

Physiological Indicators of Stress

<i>What?</i>	<i>Why?</i>	<i>How?</i>
Pupils dilate	↑ Visual perception	Sympathetic Nervous System (SNS) stimulation causes dilated pupils
Sweating	↓ Body heat generated by ↑ metabolic rate	
↑ Heart rate	↑ transport of nutrients and byproducts of metabolism more efficiently	SNS stimulation of β^1 receptors in heart muscle
Pale skin	Diversion of circulation from periphery to the core of the body	SNS stimulation of α^1 receptors in peripheral blood vessels
↑ Rate and depth of respirations	Attempt to deliver more oxygen to the cells	SNS stimulation of β^2 receptors in bronchioles causing bronchodilation
↓ Urinary output	Conservation of fluid component of circulating blood volume	↑ sodium & H ₂ O retention due to stimulation of adrenals to secrete mineralocorticoids
↓ Peristalsis → gastro-intestinal distress	↓ Parasympathetic activity	Sympathetic nervous system over-riding activity of parasympathetic nervous system
↑ Level of alertness	Mobilization to deal with serious threats	Neuro-endocrine stimulation
↑ Muscle tension	Preparation for rapid motor activity or defense	
↑ Blood sugar	Provide glycogen for muscle activity	Release of glucocorticoids by adrenal cortex Conversion of glycogen to glucose for ↑ muscle activity and ↑ metabolic rate