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## Science of Breathing Cold Breathing and Focus © Wendy Schulze March 2016

Before packaged food, very little exercise and central heating and air conditioning people were more robust and this is an opportunity to return to our robust roots.

### The Science of Controlled Hyperventilation

Daily controlled hyperventilation creates a more alkaline so less inflamed body and a calm neural system that results in an increased ability to tolerate extremes of the environment.

### Breathing Effects

- Decreased CO<sub>2</sub>
- Increased O<sub>2</sub>
- Your body creates carbon dioxide alkalosis or Respiratory alkalosis this means that your interstitial fluid, sweat and urine will become more alkaline.
- Your blood does not change it remains the same.
- An acid body makes your neural system more reactive
- Therefore an alkaline body is calming to the neural or system.
- Alkaline bodies are more able to tolerate pain, and temperature changes.
- Slightly alkaline people have a calmer neural system and less nervous excitability they sleep better, and have calmer feelings.



- When your nervous neural system is calm you are better able to deal with change.
- Western people are often acid which makes the nervous system more excitable creating more intense pain when there is an injury and a more intense response to temperature changes such as getting into an ice bath.

### Cold Effects

- Increased metabolism with the **ice bath**
- There is a **reduction of your inflammatory system due to a reduction of cytokines in your blood**. This can be the case for up to six days after a cold event.
- **Cytokines** are a category of signalling molecules that mediate and regulate immunity, inflammation and the formation of blood.
- It contracts your cardiovascular system so your blood pressure will rise this exercises the smooth muscles.

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- **Holding breath** increases the stress hormone Norepinephrine and this hormone increases heart rate, blood flow, increases blood sugar levels, pupils dilate, it improves brain function, blood flow to skeletal muscles increases and the muscles relax.
- **Breathing during exercise** stops the lactic acid build up that you can get. The build up of lactic acid is due to the lack of oxygen so if you breathe well during exercise you will eliminate or reduce this lactic acid build up.
- 
- **The focus causes the flight and flight response to be controlled** — this is control of your autonomic nervous system that was previously thought to be uncontrollable.

### In a nut shell

The combination of the breathing, focus and cold exposure lowers the inflammatory response of the body, improve immunity, creates more blood flow, increases brain function, and allows the body to be more resilient and robust with changes in the environment including bacteria and viruses.

An alkaline body is less inflamed therefore less likely to have the diseases of inflammation.

These diseases are called Western Lifestyle diseases and they are:

- Cancer
- Arthritis
- Osteoporosis
- High Blood Pressure
- Heart Disease
- Infertility
- Anxiety and other Mental Illnesses
- etc. — fill this in.

Controlled Hyperventilation for 25 minutes can change your body from acid to alkaline.

If a person does suffer one of the Western Lifestyle dis-eases to dis-create it they may need to look at other Western Habits that they have adopted. Breathing, focus and cold exposure are three of the keys but not the only ones.

These may include:

- Exercise patterns of intensity and endurance.
- Nutrition. Choosing clean whole foods that are high in nutrition and low in energy and pollutants.
- Chemical exposure in personal care products, food, cleaning products, home environmental products such as paints, mattresses etc. and other environmental pollutants.
- Tribal connection — Actively choosing to be connected to the kind people in your family, friends, work and social life and the ability to be able to leave the unkind people to sort themselves out without your interference.
- Electro magnetic exposure — not allowing too much exposure to mobile phones, wifi, clock radios, electric blankets, TV's, power lines and other electro magnetic devices.

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- Physical structural issues — realignment of the bodies musculo-skeletal structure.
- Environmental variability — the ability to allow yourself to be uncomfortable — heat, cold, sitting on the floor, squatting, reaching, stretching and compacting your body regularly.
- Grounding — regularly releasing built up electro magnetic charge in the body through the earth.
- etc.

This is just a taste of what can be addressed and is way beyond the scope of this document.

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### **Warnings for Controlled Hyperventilation**

Only do controlled hyperventilation when lying down and away from water.

This is because you can get dizzy or light headed and fall down.

If you are in the water and pass out you will naturally breathe in when your CO2 levels raise and so you will drown. Don't ever do this exercise in the water.

You may or may not feel the following symptoms

- Dizziness
- Light Headed
- Tingling in any part of the body
- Buzzing sensations
- Ringing in your ears
- Flashing lights behind closed eye lids
- Your body may jump or twitch
- You may feel emotional either positive or negative
- You may laugh or cry

Some people don't get any of these symptoms and that too is OK.

If you have any of these responses just enjoy them — it is like being on a high and the only high is air. It is safe to have these feelings or sensations when doing controlled hyperventilation.

### **The Science of Holding your Breath.**

At the end of each set of about 30 breaths of controlled hyperventilation you will be guided to hold your breath.

This creates a adrenaline rush larger than if you were doing a bungy jump. This is how the adrenal glands should work they should either give you a rush or they should be calm.

Many Western/Acidic people have their adrenal glands react when minor problems occur such as:

They are offended when someone doesn't agree with them

They get irritated when someone gives you Orange Juice is only 35% and not 100%

You are offended by what other people eat or don't eat.

They believe that other people "should" care more about .... the environment/animals/etc.

These beliefs and ideas keep a persons adrenal glands working a little all day.

Holding your breath re-sets this adrenal response and switches it off for some time.

### **The Science of Cold Training**

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When you expose yourself to extreme cold your smooth muscle in your cardiovascular system your veins arteries and lymphatic system contract.

This raises blood pressure and this is why it is important that people with uncontrolled high blood pressure should not do the cold training.

Cold training done regularly exercises and therefore improves cardiovascular muscle tone and resilience so if a person has high blood pressure they will improve if they do the training slowly starting with much less contrast than an ice bath for example they may start with a cool shower daily and gradually make it colder over months.

Cold training triggers the body to produce more white blood cells. White blood cells are the main part of the immune response. Therefore cold training dramatically improves your immunity.

### **The Science of Focus**

Richard Wiseman. — I will write this up more with his science when I get home as his books are there.

What we focus on we allow in our lives.

If we believe that we are weak and unable to do something then we don't try so create our own reality from that belief.

When we believe that something is possible we give it a try and even if we fail initially we keep trying and then we are able to achieve what we believe is possible.either immediately or after some time.

People have been doing “impossible” things with their bodies since the beginning of time.

For example; I could not imagine climbing the summit of Mt Sniezka dressed in very little with the return trip taking one hour at minus 30 degrees. I was dressed in shorts, a crop top, shoes and gloves yet, I knew it was possible and gave it a try. It took focus and breathing but I did it and it was relatively easy and an absolute buzz.

I also don't understand how I can walk 12 metres on hot coals yet, again I did it and without any negative side effects. Both of these activities took single minded focus and gave me incredible and over the top positive side effects.

One of Wendy's Wendyism's is to:

**Focus on what you do want and don't give much attention to what you don't want.**

This is the power of focus and how to find your flow.

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Negative feelings are actually positive and helpful they are telling you to do what you are doing differently. Always embrace your uncomfortable feelings and act on them.

Negative emotions are letting you know that you are out of your flow. They are letting you know that you have to change the way you are doing something or to not do something altogether.

For example the negative feelings of shivering, tensing, feeling frightened or weak when you go into the ice are telling you to change the way you are doing it.

If your buddy is having a negative response to the ice then place your hand gently on their shoulder to get their attention and speak into their right ear and in a calm voice remind them to:

- Relax your body
- Breathe as slowly and deeply as you can
- You can model for them by breathing in and out deeply and slowly.
- Take control of your breathing.
- Feel what they are experiencing as only an sensation
- To be curious as to what that sensation really feels like.

We grow neural pathways in our brain that make us more open or more fearful.

Take charge of what pathways you grow in your brain. When you find yourself growing fearful pathways tell yourself an open ended phrase.

For example a person can believe either of the following:

*I will get sick by getting into the iced water.*

*Science has shown that iced water will stimulated my white blood cells and improve my immunity.*

Both of these phrases can become true depending upon your focus/beliefs.

another Wendyism;

**In this moment choose your focus — it will change your life.**

Choose your focus. Your body will respond to your focus and beliefs.