

# Concussion

A **concussion** or brain **coma** (lat. *commotio cerebri*) is a sudden, short-term, reversible traumatic disorder of CNS activity. It has no lasting effects. The objective neurological findings are without focal changes.

## Etiology

Dysfunction of the ascending reticular formation.

## Clinical picture

Loss of consciousness for 5 minutes or less.<sup>[1]</sup> max. 30 minutes<sup>[2]</sup>.

After awakening from unconsciousness, retrograde or anterograde amnesia (lasting less than 1 hour) and confusion may be present.<sup>[1]</sup>

There are also nausea, vomiting, diffuse headache, dizziness, uncertainty in space during sudden movements, looking up, and walking stairs are also present. Furthermore, orthostatic tachycardia and hypotension, disorders of concentration, memory, sweating, palpitations, and sleep disorders.

In 50 % of those affected, these symptoms persist as the so-called *post-concussion syndrome*, sometimes developing several days after discharge from the hospital. This condition can last for several months.<sup>[2]</sup>

## Diagnosis

History + normal neurological findings. Auxiliary examinations: X-ray of the skull and cervical spine.

## Grading of commotion

- **Commotion of the first degree** – confusion less than 15 minutes, recovery several days;
- **Commotion of the second degree** – simple confusion, a qualitative disorder of consciousness, convalescence for several days;
- **Commotion of the third degree** – unconsciousness of any length;
  - brief unconsciousness, amnesia < 1 hour → 6-12 weeks recovery;
  - unconsciousness > 10 minutes, amnesia 4-6 hours → more than 3 months recovery.

## Therapy

Hospitalization in the surgical department, bed rest, observation for 3-5 days (monitoring of the state of consciousness, mobility and pupil size), symptomatic therapy, incapacity for work for 7-14 days,<sup>[1]</sup> possibly up to 3 weeks.<sup>[2]</sup>

## Prognosis

Good, it will go away with no lasting effects.<sup>[1]</sup>

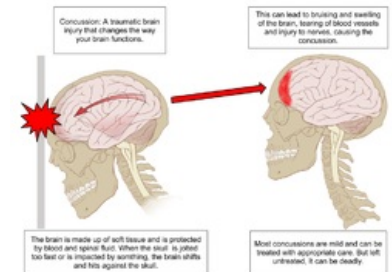
## Post coma syndrome

Post coma syndrome is a late consequence of coma. It manifests itself in a number of non-specific but demonstrable symptoms, which include

- persistent headache,
- attention, concentration and memory disorders,
- weariness,
- irritation, intolerance, frustration,
- tinnitus,
- anxiety,
- sleep disorders.

This condition can last for several days to three months.

## Links



Concussion

## Related articles

- Craniocerebral trauma
- Concussion/PGS
- Concussion/PGS/Diagnosis

## Reference

1. NEVŠÍMALOVÁ, Soňa – RŮŽIČKA, Evžen – TICHÝ, Jiří. *Neurology*. 1. edition. Galén, 2005. pp. 163-170. ISBN 80-7262-160-2.
2. AMBLER, Zdeněk. *Basics of neurology*. 6th edition. Galén, 2006. pp. 171-181. ISBN 80-7262-433-4.