



# Transforming Care at UnityPoint Health - Fort Dodge

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**Why is it Important for High School Athletes?**

Concussions are a leading cause of injury in high school sports. They can affect a student's ability to learn and perform in the classroom. It is important for athletes to understand the risks and how to prevent them.

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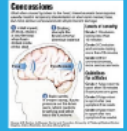
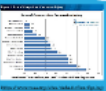
Hey, great! You can't prevent today, so you can't let it be a bad presentation. Focus on concussion education for the season. Here's why: prevention. Listen well because this is important for your season's game!

Head Coach  
TheCaseSolutions.com

**What is a Concussion?**

A concussion is a brain injury in which the brain is violently shaken inside the skull due to some type of action such as a fall or strike to the head or body. Often times, it could lead to a state of unconsciousness, however it does not need to necessarily happen as a result of a blow to the head.

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**How does it Affect your Health?**

A concussion can actually affect all 2 of your body systems. The nervous system is what is affected the most, as it is the brain that controls everything with the mind, eventually leading to a collection of what is known as symptoms. As symptoms begin to show, the **sympathetic system** goes into a state of fight or flight. Another common sign of a concussion is a headache. This is because the sympathetic system has to work so hard to keep you going to battle the pain from the injury. The sympathetic system, the **parasympathetic system** is in charge of calming the body and allowing it to rest. So when the sympathetic system, the **fight or flight** system, is overactive, it will cause the parasympathetic system, the **rest and digest** system, to be overactive as well. This can lead to a state of **fight or flight** that is not necessary, leading to a state of **fight or flight** that is not necessary, leading to a state of **fight or flight** that is not necessary.

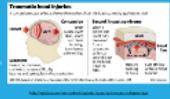
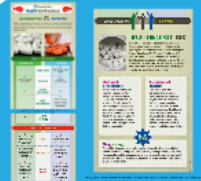
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**Signs & Symptoms**

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**Diagnosis & Treatment**

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**Causes & Potentially Dangerous Situations**

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**Precautions & Preventions**

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By: Coach Jeischia



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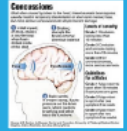
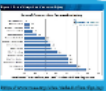
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### What is a Concussion?

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### How does it Affect your Health?

A concussion can actually affect all 2 of your body systems. The nervous system is what instructs the rest of the body that codes for all of the things that eventually result in a concussion. After a concussion, as systems begin to show the signs of a concussion, the nervous system will try to repair itself by sending signals to the rest of the body. The nervous system, the digestive system, and the circulatory system, the endocrine system will then get signals and begin to repair the brain. So when the nervous system, the circulatory system, the endocrine system, and the digestive system will then get signals and begin to repair the brain. So when the nervous system, the circulatory system, the endocrine system, and the digestive system will then get signals and begin to repair the brain. So when the nervous system, the circulatory system, the endocrine system, and the digestive system will then get signals and begin to repair the brain.

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**Signs & Symptoms**

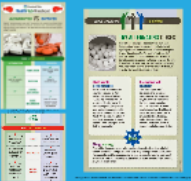
Headache, dizziness, nausea, vomiting, blurred vision, ringing in the ears, sensitivity to light and sound, confusion, memory loss, loss of consciousness, seizures, and changes in behavior.

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**Diagnosis & Treatment**

Diagnosis is typically made through a physical exam and imaging tests like CT scans or MRIs. Treatment involves rest, hydration, and avoiding further head trauma.

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### Precautions & Preventions

Wearing proper protective gear like helmets and mouthguards is essential. Avoiding alcohol and drugs before playing sports can also help prevent concussions.

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By: Coach Jeischia



**Hey, girls! I'm currently absent today, as you can tell, so here's a little presentation I made on concussion education for the soccer team's safety purposes. Listen well because this is important for your upcoming game!**

**-Head Coach**

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# What is a Concussion?

A concussion is a brain injury in which the brain is violently shaken inside the skull due to some type of action such as a fall or strike to the head or body. Often times, it could lead to a state of unconsciousness however it does not need to necessarily happen as a result of a blow to the head.

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# Why is it Important for High School Athletes?

*"Athletes did not report concussive symptoms because of a lack of knowledge"*  
(Barton Straus, Lindsey. "Concussion Education: Athletes and Parents Still Not Getting Nearly Enough". <http://www.momsteam.com/health-safety/concussion-education-ineffective-two-new-studies-show>)

9% to 12% of injuries in high school athletics are caused by concussions. A 2013 study, conducted by Sara P. Chrishman and her colleagues, that consisted of 50 athletes from three football, two boys' soccer, and four girls' soccer teams found that one out of nine concussion reports resulting from sports activities **didn't** happen because the students were unaware of the symptoms, but because **they insisted to keep playing**, ignoring the dangers of a possible concussion occurrence. In other words, they chose to take action without thinking of the consequences.

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# Causes & Potentially Dangerous Situations

In terms of sports, concussions are usually caused by a (strong), direct blow to the head, causing the brain to rattle and could result in possible cerebral damage. Other causes could include vehicle accidents (i.e. car crash or bicycle accident), falls, fighting, and/or severe whiplash. As stated previously, one of the most common reasons as to why students refuse to admit to their possible injury is because they do not want to let their team down. Although it may seem rewarding in the beginning, it is incredibly dangerous to push yourself in the state you are currently experiencing. The symptoms of a concussion become more noticeable and both your mental and physical health are suffering as well. Assume you were lucky enough to stay conscious, however due to the more amount of work is outputted, the higher the risk of becoming unconscious is. If you were to receive a blow to the head a second time, you may likely fall into a coma or die from second-hand

syndrome.\*\*

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**\*\*Fact:** Malignant brain edema syndrome or second-impact syndrome is a fatal head injury that occurs commonly at young ages. This rare TBI (traumatic brain injury) is believed to be caused due to an irregular flow of the blood supply in the brain. Consequently, rapid cerebrovascular blockage occurs and pressure within the skull increases quickly as well. If this injury continues without any immediate care, the individual may lead into a coma or death.

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# How does it Affect your Health?

A concussion can actually affect all 7 of your body systems. **The nervous system** is what is affected the most as it is the brain that collides forcefully with the skull, eventually resulting into a concussion due to intercranial pressure. As symptoms begin to show, **the digestive system** plays a role in feeling nauseous. Another common sign of concussions are headaches and drowsiness, which **the respiratory system** helps with by supplying enough oxygen to balance the carbon dioxide amounts. If the concussion worsens, **the lymphatic system** will help any cerebral bleeding, producing immune cells and regulating excess fluid and damaged tissues. Similar to the lymphatic system, **the circulatory system** will transport nutrients and gases, and will repair the injured area of the brain. Since the brain is likely bruised due to the sudden collision with the skull, **the skeletal system** will "repair and restore the shape of the skull". Lastly, **the muscular system** will be affected greatly as well because the difficulties between cell communication in one's body will likely cause slow action responses, fatigue, and muscle soreness.

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# Signs & Symptoms

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### Physical:

- Nausea & vomiting
- Balance problems
- Increased sensitivity to light & noise
- Dizziness/Frequent Headaches
- Fuzzy or blurry vision
- Feeling tired or no energy

### Emotional:

- Short-tempered
- Easily upset
- Nervous or anxious

### Thought Processing:

- Slower thought processing
- Unable to think clearly
- Unable to concentrate
- Trouble remembering new information

### Sleep:

- Difficulty sleeping/Insomnia
- Sleeping more/less than usual