

THE EFFECTS AND MITIGATIONS OF STRESS

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OUTLINE

- Definition of Stress
- Psycho-Physiological Impact of Stress
- Physiological Responses
- Mitigating the effects of stress on the brain

DEFINITIONS

Stress—a complex series of reactions, cognitive, psychological, and physical, in response to demanding or threatening situations

Stressors—events that produce cognitive, physical, and psychological demands on a person

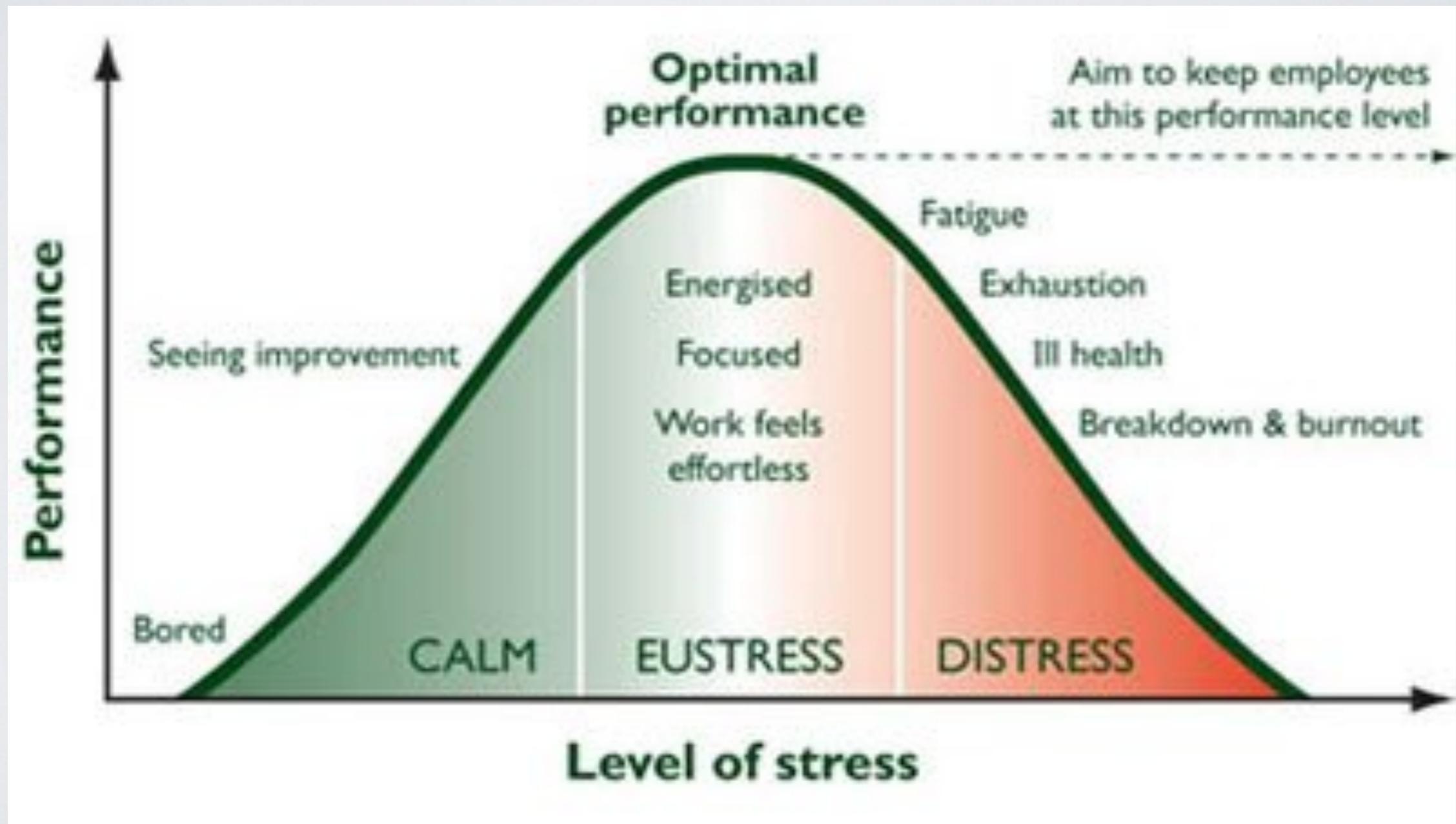
TYPES OF STRESS

1. **Hypostress** means just not enough stress. We need a little bit in our lives, otherwise we feel bored and have nothing challenging us.
2. **Eustress** is a positive kind of stress which is short term and actually arises to strengthen us for immediate action, creativity and times when we need inspiration and motivation.
3. **Distress** is negative and harmful and causes us to adapt to changing situations; there is the short-term variety of acute stress that passes quickly, and long-term chronic stress.
4. **Hyperstress** is when we get so stressed out that we just overload because it is just too much for us to handle.

COGNITIVE IMPACT

- **Yerkes-Dodson Law**
 - Empirical relationship between arousal and performance
 - The law dictates that performance increases with physiological or mental arousal, but only up to a point. When levels of arousal become too high, performance decreases.
- **New learning is reduced** and attention focus hard to maintain (forgetfulness common)
- **Perseveration**, or the inability to “let go” of minor events
- **Over-sensitivity to potential negative consequences** of situations can dominate decision-making.

YERKES-DODDSON LAW



PSYCHOLOGICAL RESPONSES

Typically, stressed out individuals feel:

- Little interest or pleasure in doing things,
- Trouble falling asleep, staying asleep, or sleeping too much,
- Feeling tired or having little energy,
- Poor appetite/overeating,
- Feeling bad about oneself,
- Trouble with concentration on things, such as reading/watching TV
- Moving so slowly that other people might notice, or the opposite, too fidgety or restless,
- Easily being irritable or on edge,
- Not being able to control worries

HOW TO MITIGATE THE EFFECTS OF STRESS IN STUDENTS?



STRESS AND EXERCISE

- Physical activity during leisure time has been associated with higher perceived energy, and in some groups also with lower perceived stress.
- Exercise in leisure time shows a more steady, consistent release of cortisol (a.k.a. the stress hormone) rather than periods of high release and low release.
- More dynamic, consistent cortisol release patterns has been shown to be beneficial.



PSYCHOLOGICAL BENEFITS OF EXERCISE

Increases:

- Assertiveness
- Confidence
- Memory
- Self-Control
- Well-Being

Decreases:

- Anger
- Depression
- Anxiety
- Headaches
- Work Errors

STRESS AND SLEEP

- Make sure that your child has an age appropriate bedtime allowing for enough sleep (9 hours). Limit screen time in the evenings before bedtime.
- Prolonged napping can result in significant difficulty at bedtime.
- Screen time, good media and sleep routine.
- Help your teenager establish a regular, relaxing routine to unwind at night, just before bedtime. This will help signal your teen's body that it is time to sleep.
- Allow your teen to go to bed later on weekends, but make sure he or she wakes up within two hours of his or her usual weekday wake time. If allowed to “sleep-in” on the weekends, your teen's body clock will be disrupted, and he or she will have a very hard time waking up on Monday morning. It is important to establish and maintain a consistent sleep-wake schedule.

STRESS AND NUTRIENTS

When a body is under stress, the body uses up its main nutrients to its bare. These include:

- **B Vitamins:** These help one's body cope with stress by building up metabolism and control the nervous system
- **Proteins:** Assist in growth and tissue repair
- **A Vitamins:** Essential for normal vision
- **C Vitamins:** Protection of one's immune system and lowers the amount of cortisol
- **Magnesium:** Responsible for many tasks such as: muscle relaxation, fatty acid formation, making new cells, and heartbeat regulation

STRESS AND NUTRIENTS

These nutrients can be found in a variety of foods, some examples are:

B Vitamins: Seaweed, legumes, and raw foods

Proteins: Lean meats, fish, eggs, seeds, and nuts

A Vitamins: Cheese, eggs, fish oil, and milk

C Vitamins: Fruits

Magnesium: Leafy greens, fish, meat, and dairy products



SOCIAL SUPPORT NETWORK

- Cast a wide net
- Be proactive
- Take advantage of technology
- Follow interests
- Seek out peer support
- Improve social skills
- Ask for help



SELF-COMPASSION

- Three pillars of self-compassion
 - Self-kindness
 - Common Humanity
 - Mindfulness
- Exercise: How would you treat a friend?

IN SUMMARY...

- Exercise, sleep, nutrients, social network, and self-compassion are all mitigations of stress in students.
- Video: Practical Strategies for Supporting Students