

GLOSSARY

accommodative insufficiency

An eye's inability to focus properly on a nearby object.

ADHD

Attention Deficit Hyperactive Disorder.

amnesia

Loss of a large block of related memories.

anterograde amnesia

Loss of ability to create new memories after the trauma.

assessment

A thorough medical examination by a licensed health care professional.

axon

A long fiber of a neuron that carries outgoing messages.

balance / postural stability

Maintaining gaze and postural stability, principal components of balance, are complex processes involving the coordinated actions of multiple biomechanical, sensory, motor, and brain processes. The gaze system positions the eyes relative to visual objects of interest in the environment, and the posture system positions the body center of gravity relative to the base of support. Poor balance is major factor in increased risk for falls and fall injuries.

“bell ringer” mindset

The perception that a person can “shake off” a head-jolting impact and play through or carry on with the activity.

Benign Paroxysmal Positional Vertigo

A balance disorder that results in the sudden onset of dizziness, spinning, or vertigo when moving the head.

beta-amyloid protein

Comes from a larger protein found in the fatty membrane surrounding nerve cells. Plaque forms when these proteins clump together, an issue in Alzheimer's disease.

binasal occlusion

A vision therapy procedure that involves partial covering of the visual field of the two eyes in which the sector of the visual field that is adjacent to the nose is occluded for each eye.

BIRSST

Brain Injury Regional School Support Teams in Educational Service Units (ESUs) of the Nebraska Department of Education (NDE). Have training in managing TBI and provide educators with materials, training, and services.

calcium

As applies to brain function, calcium triggers signaling pathways essential for a certain type of memory. Excess calcium in the brain may cause damage.

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cervical pain

Pain in the neck area in relation to the spine. Most episodes will get better with time, but if accompanied by neurological deficits or lack of appetite over time could indicate a more serious issue.

cervicogenic headache (CGH)

Headache of cervical origin, sometimes difficult to diagnose and treat.

chronic traumatic encephalopathy (CTE)

A progressive neurodegenerative disease, which can currently only be definitively diagnosed postmortem, in individuals with a history of multiple concussions or other forms of head injury. Still some debate among researchers about exact nature.

Clearance to Return to Play

In Nebraska, in order for an athlete to begin the progression back to full participation in sport, the licensed health care professional must write a Clearance to Return to Play letter.

clinical assessment

An evaluation of a patient's physical condition and prognosis based on information gathered from physical and laboratory examinations and the patient's medical history.

club sports programs

Programs such as YMCA teams, select teams, travel teams, Little League, and so on.

cognitive assessment

An examination conducted to determine someone's level of cognitive function.

cognitive impairment

Loss of higher reasoning, forgetfulness, learning disabilities, and other reductions in mental functions as a result of problems with thought processes in the brain.

co-morbidity

The extent to which two pathological conditions occur together in a patient. A co-morbid condition may or may not be a result of the concussion, but may very well be affected by it.

concussion

Induced by trauma or force, a brain injury that causes temporary changes in brain function.

concussion management

A patient who has suffered an mTBI advances toward recovery through a progression of treatments, tests, and slowly increased activities, managed by a licensed health care professional, along with help from parents or guardians, school staff, as well as the patient.

convergence insufficiency

When a patient's eyes don't work together when trying to focus on a nearby object.

CT (Computed Tomography)

A radiologic imaging modality that uses computer processing to generate an image of the tissue density in a "slice" as thin as 1 to 10 mm in thickness through the patient's body.

diagnosis

The identification of the nature of an illness or other problem by examination of the symptoms.

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diagnostic assessment

The process of medical evaluation, with the aim of defining a problem and taking the required action to resolve it.

ESU

Educational Services Unit, a division above districts in Nebraska's schools. Helps schools increase educator effectiveness and student learning by providing support and resources.

focal neurologic finding

A deficit or problem with nerve, spinal cord, or brain function that indicates a specific location in the brain, such as an issue with the left side of the face, numbness, tingling, bulging pupils, loss of function of a limb.

funduscopy examination

Looking at the eye through an ophthalmoscope.

Glasgow Coma Scale

A rating scale used in the assessment of brain function, using numbers to represent degrees of responsiveness, such as eyes open, responds to commands, and so on. The higher the rating, the more responsive the patient. Lower ratings indicate greater damage and more severe injury.

glutamate

The major excitatory (signal starter) transmitter (nerve cell messenger) in the brain.

Individualized Educational Plan (IEP)

Mandated by the Individuals with Disabilities Education Act (IDEA), an IEP defines the individualized objectives of a child who has been found with a disability and must be tailored to the individual student's needs as identified by the IEP evaluation process, and must especially help teachers and related service providers understand the student's disability and how the disability affects the learning process. In rare cases, an mTBI patient with persisting symptoms may need an IEP to continue in school.

intracranial pathology

Structural abnormalities within the cranium.

ionic fluxes

The flow of ions in and out of the axon.

LD

Learning Disability.

licensed health care professional

For the purposes of this course, a licensed health care professional is a physician, licensed practitioner supervised by a physician, certified athletic trainer, neuropsychologist, or other qualified individual statutorily recognized by the state and trained to evaluate and manage traumatic brain injuries in the pediatric population.

Likert scale

Responses along a scale that allow the individual to indicate to what degree he/she agrees or disagrees with a statement.

loss of consciousness (LOC)

Interruption of awareness of oneself and one's surroundings.

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mild traumatic brain injury (mTBI)

A brain injury, including all concussions, involving combinations of symptoms of varying duration, such as confusion, disorientation, loss of consciousness (less than 30 minutes), dizziness; that renders the brain vulnerable to further damage if ignored or improperly treated.

MRI (Magnetic Resonance Imaging)

A technique that uses a magnetic field and radio waves to create detailed images of body organs and tissues.

multidisciplinary team

In addition to the concussion management team (licensed health care professional, school staff, parents, and injured), when a patient has delayed recovery, there may be need for a team of additional experts.

Nebraska Concussion Awareness Act

The law mandates concussion education for coaches, parents, and players and sets rules of play for youth suspected of having a concussion.

Nebraska Traumatic Brain and Spinal Cord Injury Registry

A central data bank of accurate, precise, and current information about persons with brain or head injuries to assist in the statistical identification, need for treatment, rehabilitation, and prevention of such injury.

neurocognitive disorder

An acquired cognitive decline in one or more cognitive domains that can affect memory, attention, learning, language, perception, and / or social cognition.

neurodegenerative disease

Disease that damages neurons in the brain, leading to problems with the body's activities, such as breathing, movement, balance, talking, and/or heart function.

neurofibrillary tangle (NFT)

Tiny, tubular lesions that are aggregates of the tau protein and that impede the function of nerves, characteristic of Alzheimer's disease.

neuroimaging

A clinical specialty concerned with producing images of the brain by noninvasive technique.

neuron

An impulse-conducting cell that is a functional unit of the nervous system.

neurologic assessment

Evaluation of the health status of a patient with a nervous system disorder or dysfunction

neurometabolic dysfunction

A problem involving the nervous system and the metabolic system, such as the utilization of glucose in the brain.

neuropil thread (NT)

A lesion from tangle-bearing neurons in gray matter areas of the brain that represents abnormal processes, such as associated with Alzheimer's disease.

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neurotransmitter

A chemical released from a neuron that transmits an impulse from a neuron to another nerve, muscle, organ, or other tissue.

nystagmus

Involuntary eye movements.

occipital neuritis

An inflammation of the greater and / or lesser occipital nerves, sometimes referred to as Post-Traumatic Neck Syndrome.

OT

Occupational therapy. Focuses on evaluating and improving a person's functional abilities.

otolaryngologist

Ear, nose, and throat specialist.

pathophysiologic event

In a concussion case, changes associated with that injury that affect brain function.

photophobia

Extreme sensitivity to light.

physiatry

The study and treatment of disease mainly by physical methods, using physical agents such as light, heat, water, electricity, and / or mechanical apparatus.

Post-Concussion Syndrome (PCS)

Loosely defined as a complex disorder with symptom persistence over several weeks or months after the injury that caused the concussion.

Post-Concussion Vision Syndrome

Sometimes an mTBI may bring long-term symptoms of double vision, stationary objects appearing to move, eye strain, visual fatigue, headaches, and balance issues.

post-traumatic amnesia

A result of trauma, a type of anterograde amnesia.

potassium

As applies to brain function, potassium is an electrolyte that conducts electrical impulses through the body, essential in such body functions as blood pressure and nerve impulses.

pre-morbidity

A pathological condition that exists before the concussion.

primary prevention

In concussion management, minimizing further exposure to risk by educating coaches, athletes, and parents.

PT

Physical Therapy. Focuses on evaluating movement dysfunctions and treating the injury itself.

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retrograde amnesia

Lack of memory of events that took place before the trauma.

Removal from Play

Taking a young athlete out of a game or practice when a concussion is suspected. The athlete's parents or guardians must be notified, and the student-athlete or athlete must not be allowed to Return to Play until he or she is cleared by a licensed health care professional.

Return to Activity

For a young mTBI patient, Return to Activity includes first Return to Learn and then Return to Play.

Return to Learn

A protocol recognizing that students who have sustained concussions and returned to school may need informal or formal accommodations, curriculum modification, and/or monitoring by medical or academic staff during recovery.

Return to Learn Progression

This progression is tailored to each individual student who returns to school after a concussion. The goals are to prevent symptoms from worsening to help the individual to full cognitive recovery through a carefully managed program of increased mental activity and stimulation.

Return to Play

Any student-athlete may be allowed to Return to Play when he or she has been evaluated by a licensed health care professional and has submitted to school administration or club management written, signed clearance from the licensed health care professional and written permission from parent or guardian.

Return to Play Progression

This progression must be started and managed by a licensed health care provider after a student athlete has completed a Return to Learn progression. The goals are to prevent symptoms from worsening to help the individual to full physical recovery through a carefully managed program of increased physical activity and stimulation. The patient must be free of all symptoms and must progress slowly, usually spending one to two days on each step.

saccadic insufficiency

A disruption in the eye's ability, while moving, to fix on a series of points in the visual field.

Second Impact Syndrome

Second impact may occur before the symptoms of a first concussion have subsided. In rare circumstances, it is thought to lead to cerebrovascular congestion resulting in brain edema and increased intracranial pressure.

secondary prevention

In concussion management, preventing of the establishment or progression of a chronic condition after injury exposure.

Section 504 Education Plan

A federal law designed to protect the rights of individuals with disabilities in programs and activities that receive Federal financial assistance from the U.S. Department of Education (ED). In rare cases, an mTBI patient with persisting symptoms may need a Section 504 Education Plan to continue in school.

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sign

In this course, a physical or mental feature the *licensed health care professional, coach, or parent* observes or discovers upon examination that suggests a concussion has occurred.

somatic problem

An issue in the peripheral nervous system associated with the voluntary control of body movements.

ST

Speech Therapy. Focuses on treatment of voice, language, and swallowing disorders.

symptom

In this course, a physical or mental feature the *patient* describes that indicates a concussion has occurred.

tau

A protein abundant in the central nervous system's neurons. When tau proteins become defective, the result may be pathologies and/or dementias of the nervous system, such as Alzheimer's disease.

traumatic brain injury (TBI):

Injury to the brain usually resulting from violent impact to the head or body.

vestibular issues

Disorders of the body's balance system in the inner ear.