Pressing Reset

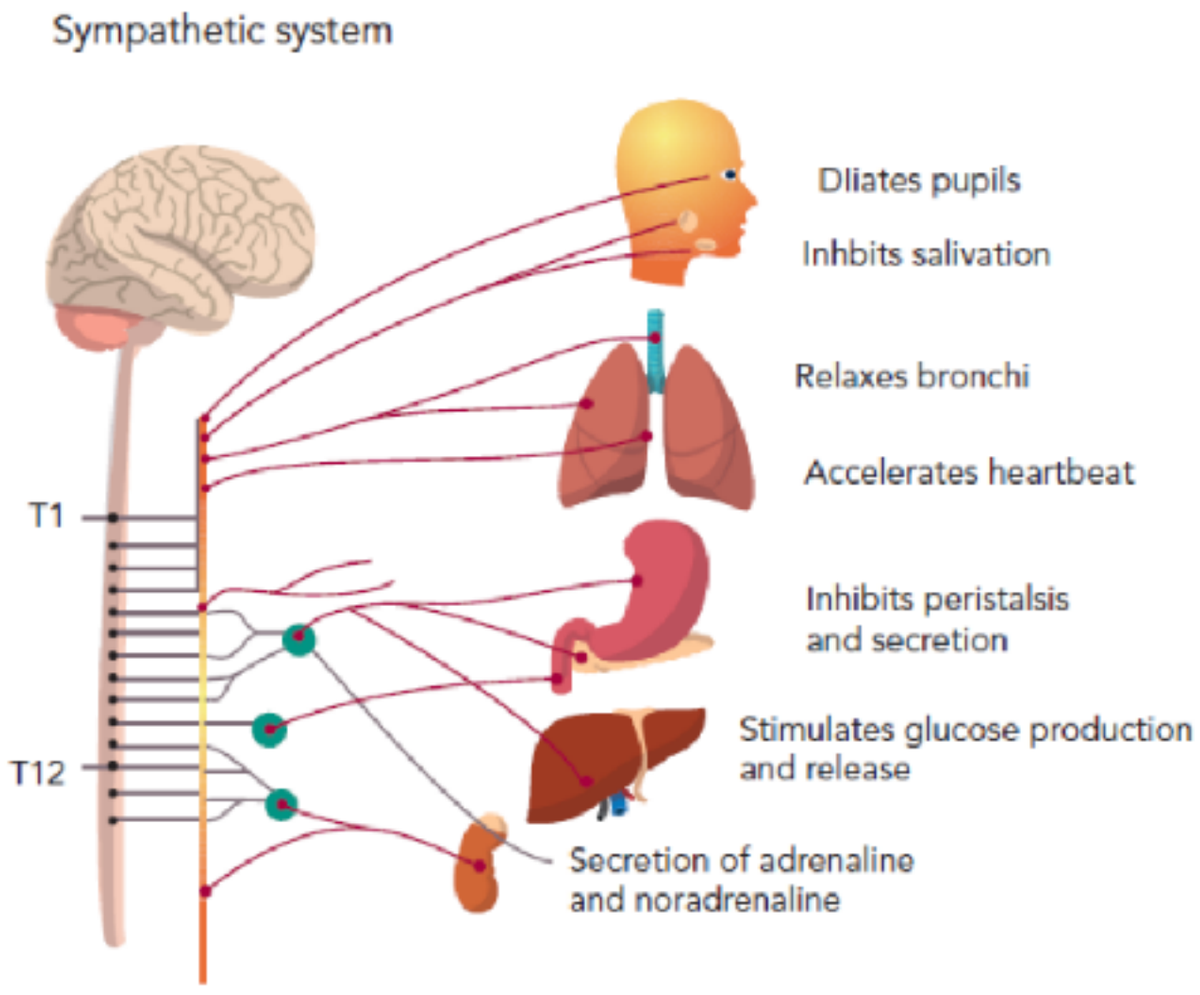
tools & techniques for coping with the vicissitudes of life

On the spot/real time tools to lower stress

- All stress isn't bad: it's a mechanism to **mobilize** us toward action and change. The problem lies in the stress switch being left on and not feeling in control of our state of body/mind.

- Even though it's called the autonomic (automatic) nervous system, we have various **entry points** in to access it. Breathing, vision, deliberate de-focusing and movement are a few techniques we will cover here.

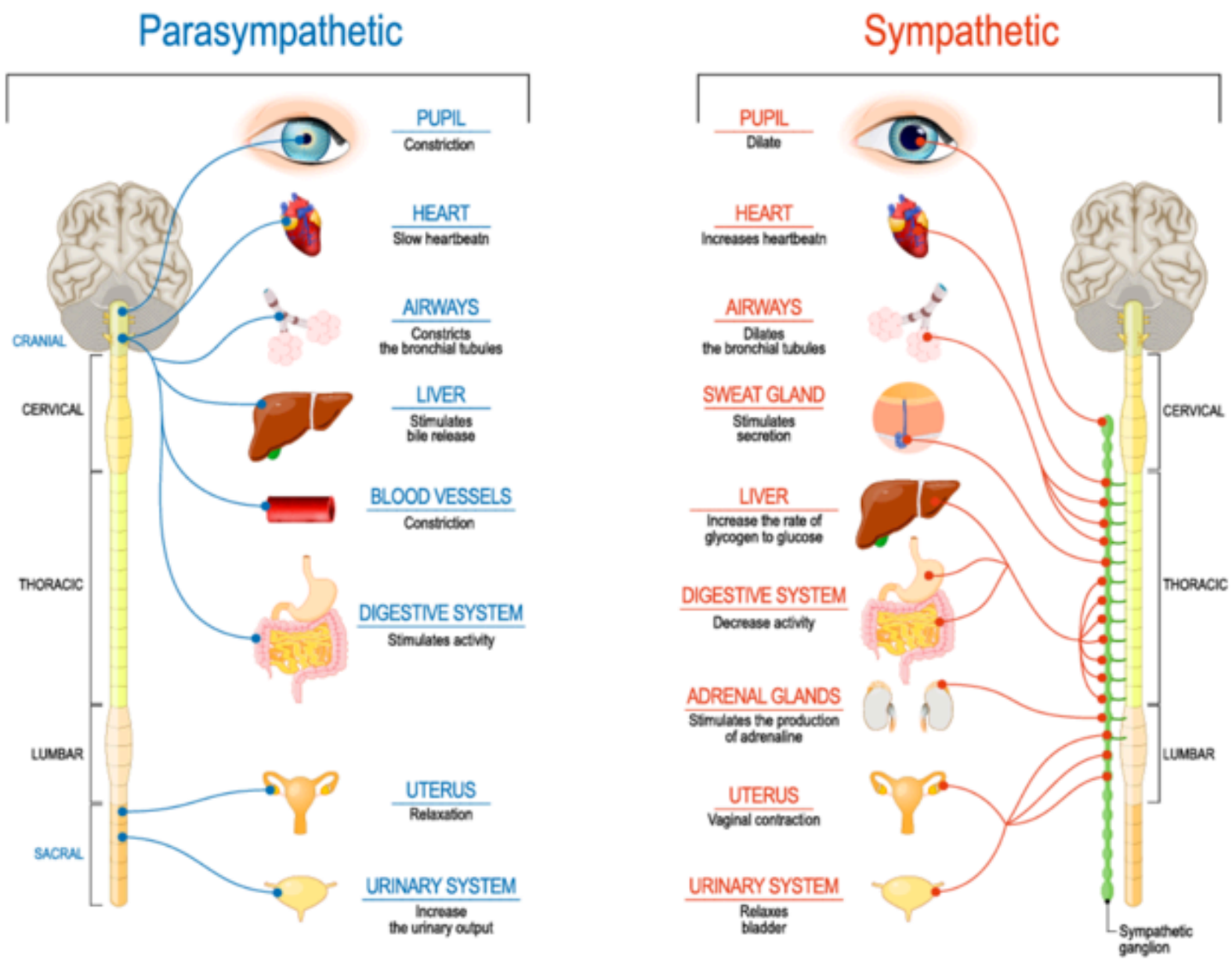
- Certain tools are great for practicing when we're ***not*** actually trying to lower stress in the moment (off-line tools) and others are for on the spot (real-time) down-regulation.



Two categories of stress management

1. REAL TIME On-the-spot TOOLS: Quelling stress response/down regulating

2. OFF LINE TOOLS: General practices for a more resilient nervous system


Parasympathetic
PUPIL
Constriction
HEART
Slow heartbeatn
AIRWAYS
Constricts
the bronchial tubules
LIVER
Stimulates
bile release
BLOOD VESSELS
Constriction
DIGESTIVE SYSTEM
Stimulates activity
UTERUS
Relaxation
URINARY SYSTEM
Increase
the urinary output
CRANIAL
CERVICAL
THORACIC
LUMBAR
SACRAL
Sympathetic
PUPIL
Dilate
HEART
Increases heartbeatn
AIRWAYS
Dilates
the bronchial tubules
SWEAT GLAND
Stimulates
secretion
LIVER
Increase the rate of
glycogen to glucose
DIGESTIVE SYSTEM
Decrease activity
ADRENAL GLANDS
Stimulates the production
of adrenaline
UTERUS
Vaginal contraction
URINARY SYSTEM
Relaxes
bladder
CERVICAL
THORACIC
LUMBAR
Sympathetic
ganglion

breath

movement

nature

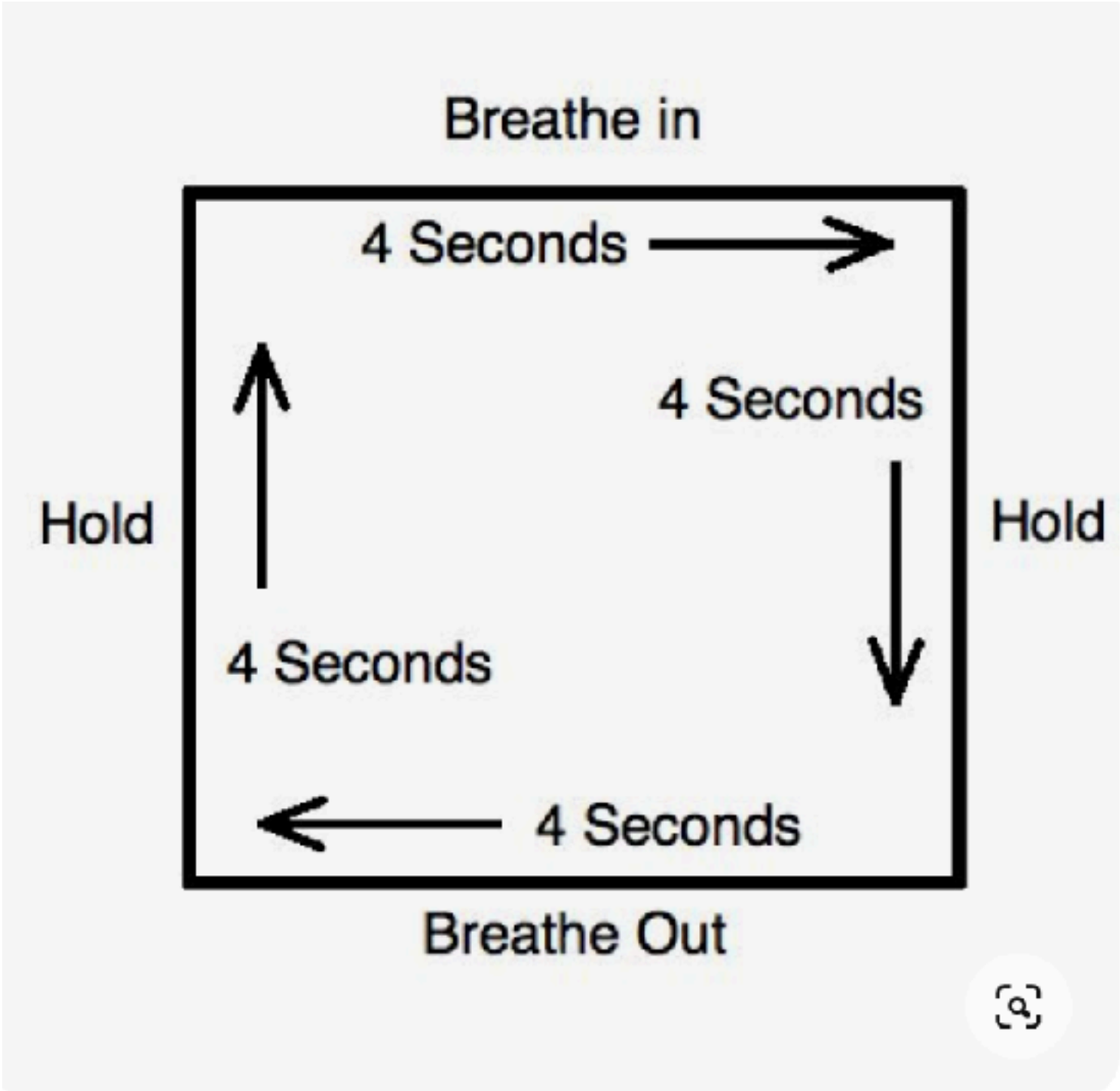
play

vision (including light/circadian rhythm)

Advantages of nose breathing

- The nose acts as a filter and retains small particles in the air, including pollen.
- The nose adds moisture to the air to prevent dryness in the lungs and bronchial tubes.
- The nose warms up cold air to body temperature before it gets to your lungs.
- Nose breathing adds resistance to the air stream. This increases oxygen uptake by maintaining the lungs' elasticity.
- Stimulation of Nitric Oxide production. Nitric Oxide increases the ability to transport oxygen throughout your body by dilating blood vessels. Nitric oxide is also antifungal, antiviral, antiparasitic, and antibacterial. It helps the immune system to fight infections.

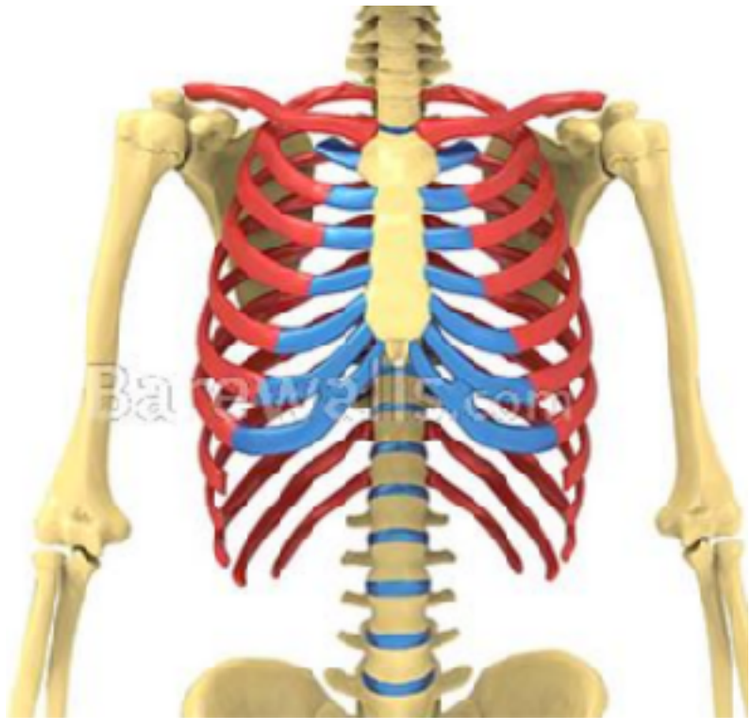
IN GENERAL- EXHALE DOMINANT BREATH WILL LOWER STRESS



2 part NOSTRIL inhale
followed by sighing exhale

Breath of joy: 2 or 3 part inhale, exhale with movement

Rib cage ladder breath with hands/band/blocks



Breath Test

The CO2 Tolerance Test is a gateway to understanding your physiology. Developed through extensive trials and applications, including in conjunction with Stanford University's Huberman Lab; this test has been proven to be a powerful indicator of a variety of physiological mechanisms and gives strong indicators of anxiety levels and even breath mechanics to some degree.

Carbon Dioxide tolerance is important because:

- CO2 and water along with energy (in the form of ATP) is the exhaust of your aerobic metabolism. When you work harder, breath rate and volume go up.
- Respiration increases as a result of energy, and CO2 accumulation. Therefore you need to rid yourself of more CO2 depending on how tolerant or intolerant of it we are.
- Your ability to go through metabolic pathways has a lot to do with how well your body can tolerate CO2 and the acid processes that can "stress" the system as it navigates its way up or down.
- C02 Tolerance is a great indicator of stress and inflammation

Follow the directions below to find your current CO2 Tolerance. Then you can use your time to calculate personalized Apnea and Cadence Breathing Protocols. Retest every 2-3 weeks to measure your progress and calibrate your personal protocol to your current state.

Over time your CO2 tolerance and your breath practice, in general, can serve as powerful indicators of reactivity to stressors (whether training or otherwise) and how your physiology is dealing with those stressors.

Directions for Test:

Find a stopwatch (on most phones)

All breaths are through your nose only

Take 3-5 deep normal nasal breaths

Relax for 10 seconds, continue breathing through your nose

Take 1 more full nasal inhale, and when you start to nasal exhale, start your timer

Exhale through your nose as slowly as you can, for as long as you can

Don't hold your breath or swallow. If that happens, stop your timer

When you have no air left to exhale, stop your timer

Record your time and input it below in the Apnea and Cadence Calculators to obtain personalized breathing protocols

What does your test result mean?

>80 seconds –> Elite. Reflects an advanced pulmonary adaptation, excellent motor control, and low arousal.

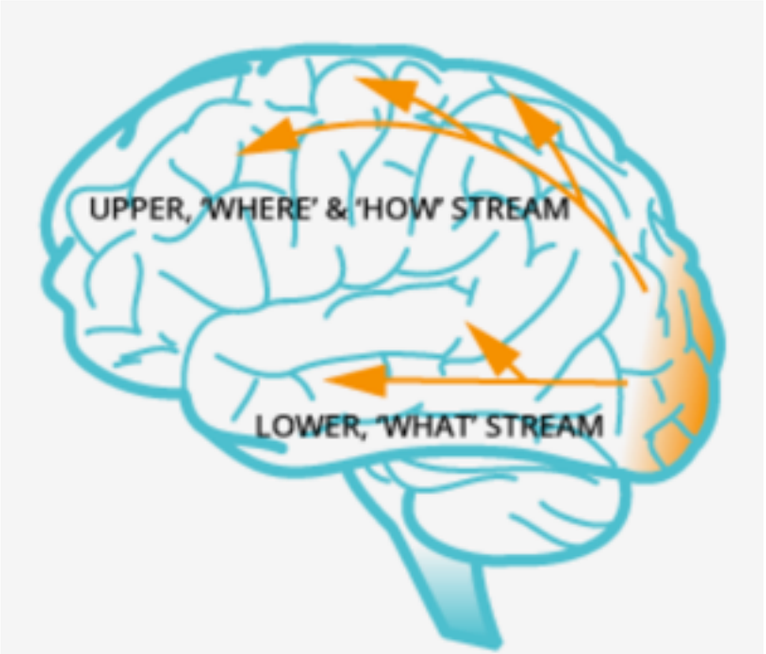
60-80 seconds –> Advanced. Reflects a healthy pulmonary system, good motor control, and relatively low arousal.

40-60 seconds –> Intermediate. This range generally improves quickly with a focus on CO2 tolerance training.

20-40 seconds –> Average. Moderate to high arousal state. Breathing mechanics need improvement.

<20 seconds –> Poor. Very high arousal and stress sensitivity. Mechanical restriction possible. Poor pulmonary capacity.

Two visual modes

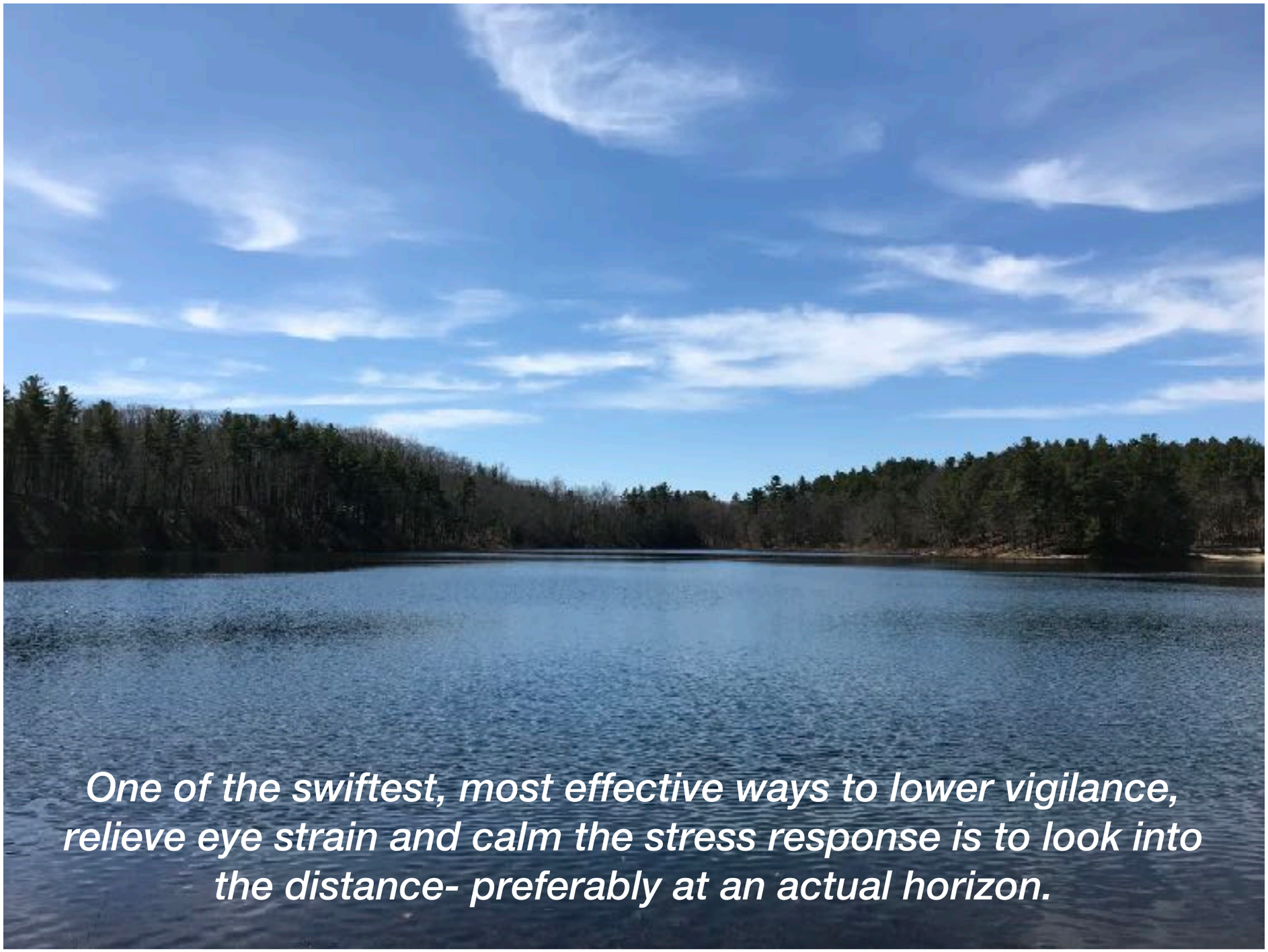


We have dedicated brain circuitry for two distinct modes of vision:

1. High acuity, narrowly focused “vergence” eye movements are involved with the ability to identify and make meaning of what we see

2. Reflexive and reactive, larger visual pathway cells are for detecting movement and subconscious level of safety. The brain is a survival organ above all else, basing information on and predicting the environment.

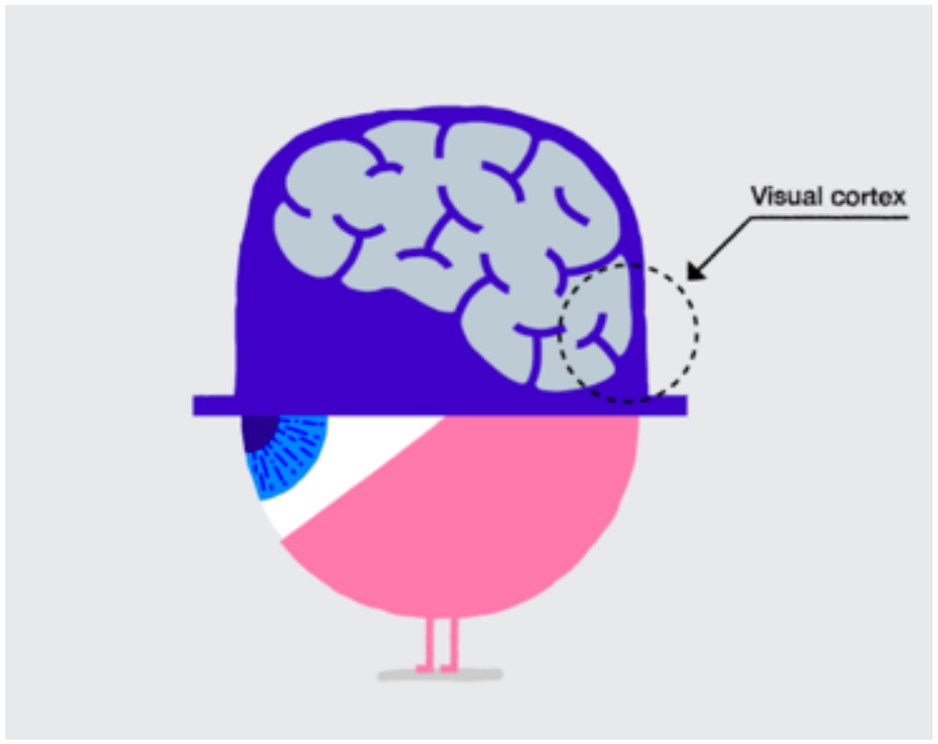
This second mode of vision recruits a dialed-out/panoramic visual stream corresponding to our level of autonomic arousal: higher arousal for focused gaze and lower for de-focused. This is bi-directional. We’re actually able to take in more visual information (particularly movement) with expanded sight, accessing a level of calm alertness where our our perception of space and time is more broad, allowing for greater perspective and sense of safety.


One of the swiftest, most effective ways to lower vigilance, relieve eye strain and calm the stress response is to look into the distance- preferably at an actual horizon.

Temporarily blocking all visual input can reduce stimulation and anxiety, relax facial tension and relieve eye fatigue and strain

Make a complete seal over both eyes with hands. Can rest elbows on a desk or table. I recommend about thirty seconds of “palming”. Combine with exhale dominant nasal breathing.

3 peripheral awareness drills:



- wiggling fingers around the frame
- peripheral vision/optic flow walking
- ball toss/catch using peripheral vision

Deliberately DEFOCUS, DETACH and under stimulate to provide a counterweight to high-stress jobs like frontline health care workers. Watching TV and playing video games are examples of ways we may seek to disconnect/self-medicate but won't accomplish the kind of deep-clean reboot, and recalibration/ recharge some other practices will provide.

- Listen to a guided relaxation such as yoga nidra: ten to thirty minutes a day can make a huge impact
- Watch the sunset
- Spend time in the woods, mountains, beach
- Take a bath (epsom salts are natural muscle relaxant)
- Make art, music, be creative
- Listen to binaural beats, ocean sounds
- Smell favorite high-grade essential oils

Change position often: keep moving!

If seated in front of a computer for work, set an alarm every 30-60 minutes to change position

Optimizing sleep and alertness by knowing WHEN to look outside

In an area of the brain right behind the roof of your mouth, there is a master clock orchestrating mental alertness, sleep, hormone production, appetite and more. The master clock is set by way of light to the eyes (original purpose of eyes) by viewing natural light (ideally before 9 am even if overcast) after a long period in the dark. Viewing evening/sunset light can also be helpful for regulating biological rhythms. Color contrast is highest at these times and sends the strongest signals to all aspects of the body influencing hunger, satiety, hormones, memory, cognition, sleep, mood.

Optimize mood, alertness and sleep by viewing natural light upon waking (outdoors if possible or through window that is not tinted).
No sunglasses and no looking directly at the sun.

You need just 2-10 minutes depending on cloud cover.
Even thick cloud cover provides far greater light level and optimization than any artificial light.

THE NATURE FIX: WHY NATURE MAKES US HAPPIER, HEALTHIER, AND MORE CREATIVE

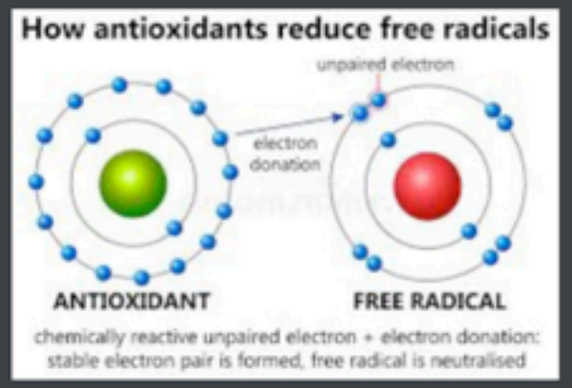
BY FLORENCE WILLIAMS

An intrepid investigation into nature's restorative benefits by a prize-winning author.

For centuries, poets and philosophers extolled the benefits of a walk in the woods: Beethoven drew inspiration from rocks and trees; Wordsworth composed while tromping over the heath; Nikola Tesla conceived the electric motor while visiting a park. Intrigued by our storied renewal in the natural world, Florence Williams sets out to uncover the science behind nature's positive effects on the brain.

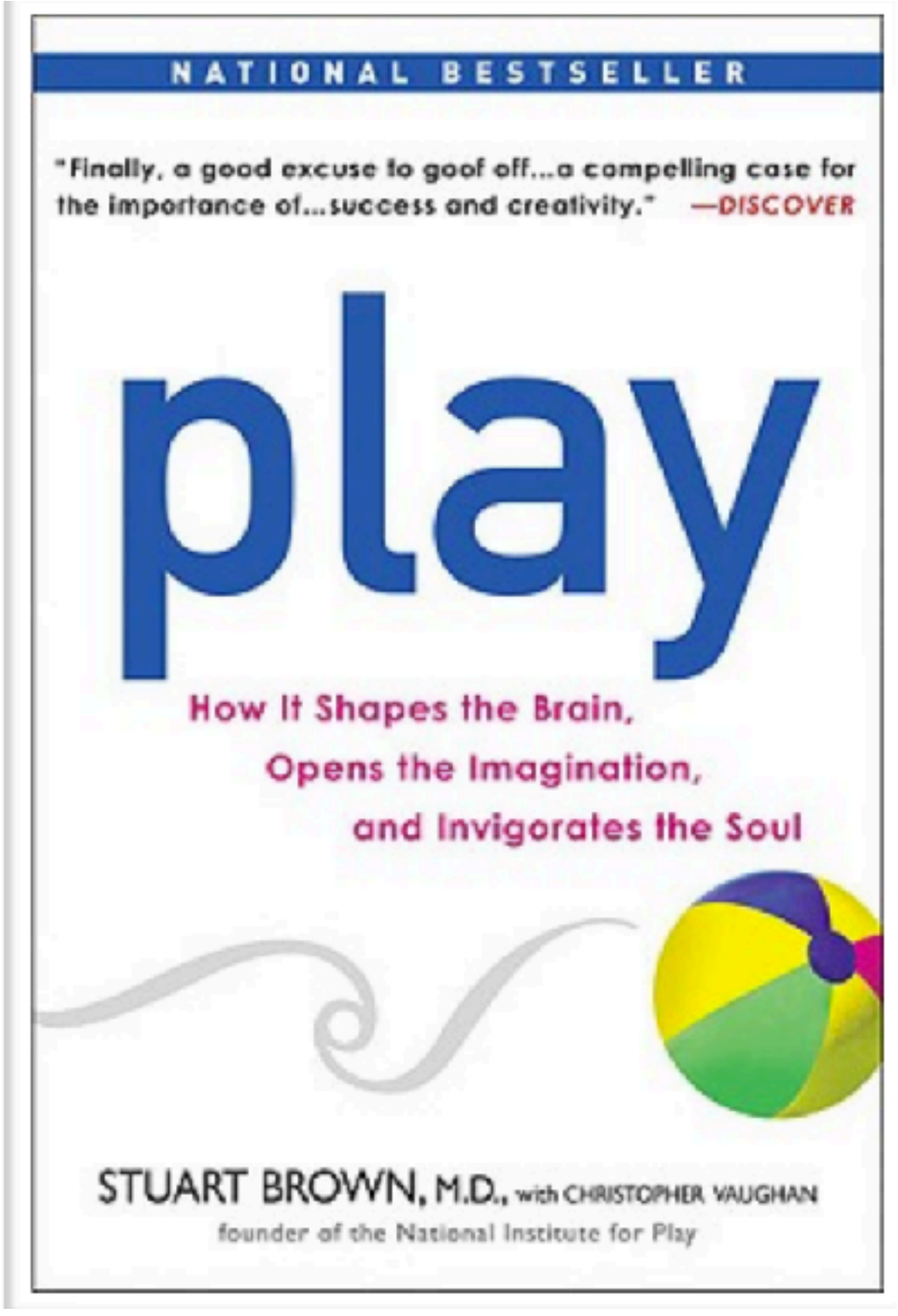
From forest trails in Korea, to islands in Finland, to groves of eucalyptus in California, Williams investigates the science at the confluence of environment, mood, health, and creativity. Delving into completely new research, she uncovers the powers of the natural world to improve health, promote reflection and innovation, and ultimately strengthen our relationships. As our modern lives shift dramatically indoors, these ideas—and the answers they yield—are more urgent than ever.

EARTHING



When bare are feet or skin comes in **contact** with the earth, **free electrons are absorbed**

- **cope and repair**
- **vitality**
- **better sleep**
- **stabilizes the body's basic biological rhythms**
- **knocks down (and even knocks out) chronic inflammation**
- **reduces and eliminates pain**
- **anti-inflammatory and anti-aging**


NATIONAL BESTSELLER
"Finally, a good excuse to goof off...a compelling case for the importance of...success and creativity." —DISCOVER
play
How It Shapes the Brain,
Opens the Imagination,
and Invigorates the Soul
STUART BROWN, M.D., with CHRISTOPHER VAUGHAN
founder of the National Institute for Play

Playful interaction allows a penalty-free rehearsal of the normal give-and-take necessary in social groups.

Stuart Brown M.D & Christopher Vaughan

Play

Play energizes us and enlivens us. It eases our burdens. It renews our natural sense of optimism and opens us up to new possibilities.

Stuart Brown, MD

Play ALLOWS US TO
DEVELOP **ALTERNATIVES**
TO violence AND DESPAIR;
IT HELPS US LEARN
perseverance
AND GAIN optimism.

Dr. Stuart Brown