

Autonomic Nervous System

Autonomic Nervous System (ANS) is part of the motor system that controls internal organs (viscera), and is thus also called viscera nervous system.

Somatic nervous system:

Largely deals with voluntary somatic sensory and motor responses.

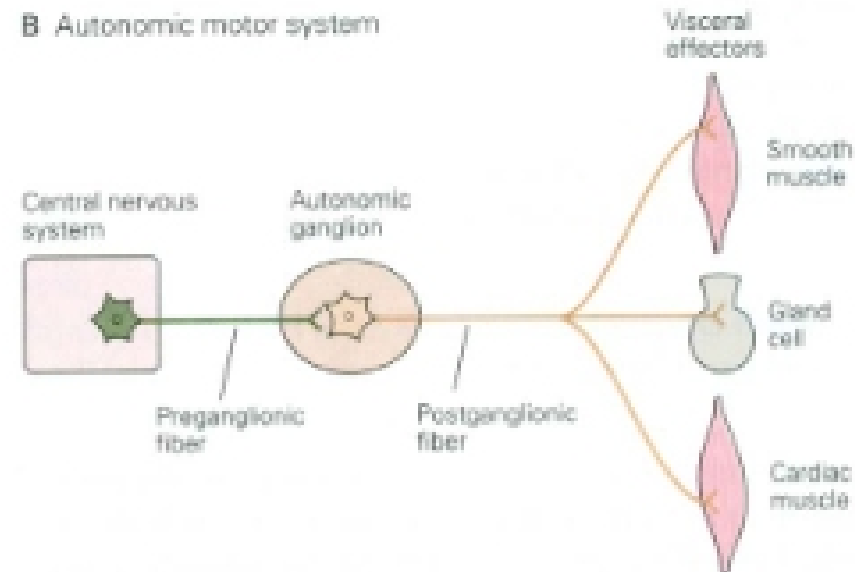
Autonomic nervous system

Largely deals with involuntary sensory and motor response of the internal organs.

A Somatic motor system



B Autonomic motor system



ANS controls smooth muscles, cardiac muscles and glands of the internal organs.

ANS does NOT control skeletal muscles.

ANS assists the body to maintain a constant internal environment (homeostasis).

ANS also participates in coordinated responses to external stimuli:

e.g. regulation of pupil size in response to change of light

e.g. fight-or-flight response: release of adrenaline, increased heart rate, BP, etc.

ANS has three major divisions:

- (1) Sympathetic nervous system
 - (2) Parasympathetic Nervous system
- } Innervate cardiac muscles, smooth muscles, glands.
Function in coordinated manner to meet the needs of the body in response to changes in environment.
- (3) Enteric Nervous System:
 - Controls gastrointestinal tract, pancreas, gall bladder to mediate digestive reflex.
 - Largely self-contained, with minimal connection to the rest of the nervous system.