

Information Handout

Professional Version | US English

How Your Body Responds To Stress



Description

The sympathetic nervous system is activated in response to stimuli processed as threatening. It controls 'fight or flight' responses which, when activated to a high degree, can result in powerful body sensations. At a lower level of intensity the same physiological system responds to stress. Many clients identify with the concept of 'stress' more readily than 'threat' and the *The How Your Body Responds To Stress* information handout visually describes the most common physiological responses to stress. Components of the response about which clinicians will find it helpful to be informed include:

- **Brain response:** threats are detected at the level of the amygdala, but the hypothalamus is responsible for activating body systems in response to the stress.
- The **hypothalamus** releases corticotrophin-releasing hormone.
- The **adrenal glands** respond by releasing epinephrine (adrenaline) and cortisol which stimulate a number of further systems with the effect of preparing the body to respond to the stress or threat.
- **Bronchioles** dilate facilitating higher oxygen intake.
- **Heart rate** increases facilitating greater oxygen and glucose transport.
- **Blood pressure** increases in response to the increase in heart rate.
- **Liver** converts glycogen to glucose allowing for greater energy expenditure.
- The (non-essential) **digestive system** is down-regulated to facilitate greater energy expenditure elsewhere.

Instructions

This is a Psychology Tools information handout.

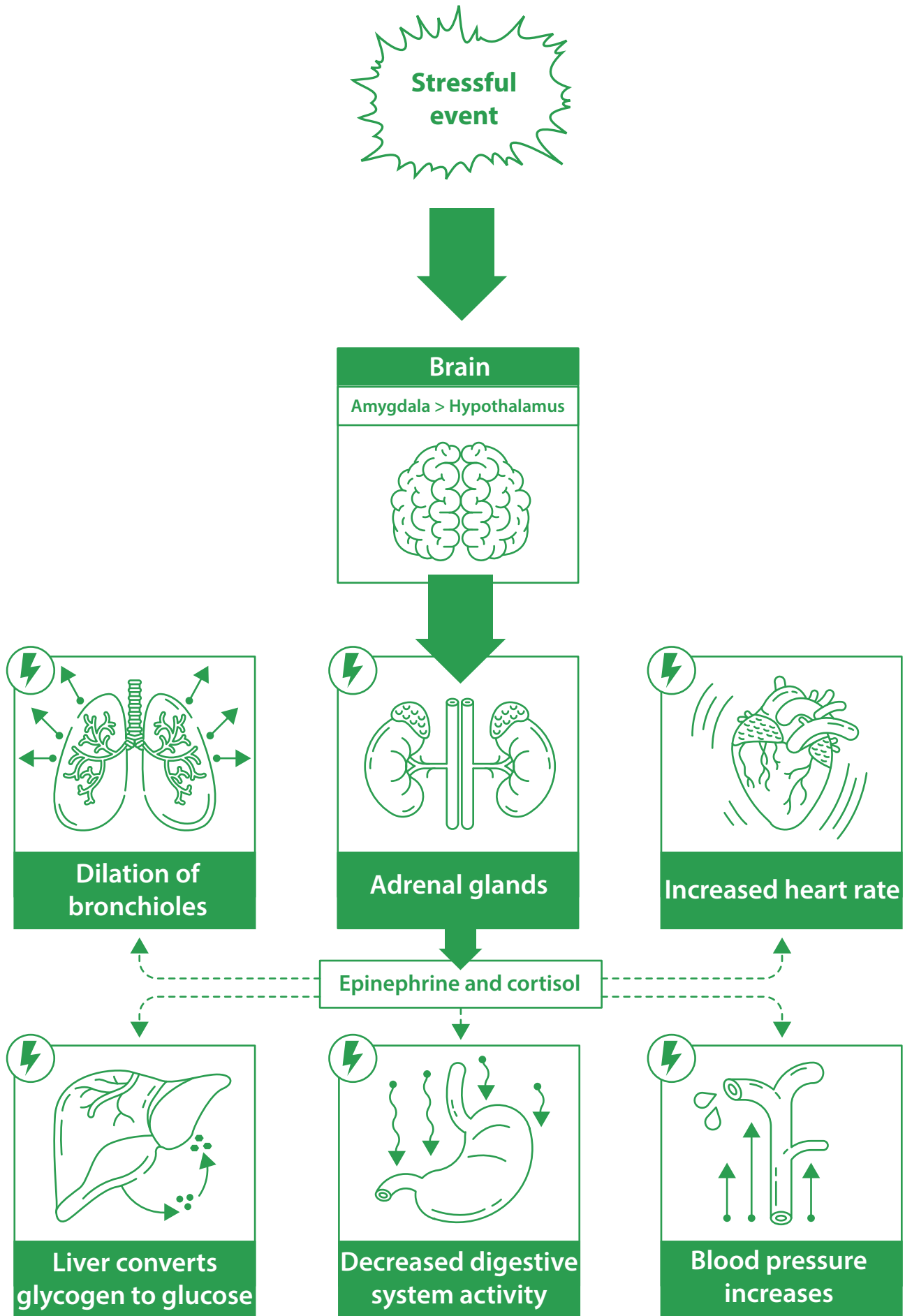
Suggested uses include:

- Client handout – use as a psychoeducation resource.
- Discussion point – use to provoke a discussion and explore client beliefs.
- Therapist learning tool – improve your familiarity with a psychological construct.
- Teaching resource – use as a learning tool during training.

References

Sapolsky, R. M. (2004). *Why zebras don't get ulcers*. Holt paperbacks.

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