
Stress- related modern day ailments

Level 2 Teacher
Training Dec 2013

Qiu ONG

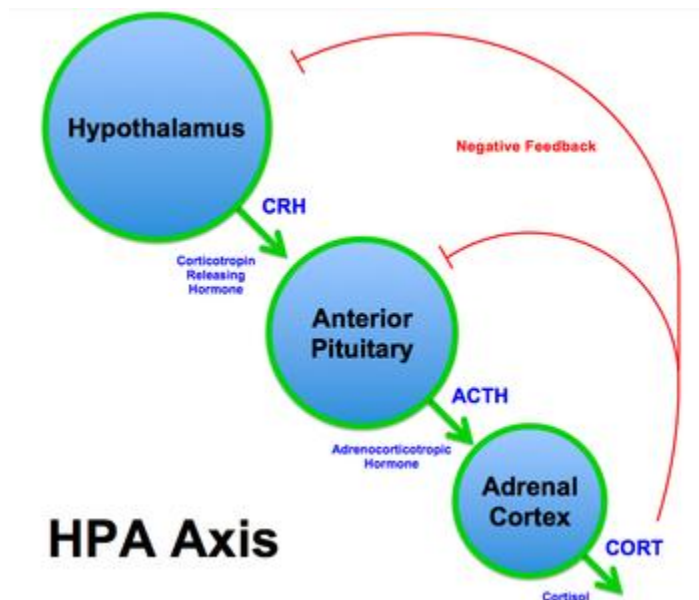
What is Stress?

Stress is the human body's way of responding to pressure. This can be emotional, mental or physical pressure. In the case of evolution, stress used to be physical. Our caveman ancestors mostly used to deal with physical challenges. They had to defend their colony against an aggressive animal like the saber-toothed tiger, or preferably (as what I would recommend) run away. What happens is this:

First: Brain recognizes there is a stressful situation –

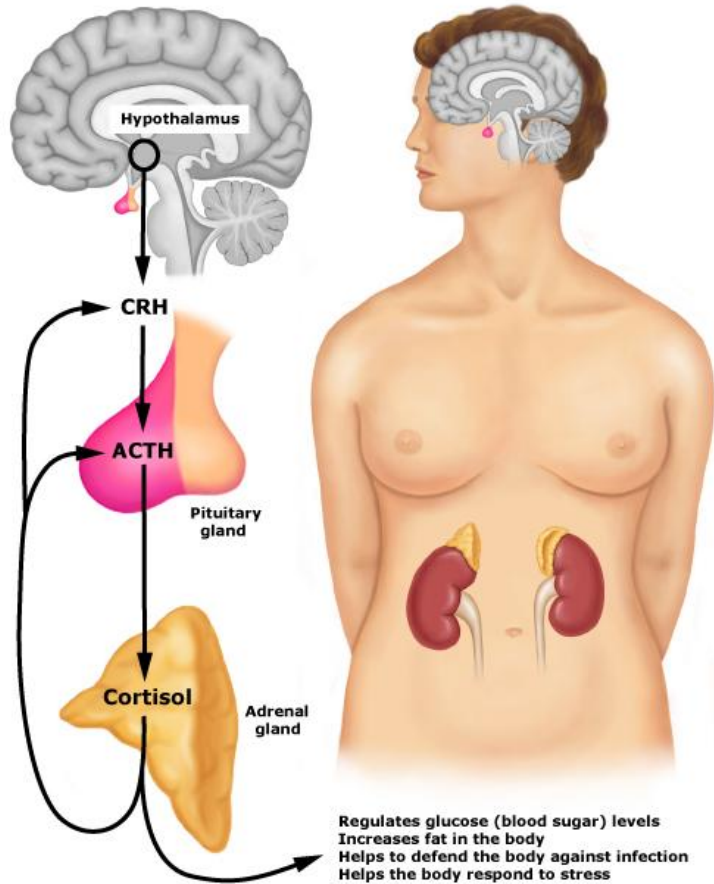


Second: The **hypothalamus** in your brain which is in charge of the stress response, sends signals to the **pituitary gland** (size of a pea, situated at the base of the brain) which sends signals to the **adrenal glands** (above the kidneys) –



Source: wikipedia.com

Third: The adrenal glands secrete 2 hormones – **Cortisol and Adrenaline**.



Source: phoenixrevolution.net

Cortisol is actually released by the body throughout the day. It basically reduces inflammation, increasing short-term memory, and helps the liver remove toxins from the body. When the body gets very stressed, too much cortisol is produced. Too much cortisol also prepares the body for fight or flight by decreases the body functions in other relatively unimportant functions like digestion and immunity. Constant elevated amounts of cortisol raises blood pressure, lowers bone density (interferes with replenishing of bone tissue), and reduces serotonin which results in being highly agitated and anxious.

Adrenaline works by stimulating the heart rate, contracting blood vessels, and dilating air passages, all of which work to increase blood flow to the muscles and oxygen to the lungs. It is the response mechanism by the body to handle stress. Adrenaline increases a person's physical performance and provides the amount of energy necessary in coping with unexpected situations.

Confused between Adrenaline and Cortisol?

They are both produced from the same gland, the adrenal gland. Adrenaline is produced by the adrenal medulla in the adrenal gland, while cortisol is produced by the adrenal cortex in the adrenal gland. Cortisol is produced in steady amounts throughout the day. Adrenaline is only released during times of stress. While adrenaline has no known harmful effects on the body, high levels of cortisol can result in insulin resistance, weight gain or loss, mineral loss from bones which might lead to osteoporosis, decreases the gut lining which evokes ulcers and irritable bowel syndrome.

Stress-related modern day ailments

1. Neck/shoulder pain
2. Common cold
3. Lack of motivation

1. Neck/shoulder pain: Cortisol tenses the muscles to get ready to fight, or flee. When your body is in regular high levels of stress, the muscles are constantly tensed and this eventually leads to stiffness or pain in the shoulder and neck.



2. Common Cold: Elevated levels of cortisol decreases the body's immunity. What happens is it turns off the body's inflammatory response. Invading pathogens which include disease producing agents like viruses and bacteria enter the body. When the immune system is turned back on during slight moments of relaxation, the body recognizes there is an invasion and quickly switches on its inflammatory response to get rid of the pathogens → this results in symptoms like stuffy nose, sore throat, fever, ie the common cold.



3. Lack of motivation: To a certain extent, stress is good. Utilised well it keeps us in peak performance in whatever we do, be it looking after the children, being creative designers or managing finance at the office. Stress makes us alert, awake and ready. Too much stress overworks the body. This is especially so if a person is unable to turn the stress switch off and relax. On a mental level the stress turns into distress. On a physical level, cortisol puts other functions of the body like digestion and immunity on hold. This eventually wears the body out. When the body is worn out physically and mentally, our emotions easily get affected. In short we get tired. When this tiredness is constant, it becomes a drain. When we feel drained, we do not have the will or energy to do anything. On top of many things, this affects our relationship with others, our sleep, our health. Everything snowballs into one big mess and it just gets worse!



How can yoga help?

Yoga connects body, breath and mind. When we get too stressed our sympathetic nerves are activated and cortisol gets released into our body. Yoga activates the parasympathetic nerves to help one relax and rest. Yoga connects body, breath and mind. The asanas bring our mind to the present moment, our breath lengthens and deepens, and the body is strengthened.

Since stress is the cause of these ailments, the poses in this sequence are designed to combat stress, and deal with the 3 ailments.

<u>Ailment</u>	<u>How yoga benefits ailment</u>
Neck/shoulder pain	<ul style="list-style-type: none"> • Relieves tension in joints, neck and shoulders • improves circulation in the area • strengthens muscles around the area.
Common cold	<ul style="list-style-type: none"> • Boost immunity by oxygenating the system through deeper longer breaths • improves circulation throughout body • revives and stimulates thyroid and pituitary glands • strengthens body and hence reducing susceptibility to illnesses.

Lack of motivation	<ul style="list-style-type: none"> • Brings body, breath and mind together to increase awareness of physical, emotional and mental self • improves concentration • re-centres the mind to bring about a general feeling of well being.
--------------------	---

Note:-

It is important to keep long deep breaths throughout the practice. This must be done without strain or it becomes counteractive and stress gets elevated rather than relieved. The initial asanas are short in duration to increase awareness and encourage a present mind. They also increase body heat to burn off a stressed person's nervous energy. The later half of the sequence is more therapeutic. Asanas are of a longer duration to slow down breath and mind.

If severe neck pain is present, in all relevant asanas look ahead instead of up.

<u>Time</u>	<u>Asana</u>	<u>Benefits</u>
2 min	Start with quiet seated meditation. deep abdominal breathing or natural breathing	<ul style="list-style-type: none"> • Calms the mind • strengthens the nervous system • lowers blood pressure and respiratory rate • improves oxygenation of blood and circulation
6 min	Surya Namaskar (Sun salutations)	<ul style="list-style-type: none"> • reduces stiffness in almost all parts of the body • an active standing meditation that unites body breath and mind • improves lung capacity • cultivates flexibility, stability and involvement
1 min	Utkatasana (powerful pose)	<ul style="list-style-type: none"> • improves flexibility of ankles, knees, hips, shoulders and neck • increases mental strength • strengthens body
1 min	Garudasana	<ul style="list-style-type: none"> • improves flexibility in joints (including

	(eagle pose)	shoulder) <ul style="list-style-type: none"> • relieves stiffness in neck and shoulder • improves concentration
2 min	Trikonasana Classical and Variation (3 angle poses)	<ul style="list-style-type: none"> • reduces tension in shoulders and neck • helps function of internal organs • relieves arm stress • activates abdominal organs, especially the kidneys (adrenal glands)
2 min	Virabhadrasana A&B (warrior poses)	<ul style="list-style-type: none"> • strengthens body and mind • relieves stiffness (including shoulders and upper back) • improve lung capacity • builds sturdiness in body and mind
5 min	Vagra Swasa breathing (and variation if student feels like more challenge: inhale, raise one leg back, exhale bring knee to forehead)	<ul style="list-style-type: none"> • relieves stress in shoulders, neck and lumbar • encourages long and deep breaths
5min	Bhujagasana (cobra) and Shalabhasana (locust) breathing	<ul style="list-style-type: none"> • works pancreas, spleen and liver (where glucose is converted to blood sugar in times of high stress) • strengthens spine and nervous system • relieves pain in spine including neck • thymus glands (immune glands situated upper part of chest behind breastbone) stimulated and revived back to health
1 min	Jathara Parivartasana (abdominal twist)	<ul style="list-style-type: none"> • releases tension in shoulders, neck and entire spine • breathing slows down

1 min	Ardha Matsyendrasana (spinal twist)	<ul style="list-style-type: none"> • relieves tension in entire spine • increases digestive power (happy belly, happy mind!) • improves lung capacity • increases mobility and stability
1 min	Kakasana (crow pose)	<ul style="list-style-type: none"> • calms body and mind, making one feel lighter and fresher • improves lung capacity • reduces stress • activates spinal cord
3 min	Shavasana (corpse pose) followed by seated, closed eyes shoulder/neck movements – slowly bend head front, back, left, right, then rotate shoulders back and front. Then gently open eyes and Namaste to end the class)	<p><i>(continued on next page)</i></p> <ul style="list-style-type: none"> • relaxing pose • calms mind • relieves stress • brings energy into balance • most important part of the class to unite body, breath and mind
Total: 30 min		

In conclusion

Stress will continue to be part of our modern lives. It is unavoidable and in fact a reasonable amount of it is necessary to be good at what we do. The problem is when stress is of high, constant levels and the mind does not know how to switch it off. Yoga definitely helps, but it is also important to keep this in mind:

- Think positive
- Chin up and keep smiling (a physical effort can have a pleasant effect on your mental health)
- Be grateful and thankful

If all else fails; If the day was absolutely awful; If one didn't even have time or is totally exhausted to do any yoga, and is feeling miserable and in total despair, try this:

Take just **10 minutes** before bed time to sit in Vajrasana or any comfortable seated position. Make sure you are comfortable.

Close your eyes and **meditate**. Pick one thing – your breath, the sensation in your nostril or abdomen, our count backwards from 108. This relaxes your mind right before sleep. It calms down all the crazy thoughts and emotions and prepares your mind for a good rest.

A good sleep always helps make everything better.

Your body and mind are sufficiently rested to tackle another day.

Sources:

Light on Yoga – BKS Iyengar

www.mayoclinic.com

www.helpguide.org

www.ehealthmd.com

Wikipedia

Aananda Yoga Indea Teacher Training Manual 2013