The Spinal Column

The spinal column protects the spinal cord.
The spinal cord is one of the direct lines of communication from the Central Nervous System to the Peripheral Nervous System.
The spinal nerves connect the PNS to the CNS.
There are also twelve pairs of Cranial nerves that attach directly to the ventral surface of the brain and also communicate with the PNS.
The higher the damage on the spinal column, the greater the loss of function.

The Peripheral Nervous System

Two main parts:

- Somatic Nervous System (SNS).
  Interacts with the external environment.
  Afferents carry sensory signals to the CNS (also called sensory neurons)
  Efferents carry motor signals from the CNS to the skeletal muscles (also called motor neurons)
  E.g. Hot plate. Afferents = I'm burning my hand. Efferents = Put it down.

- Autonomic Nervous System (ANS)
  Participates in the regulation of the body's internal environment.
  Afferents carry sensory signals from the internal organs to the CNS.
  Efferents come in two forms: Sympathetic nerves (energise resources to deal with threatening situations) and Parasympathetic nerves (act to conserve energy).
  Activation of sympathetic nervous system = Fight or Flight system.

Some Disorders Associated with Damage to the Nervous System

Peripheral Nervous System:

- Paralysis (damage to spinal connections)
- Loss of Feeling (damage to nerve endings)
- Blindness (damage to optic nerve or retina)

Central Nervous System:

- Stroke (various symptoms depending on the site of the rupture of the blood vessels)
- Aneurism (various symptoms depending on the site of the dilation of the blood vessels) (NB. Better prognosis if caught early, compared to stroke).
- Amnesia (memory loss as a result of temporal lobe damage).
- Paralysis (damage to spinal cord).