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Head, Face, Eyes, Ears, Nose and Throat

Westfield High School
Houston, Texas

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Neurological Exam

Consists of Five Major Areas:

1. cerebral testing – cognitive functioning
2. Cranial nerve testing
3. Cerebellar testing - coordination
4. Sensory testing
5. Reflex testing

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Eye Function

- Pupils equal and reactive to light (PEARL)
 - Dilated or irregular pupils. Check with penlight. Some individuals normally have pupils that differ in size.
 - Inability of the pupils to accommodate rapidly to light variance. Cover with card or hand and expose to light. Slow response may indicate cerebral injury.

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Eye Function



- Eyes track smoothly. Looking for smooth movement and any sign of pain. A constant involuntary back and forth, up and down, or rotary movement of the eyeball is called nystagmus and indicates possible cerebral involvement.
- Vision blurred. Have them read a game program or the scoreboard.

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Balance Test



- Also known as Rhomberg test, can be used to assess static balance. Original test is to stand on one leg with eyes closed.

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Coordination Tests



- These test include the finger to nose test, heel to toe walking, and the standing heel to knee test. Inability to perform any of these test may be indicative of injury to the cerebellum.

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Cognitive Tests

- The purpose is to establish the effects of head trauma on various cognitive functions and to obtain an objective measure for assessment of the patient's status and improvement.
 - Serial of 7s, in which one counts backward by 7s
 - Name of the months in reverse order
 - Careful about questions you ask, make sure you know the answer

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Skull Fracture

- Occur most often from blunt trauma such as a baseball, shot put to the head or a fall.
- Signs include severe headache and nausea. Palpation may reveal defect such as indentation. May be bleeding in the middle ear, blood in the ear canal, bleeding through the nose, ecchymosis around the eyes or behind the ears. Cerebrospinal fluid may appear in the ear canal or the nose.

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Skull Fracture

- Management includes immediate hospitalization. The fracture is not the main problem, rather complications that stem from intracranial bleeding and bone fragments embedded in the brain and infection.

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Concussions



- Has been defined as clinical syndrome characterized by immediate and transient posttraumatic impairment of neural functions – such as alterations of consciousness, disturbance of vision, loss of equilibrium, and so on – due to brain stem involvement.

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Grade	First Concussion	Second Concussion	Third Concussion
1 (mild)	Return to play if asymptomatic*	Return to play in 2 wk if asymptomatic for 1 wk	Terminate season; may return to play next season if asymptomatic
2 (moderate)	Return to play if asymptomatic for 1 wk	1 mo minimum restriction; may then return to play if asymptomatic for 1 wk; consider terminating season	Terminate season; may return to play next year if asymptomatic
3 (severe)	1 mo minimum restriction; may then return to play if asymptomatic for 1wk	Terminate season; may return to play next year if asymptomatic	

*No headache or dizziness; no impaired orientation, concentration, or memory during rest or exertion.

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Postconcussion Syndrome



- Is a poorly understood condition that occurs following concussion. It may occur in cases of mild head injury that do not involve loss of consciousness or in cases of severe concussions.
- Signs include persistent headache, impaired memory, lack of concentration, anxiety, irritability, giddiness, fatigue, depression, and visual disturbances.

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Postconcussion Syndrome



- Management includes making an effort to treat the symptoms. The athlete should not be allowed to return to play until all symptoms have resolved.

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Second Impact Syndrome



- Occurs because of rapid swelling and herniation of the brain after a second head injury that occurs before the symptoms of a previous head injury have resolved. It may not take a blow to the head, it may be to the chest or the back. The symptoms occur because a disruption of the brain's blood autoregulatory system leads to swelling of the brain, which significantly increases intracranial pressure, and to herniation.

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Second Impact Syndrome



- Signs include the athlete not losing consciousness, and may look stunned. The athlete may remain standing and be able to leave the playing surface under his or her own power. Conditions will worsen rapidly, with dilated pupils, loss of eye movement, loss of consciousness leading to coma, and respiratory failure.

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Second Impact Syndrome



- This is a life threatening emergency that must be addressed within approximately five minutes by dramatic life-saving measures performed in an emergency care facility. Prevention is the best way to treat this emergency. Do not allow an athlete to return too soon to competition.

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Tooth Fractures



- Any impact to the lower or upper jaw or direct trauma can potentially fracture the teeth. Three types of fractures can occur
 - Uncomplicated crown fracture
 - Complicated crown fracture
 - Root fracture

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Tooth Fractures



- Uncomplicated fracture there is a small portion of the tooth broken, no bleeding and the pulp chamber is not exposed
- Complicated fracture there is bleeding and the pulp chamber is exposed and there is great deal of pain.
- Root fracture occurs below the gum line so diagnosis is difficult. X-Ray needed and it is very painful.

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