

Autonomic Nervous System (Human): Chart

Organization

The autonomic nervous system (ANS) regulates involuntary (not under conscious control) activities. It consists of the sympathetic and parasympathetic nervous systems. These work in opposition to each other in order to maintain homeostasis (balance) within the body.

Sympathetic nervous system

Output from this system steps up internal bodily activity. It is sometimes called the "fight or flight" system because it stimulates the body to react to emergencies by increasing the heart rate, dilating the pupils, and switching blood supply from the intestines to the muscles and brain.

Parasympathetic nervous system

This system decreases the heart rate, contracts the pupils, and feeds blood away from the brain and muscles to the intestines.

Listed below are some of the organs affected by the ANS and the effects produced by stimulation by the sympathetic and parasympathetic systems.

Organ affected	Sympathetic stimulation	Parasympathetic stimulation
Heart	<ul style="list-style-type: none"> Accelerates the heartbeat. 	<ul style="list-style-type: none"> Slows the heartbeat.
Eye	<ul style="list-style-type: none"> Dilates the pupils. 	<ul style="list-style-type: none"> Constricts the pupils.
Sweat glands	<ul style="list-style-type: none"> Stimulates sweat secretion. 	<ul style="list-style-type: none"> Generalized secretion.
Tear glands	<ul style="list-style-type: none"> Inhibits secretion. 	<ul style="list-style-type: none"> Stimulates normal or excessive secretion.
Salivary glands	<ul style="list-style-type: none"> Decreases secretion. 	<ul style="list-style-type: none"> Stimulates secretion.
Gastric fluids	<ul style="list-style-type: none"> Inhibits secretion. 	<ul style="list-style-type: none"> Stimulates secretion.
Intestinal fluids	<ul style="list-style-type: none"> Inhibits secretion. 	<ul style="list-style-type: none"> Stimulates secretion.
Lungs (bronchial tubes)	<ul style="list-style-type: none"> Dilates. 	<ul style="list-style-type: none"> Constricts.
Blood vessels in skin in skeletal muscle in digestive tract	<ul style="list-style-type: none"> Constricts. Dilates. Usually inhibits defecation. 	<ul style="list-style-type: none"> Dilates. Dilates. Increases peristalsis (wave-like muscular contractions).
Liver	<ul style="list-style-type: none"> Releases glucose; and decreases bile secretion. 	<ul style="list-style-type: none"> Increases bile secretion.
Stomach	<ul style="list-style-type: none"> Decreases activity. 	<ul style="list-style-type: none"> Increases activity.
Intestines	<ul style="list-style-type: none"> Decreases activity. 	<ul style="list-style-type: none"> Increases activity.
Kidney	<ul style="list-style-type: none"> Decreases volume of urine. 	<ul style="list-style-type: none"> None.
Pancreas	<ul style="list-style-type: none"> Inhibits secretion. 	<ul style="list-style-type: none"> Promotes secretion.
Bladder	<ul style="list-style-type: none"> Relaxes the bladder. 	<ul style="list-style-type: none"> Contracts the bladder.
Hair follicles	<ul style="list-style-type: none"> Produces "goose pimples." 	<ul style="list-style-type: none"> None.