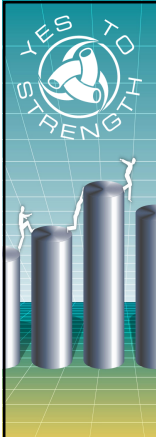
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1 x 20 with a 10RM Load How?

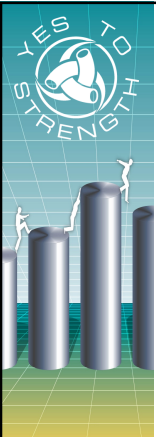
Hyperventilation between repetitions.

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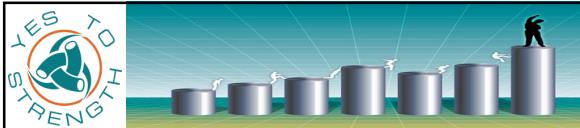
*"We generally recommend that the pupil perform about 3-5 squats with one breath between each squat and from there on [they] will use 3 or more **breaths between each squat**, gradually increasing the number of breaths between squats as [they] progress with squat repetitions, as you require more breathing as you tire from the squat. When you reach 20 repetitions, you may be taking as many as 8-10 breaths.*

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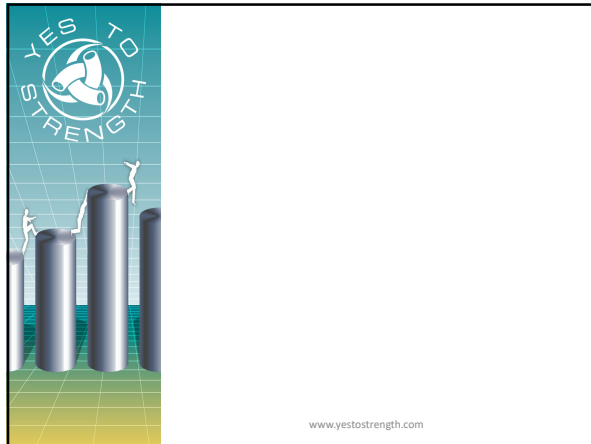
*Each breath is made as large as possible and an effort is made to **use the entire chest capacity**. On the last breath you draw in all the air that you can and then make an extra effort to fill the lungs still fuller. As you make this last effort **you hold the breath and perform your squat** and then repeat your breathing procedure as before."* (13)

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Reps	8-12 rep set	12-20 rep set
1 st —5 th rep	3 breaths	3 breaths
6 th —10 th	5 breaths	5 breaths
11 th —15 th	6 breaths	7 breaths
16 th —20 th		7 breaths

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Balance the WHM with slow breathing

End of workouts,
on off days or
any time desired.

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Slow breathing <10/min: (5, 14, 15)

- Improvements in various **cardio-vascular parameters** including a reduction in blood pressure
- Increased **pulmonary function** including (forced) vital capacity and peak inspiratory flow.
- Increased parasympathetic activity can **modulate inflammatory response** through stimulation of the vagus nerve

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Even duration of inh/exh or longer exhalations. (19)

- Example: (16)
 - Inhale for **5** seconds
 - Breath holding **10** seconds
 - Exhale **15** seconds

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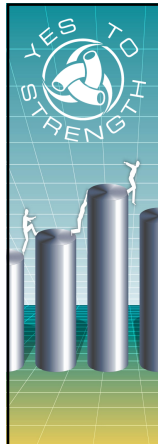
Thank you for watching!

Questions?
Email: karsten@yestostrength.com

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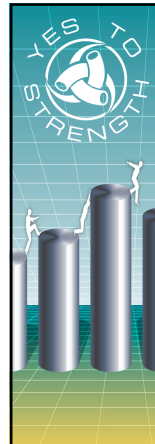
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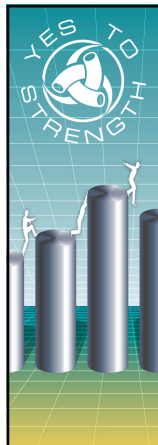
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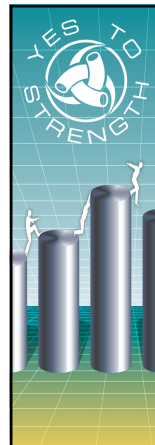
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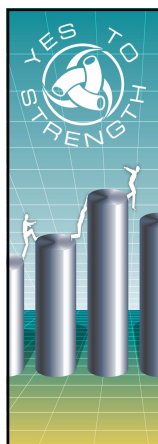
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