

# STRESS

Stress is everywhere and impacts everyone. Our bodies have an inherent system to handle stress if we allow it to do so. If we begin to manifest the ill effects of stress, there are easily applied techniques which if practiced can become automatic and help reduce these ill effects.

The autonomic nervous system (ANS) has a direct role in physical response to stress and is divided into the sympathetic nervous system (SNS) and the parasympathetic nervous system (PNS). When the body is stressed, the SNS generates what is known as the "fight-or-flight" response. The PNS is complementary to that of the SNS, and it's known as the "rest-and-digest" system.

## Autonomic Nervous System:

<u>Sympathetic System:</u>	<u>Parasympathetic System:</u>
The "Adrenergic System" (Stress) <ul style="list-style-type: none"><li>• Fight-or-flight</li><li>• Adrenaline secreted</li><li>• Blood shunted to the muscles for action</li><li>• Increased blood pressure and heart rate</li><li>• Eyes dilate, respirations increase</li><li>• These actions are stimulated by the circulating catecholamines, like Adrenaline</li></ul>	The "Cholinergic System" <ul style="list-style-type: none"><li>• Rest-and-digest</li><li>• "Housekeeping" system</li><li>• Relaxes</li><li>• Repairs injuries</li><li>• Immune system</li></ul>

These two systems are necessary but opposing. If one increases, the other conversely decreases as if each side on the opposite sides of a see-saw. With an increase in the sympathetic system, there is automatically a decrease in the parasympathetic system.

Stress stimulates the sympathetic system and decreases the parasympathetic system.

With a DECREASE IN PARASYMPATHETIC TONE (chronically), we see:

- troubles with food digestions, constipation, diarrhea, bloating, peptic ulcers
- ongoing or persistence of injuries
- recurrent infections, sore throats, colds, flus, etc.
- a decreased ability to rest (insomnia) or relax

### **Practical considerations:**

- Stress is ubiquitous.
- Stress can be negative (loss of loved one or a job, etc.) or positive (weddings, promotions, etc.).
- Stress is more prevalent today – 77% of people regularly experience physical symptoms caused by stress (The American Institute of Stress 2014) – than in years past. WHY? In today's world of social media, our minds are bombarded with constant and sometimes nerve-wracking, fear-instilling information. Social media can also cause people to spend a predominant part of their lives online rather than connecting and de-stressing with people in person. Other contributors to our stressful lives in today's world include financial burdens, over-scheduled calendars, high divorce rates, and job pressure.
- Stress is cumulative throughout the day, week, or lifetime.

- With the increasing intensity and duration of stress on our bodies, there is an increase in the physical (and emotional) manifestation of this stress. Irritability, rashes, noise intolerance, decreased libido, as well as the aforementioned conditions above can all be representative of an overload of stress.
- We have a reserve capacity to handle stress (an empty, but forever filling ‘cup’). The less reserve (fuller cup), the greater our chance of manifesting stress. The more reserve, the better equipped we are at handling new stress and to perform new tasks.
- It is difficult to avoid all environmental stress, but we can modify the way we perceive and accumulate stress.

The goal is to reduce the negative impact of stress on our bodies. We can do this by reducing the amount of stress we are exposed to or by increasing our ability to alleviate stress.

The theoretical goal, based upon the model above, is to increase the parasympathetic tone and conversely reduce the sympathetic tone. There are several methods to do this or techniques for stress alleviation. Below are some good suggestions to follow, encapsulated in the pneumonic **COPE V x3**.

**Control issues:**

- The things you can control, do
- The things you have no control over, stop worrying about

**Openness:**

- Being open, or “venting,” helps reduce the amount of circulating adrenaline and therefore reduce the sympathetic tone. The important issue is to discuss, or vent, these problems with people, regardless of whether they have any answers. They just need to listen and give you a forum to unload!

**Pace/Perception:**

- Pacing - Don’t overbook! Hurrying stimulates the sympathetic system. Set and follow a reasonable schedule. Set up your schedule once weekly to unburden potentially stressful days.
- Perception - many people spend too much time worrying about things that never materialize. Do your best, and think the best about what you did; then stop worrying about all of the possible negative outcomes. Think of the worst case scenario: How likely is that to happen? What if it does happen? Put your feeling in perspective, think the best possible outcome, and then act on it. ‘Reframing’ can help reduce your perceptions of stress.

**Exercise:**

- Exercise is a good means to “use up” that excess circulating adrenaline. The best type is aerobic exercise, which is activity that is continuous, rhythmic, and uses the larger muscle groups to keep your heart rate (HR) at its target level for at least 20 minutes. (Target HR=220 minus age, times 60-80%).

**Vacation:**

- Vacations, or “time off,” increase the parasympathetic tone, allowing the body to rebuild and improve its reserve capacity to handle stress. To do this, these vacations must be enjoyable (thus stimulating the parasympathetic system)! Yearly vacations are great, but we also need them more frequently.

- **‘Mini Vacations’**

1. Six to eight times per day for 10-15 seconds each. Sit up straight, shoulders back, take a deep breath, hold it for 5-10 seconds, and let it out as your shoulders drop (this deep breath stimulates the parasympathetic system). You can put a blue dot on a sticky paper and place this somewhere that you will see 6-8 times per day to remind you to do this (‘biofeedback’).
2. Take a ‘break’ for 20-30 minutes every day. This could be going for a walk, reading a book,

knitting, exercising, etc. (as long as it's fun!). A break for fun stimulates the parasympathetic system and reduces stress. Only 20-30 minutes per day. (Pay yourself now or suffer the consequences later!).

3. SLEEP. This is the mode in which your body rejuvenates itself (parasympathetic function). If you're stressed out during the day and go to sleep with these same worries, you will dream about these concerns, maintaining your sympathetic tone. You need to turn off this adrenergic system to allow your body restful and rejuvenating sleep. There are many ways to help this transition from day to night: progressive relaxation tapes, visualization techniques, easy stretching before bed, etc.

Reference: [The Relaxation and Stress reduction workbook](#), by Martha Davis