Concussions
Take care of your brain

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A loss of independence is rarely ideal for anyone. Not being able to speak without speech therapy, obtaining less control over your facial expressions, inability to read, etc. This is an unfortunate reality for some of those who don’t cater to the safety of their brain when suffering from a concussion; however, this can easily be avoided with a little bit of knowledge and care. In society today concussions are typically brushed under the rug, especially with athletes. Because the injury itself cannot physically be seen to the naked eye, at times it can be hard for people to fathom that they actually have one, or the extremities of it. A concussion can occur in anyone, from an athlete, to a teacher, construction worker, chef, etc. With this being said, it’s important to understand how to diagnose a concussion, its symptoms, how to treat it, and the risks of improper treatment.
What is a concussion?

- **Concussion**: traumatic brain injury that affects brain function
- **Causes:**
  - Direct blow to head
  - Whiplash motion
    - Brain is a soft, jello-like organ
    - With enough force, brain can collide with skull
Cellular level

- Axons within neurons communicate through synapses
  - Responsibilities
    - Receives sensory input from the external world
    - Sends motor commands to our muscles
    - Transforms and relays the electrical signals

- A concussion occurs when these neurons stretch or break

- Damaged neurons have trouble communicating resulting in physical symptoms
Symptoms

- Headache
- Pressure in head
- Nausea
- Balance problems
- Dizziness
- Abstracted vision

- Sensitivity to light/noise
- Confusion
- Irritability
- Concentration
- Memory problems
# Concussion Assessments

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<thead>
<tr>
<th>ImPACT</th>
<th>SCAT6</th>
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<tr>
<td>(Immediate Post-Concussion Assessment and Cognitive Testing)</td>
<td>(Sport Concussion Assessment Tool)</td>
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<td>● 20- to 30-minute computer-based test that helps measure multiple aspects of cognitive function including attention span, working memory, sustained and selective attention span, nonverbal problem solving, reaction time, and response variability</td>
<td>Assessments of physical and vocal activity in order to evaluate the patient’s status of symptoms, orientation, immediate memory, concentration, and delayed recall</td>
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<td>● Within 72 hours post injury</td>
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<td>● Doctor to patient (not online)</td>
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Treating:

- Get supervised rest in the first 24 hours
  - The body performs tissue growth and repair, allowing healing and restoration to occur during sleep
- Acetaminophen within the first 24 hours of injury
- Ibuprofen and naproxen sodium after 24 hours for pain relief
- Light physical activity within 3-5 days post-injury after 2 days of rest
- As symptoms decrease, patients should gradually return to light daily activities (school, work, etc.)
- Gradually increase activity, paying attention to symptom severity and acting accordingly
- Everybody’s bodies heal differently, 80% of recovery time occurring between 7 to 14 days
RugbyPass Documentary  www.youtube.com/watch?v=fmmTYERMCgE

- over 1 in every 5 injuries from a rugby match are concussions, leaving concussions to be the most common rugby injury
- those who develop chronic traumatic encephalopathy (CTE) at a younger age are more prone to dementia as they age
  - CTE is a degenerative brain disease linked to repeated hits to the head
- Brain injuries have been proven to affect personality
- Repetitive brain injuries without proper treatment/assessment can be fatal
- Culture of contact sports (mainly club and professional)
  - “Rub some dirt in it” mindset
The brain is a complex, intricate organ that is the center of who you are as a person. Scientists are still uncovering various capabilities and uses of the brain. One thing that is very prominent and known, however, is that you'll be at your happiest and healthiest with a healthy brain. A temporary satisfaction, like winning a game or impressing your friends, is never going to be worth experiencing its long term effects. If the symptoms of a concussion can be caught early on, can be properly diagnosed, and can be catered to with the correct form of treatment, your brain and body will thank you. Any failures within this process can run the risk of developing a CTE, personality, mood, or anxiety disorder, fatal injury, and many other unideal effects. Don't take the risk.
“Crashcourse | Concussion Education.” YouTube, YouTube, 8 Sept. 2018, www.youtube.com/watch?v=is7NjpiW4NY.


