

A CONCUSSION AND NECK INJURY REFERENCE TOOL

FROM THE CHICAGO INSTITUTE OF NEUROSURGERY AND NEURORESEARCH

CONCUSSIONS

A concussion is a brain injury, and all of them are serious!

Medical professionals typically discuss concussions in terms of severity. It is important to know that concussion CAN occur without loss of consciousness, and they CAN occur in any sport. In fact, more than 5% of high school athletes are concussed each year from collision sports.

Proper management of concussions when they first occur is critical to prevent permanent brain injury or even death.

NECK INJURIES

If a player develops neck pain or neck spasms, it most likely is soft tissue related and should resolve on its own. Other types of neck conditions which are seen in football players include:

- **STINGERS** are characterized by a stinging sensation in the affected arm and are caused by a pinched nerve. Stingers only impact one side of the body and symptoms typically resolve on their own. An athlete should be taken out of play until symptoms resolve. If symptoms persist, worsen, or frequently recur, consult a spine specialist.
- **BURNERS** are characterized by a burning sensation which presents in both arms. This may be a sign of injury to the spinal cord, and the athlete should be removed from play. A spine specialist should be consulted.
- **SPINAL CORD INJURIES** There are 1,000 cases of sports-related spinal cord injury each year. Critical to the prevention of these devastating injuries is proper tackling technique – **Teach players to keep their head up: See what you hit.** If spinal cord injury is suspected, immediately call an ambulance and minimize movement of the player’s head. The face mask should only be removed if the airway is compromised and the player is having trouble breathing. The player may be laid flat with neck in neutral position, but should not be moved, nor should the helmet or pads be removed.

On-site presentations are available by skilled physicians to groups of 20 or more. If you have any questions or would like further information, please email us at info@cinn.org.



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CONCUSSION GUIDELINES

LEAST SEVERE	SEVERE	MOST SEVERE
SYMPTOMS		
Temporary confusion	Temporary confusion	N/A
No amnesia	Amnesia	N/A
No loss of consciousness	No loss of consciousness	Any loss of consciousness – brief (seconds) or prolonged (minutes)
(1) CONCUSSION SYMPTOMS/COMPLAINTS resolve in less than 15 minutes	(1) CONCUSSION SYMPTOMS/COMPLAINTS last for more than 15 minutes	N/A
(2) MENTAL STATUS EXAM abnormalities resolve in less than 15 minutes	(2) MENTAL STATUS EXAM abnormalities resolve in more than 15 minutes	N/A
MANAGEMENT RECOMMENDATIONS		
Remove from contest	Remove from contest	Transport the athlete from the field to nearest emergency department by ambulance if still unconscious
Examine immediately and at 5-minute intervals (at rest and at exertion)	Disallow return that day	Thorough neurologic examination should be performed emergently, including appropriate imaging studies when indicated
May return to contest if mental status abnormalities and/or symptoms clear within 15 minutes	Medical professional should re-examine athlete the following day	Hospital admission is indicated if any signs of pathology are detected, or if the mental status of the athlete remains abnormal
	Medical professional should perform a neurologic examination to clear athlete for return to play after one full asymptomatic week at rest and with exertion	
RETURN TO PLAY, general guidelines		
<ul style="list-style-type: none"> • Same day • If multiple “least severe” concussions — one week 	<ul style="list-style-type: none"> • One week • If multiple “severe” concussions — two weeks 	<ul style="list-style-type: none"> • Brief loss of consciousness — one week • Prolonged loss of consciousness — two weeks • Multiple “most severe” concussions — one month or longer

(1) CONCUSSION SYMPTOMS/COMPLAINTS: headache, nausea, balance problems/clumsiness, double/fuzzy vision, sensitivity to light/noise, feeling sluggish/foggy/groggy, concentration/memory problems, personality changes

(2) MENTAL STATUS EXAM: orientation (time/place/person/situation), concentration (digits backwards, months of year in reverse order), memory (names of teams in prior contests, recall of three words and three objects in less than five minutes, recent newsworthy events, details of contest including plays, moves, strategies)