

STRESS – prevention

Rationale -

Research indicates that each of the 4 routines below enhance distress tolerance. Each directly or secondarily primes the parasympathetic nervous system (PNS). A counter-weight to the fight or flight mechanism, the PNS triggers what is known as both the "rest & digest" or "feed & breed" mode. The PNS slows us down and promotes a state of relaxation. In a sense, the PNS can help to inoculate us against stress. Physiologically, a PNS works to stabilize the central nervous system. Generally speaking, then, the more responsive a PNS, the less likely someone will experience excess or chronic stress. The exercises and rituals listed here will improve the responsiveness of your PNS.

- Exercise Arguably, no other routine or ritual can more effectively alleviate anxiety and/or minimize stress then exercise. Cardiovascular exercise in particular, though research suggests that weight-lifting in combination with cardiovascular exercise is more effective than either routine alone. Any exercise helps. Most experts recommend at least 20 minutes a day of moderately intense exercise to maximize the PNS benefits. Regularly exercise also cuts down on the tau protein in the brain, excess levels of which predispose us to dementia. Exercise, then, enhances both cardiovascular functioning and cognitive skill.
- 2. Sleep hygiene Sleep is perhaps the most important behavior that we engage in. Extensive research has demonstrated that sleep deprivation greatly elevates our risk of various symptoms and diseases. The more soundly that we sleep, over a 6- to 9-hour period, the healthier we live. And, a healthy body can repel stress more readily then a fatigued, ill, or stressed body. Avoid your electronics for at least an hour before bedtime. More so, avoid meals within 2 hours of your bedtime. For those who often struggle to drift off at night, diaphragmatic breathing can help to induce sleep. If you find some particular task or behavior boring, and boredom triggers sleepiness in you, then practice that mind numbing, boring behavior before bed. Certain scents (*e.g., lavender*) can activate sleepiness, as the olfactory bulb in the brain connects directly into the opioid system. The right scent, then, can trigger the opioid system and the type of inhibitory response that stills the brain. Finally, the more ritualized your sleep hygiene, the more likely that you can cue sleepiness at bedtime. That is, practicing the same ritual at night in the 20 to 45 minutes before laying down *EX: brush teeth, then take 5-minute shower, before 3 stretching exercises, and finally 5 minutes of diaphragmatic breathing. Head to pillow.* the more likely that you can behaviorally condition your body to expect sleep once your head hits the pillow.
- 3. Attend to relationships We are social animals, hardwired to bond. Relating and belonging signal biological imperatives. For your brain and body to optimally function, you need to have at least one deeply anchored, safe connection in this world. If you and a significant other are in a rift, then repair. It's fine if you need time to figure out what to say and how. But, sooner better than later, repair with that significant other. Identify what you need from the significant other, and what they may want from you. Apologize if need be. One way or the other, repair and reestablish your bond. Healthy relationships stimulate the opioid track in the forebrain, the area associated with soothing. The healthier our relationships, then, the healthier, more resilient our brains.

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4. Diaphragmatic breathing –

Square breathing signals a basic to therapeutic breathing. In square breathing, you focus on the pace of your breathing. The technique is quite simple - breather in x4 seconds, pause 4 seconds at the top of your inhale, breathe out x4 seconds, then pause 4 more seconds. Rhythmic breathing – cycling between inhalation & exhalation at the same tempo – activates the PNS.

People tend to master square breathing quickly, especially if they practiced it a few minutes every day (while sitting in traffic, bored at your desk). Once mastered, people next integrate either diaphragmatic breathing and/or meditation into the intervention. *Diaphragmatic breathing* – flexing the diaphragm sheath that connects the base of the lungs to the lower viscera – maximizes oxygenation, which in turn alleviates the demand on the heart. Tiny organs called alveoli line the lungs and help to pass air into the blood supply. Alveoli pack more densely in the lower half of the lungs, so, when you use the base of your lungs to breath in, you more than double what the top half respirates into the blood system. The more oxygen-rich your blood, the less the heart has to work to push oxygen across your body. More so, the lungs and heart are interconnected. When the diaphragm muscle flexes and fully expands the lungs, it secondarily stretches the heart. And, as a muscle itself, the heart loves a good stretch to relieve tension. Practicing diaphragmatic breathing for 5 to 10 minutes at a time, 2 to 3 times a day, will prime your PNS and enhance distress tolerance.

Link – this Youtube video demonstrates the basics to diaphragmatic breathing. https://www.youtube.com/watch?v=Apitav4HMCg

Diaphragmatic breathing –

Lay down on a flat surface or firm bed

Place one hand on your chest, the other betw your lungs & belly

First minute - breathe normally

Second minute – focus on your diaphragm breathing in deeply & slowly,

 $\circ\,$ fill 60-70% of your lungs per breath, $\circ~$ bottom hand raises as you inhale, top hand remains still

Third minute – fill 80-90% of your lungs

- Minutes 4+ fill 95-100% of your lungs
- breathe in & out at the same pace 4-6 seconds in, pause, 4-6 seconds out, pause

