

# Righting reflexes

**Upright standing is controlled by many divisions of the CNS:**

- spinal cord;
- reticular formation;
- midbrain;
- cerebellum;
- basal ganglia;
- by the cerebral cortex.

**The basic element is the contraction of the antigravity muscles based on complex reflex actions using two basic types of reflexes:**

- attitudinal;
- erecting.

## Righting reflexes

- ensure higher coordination of static reactions and '*directing the center of gravity*'
- the reflex tension of the muscles is provided by the postural muscles at rest and during movement
- includes integrative activity spinal cord, RF, midbrain, cerebellum, basal ganglia and cerebral cortices supported by the activity of the vestibular apparatus
- initiated by **stimulation of tactile exteroceptors'**

### Most Important Reflexes

1. **labyrinth righting reflex** - occurs when the trunk tilts from side to side and the head must be kept upright
2. **body uprighting reflex affecting the position of the head** - when passively lying on the side, when the head is turned to a normal position due to irritation of the tactile receptors
3. **cervical righting reflex'** - as a continuation of the previous reactions leading to the straightening of the trunk
4. **body uprighting reflex acting on the position of the body'** - occurs if, when passively positioned on the side, we prevent the head from being raised, the trunk will be raised without raising the head
5. **visual righting reflexes** - reactions to visual stimuli followed by raising the head

### Placement Reaction

This reaction ensures the acquisition of a stable position in case of a significant deviation from the normal (fall, rapid change of position).

- vestibular - the simplest form of this group of reflexes, when falling (lowering to the ground) the forelimbs are extended and the fingers are abducted
- visual - when lowering to the mat, when the limbs are stretched

## Links

### Related Articles

- Reflex
- Postural Reflexes

### Source

- MYSLIVEČEK, Jaromir. *Základy neurovědy*. 2. edition. Triton, 2009. 390 pp. ISBN 978-80-7387-088-1.