

Allina Health 
Non-Surgical Orthopedics & Sports Medicine Clinic
ImPACT™ Baseline Concussion Test

When will I get the results of this test?

Your test results will be stored in Cambridge Medical Center's secure online database and can only be accessed by CMC's Non-Surgical Orthopedics & Sports Medicine physicians, nurses and certified athletic trainers. Only physicians trained in interpreting the ImPACT™ concussion management test can read the results.

How is the test used?

In the event of a head injury/concussion, the physicians in CMC's Non-Surgical Orthopedics & Sports Medicine clinic can use information from the baseline test to help determine the extent of the head injury. As part of their evaluation, they may ask the athlete to take a post injury ImPACT™ test. The results from the test are then compared to the athlete's original baseline test results. This comparison is one of the tools that help the medical staff evaluate the extent of the injury and help in making return to play decisions.

What is the difference between a baseline test and a post injury test?

The computerized test itself is the same. The baseline test is administered during the pre-season to get an accurate measure of the athlete's healthy brain. If an athlete sustains a concussion, the post injury test is administered and then compared to the baseline test to help demonstrate more objective differences in the athlete's brain function.

How often should an athlete have a baseline test?

Baseline tests are good for approximately 2 years. Ideally, athletes should have a baseline test done when they are 11 years old and every 2 years after that.

Does a baseline test cost the same as a post injury test?

No. The cost for a pre-season baseline testing may vary depending on the organization. For post injury testing, there is an appointment with a physician trained in concussion management and the fee for that post injury visit is handled through your medical insurance company.

What should I do if my child gets a concussion?!

If your son/daughter is suspected to have sustained a head injury during play, they should be removed from play/activity immediately and evaluated by a medical professional. This initial evaluation may be with a certified athletic trainer or EMT, in an Emergency Room setting, Urgent Care setting or with your child's primary care physician. They should suggest referral for follow-up with a provider trained in concussion management. That can certainly be at Cambridge Medical Center in the Non-Surgical Orthopedics & Sports Medicine clinic. Typically this appointment scheduling is done by Nicci Westensee, ATC Manager of Sports Medicine and through our Athletic Trainer On-Call pager system.

How do I schedule a post injury clinic visit?

Patients who have been seen in Cambridge Medical Center's Emergency Department, Same Day Clinic (Clinic A) or primary care clinic following a concussion will be referred to the Non-Surgical Orthopedics & Sports Medicine clinic via our Athletic Trainer (ATC) On-Call Pager process. This involves a page being sent to the ATC On-Call who will assist the family in scheduling a follow-up appointment within 24-72

hours post injury or as soon as possible. The Athletic Trainer will receive your information, call you within 24 hours to check in and help schedule your follow-up appointment.

If you were seen by another provider at another clinic/hospital, you can call Cambridge Medical Center and speak to a triage nurse, who will initiate the follow-up On-Call process as mentioned above to ensure that you get an appointment in our clinic.

IF your child sustains a concussion and you have questions about a follow-up appointment or are having difficulty connecting with a triage nurse at Cambridge Medical Center, please contact Nicci Westensee at Nicole.westensee@allina.com OR 763-227-2427. Please let me know that you are with the Blaine Youth Hockey Association.

What if someone doesn't have a baseline test on file? Can they still be seen in the Non-Surgical Orthopedics & Sports Medicine Clinic for post injury evaluation following a concussion?

YES! Although it is ideal to have a patient's OWN baseline test for comparison, CMC physicians can compare post-injury test results with normative values of kids in the same gender and age categories as the athlete.

CMC Non-Surgical Orthopedics & Sports Medicine Concussion Management Team

Physicians

R. Michael Patten, MD
G. Budd Renier, MD

Athletic Trainers

Nicci Westensee, ATC Manager of Sports Medicine
Sadie Ward, ATC
Kristin Lindberg, MS ATC
Ashley Fischer, ATC

CMC's Concussion management team has been treating athletes with use of the ImpACT™ program since 2008. They have managed hundreds of concussions within that timespan.

They were the first concussion program within Allina to be CIC certified (Credentialed ImpACT™ Consultant) and are currently one of only 3 total with the Allina Health System.

Please contact Nicci Westensee, ATC Manager of Sports Medicine with any questions/concerns regarding baseline or post-injury testing.

Nicole.westensee@allina.com OR 763-227-2427

POST CONCUSSION FOLLOW-UP

Helpful Information about what to do following a concussion

A post injury appointment should be a comprehensive visit with the physician and sports medicine team who are trained in concussion management which should include :

- Evaluation of the injury
- ImPACT™ Computerized Post-Injury Concussion Testing (age 11-college graduation)
- Discussion about test results, and guidelines for return to sports and activities

-Patient is encouraged to get a good night sleep the night before the appointment

-If needed, patient can take **Tylenol** for headache pain, and avoid Ibuprofen until rechecked

-If patient is having symptoms post injury, we recommend that they not be allowed to drive prior to being evaluated.

-If symptoms are worsening prior to your follow-up appointment, you may need to return to the ED for further evaluation.

Once discharged from the Emergency Department/Urgent Care, the following information may be helpful:

WHEN/WHERE TO FOLLOW UP:

Anyone who has a concussion or who is suspected of having one should be allowed to return to sport or work until they have the appropriate follow up.

We suggest that a follow-up visit with a provider trained in concussion management occur ideally **within 3-4 days after the injury whenever possible.**

*ACTIVITY RESTRICTIONS & RECOMMENDATIONS:

Patient with a concussion should avoid ANY AND ALL ACTIVITY that produces or worsens concussion symptoms. This includes physical and mental exertion.

We also recommend that the patient **NOT be allowed to play video games, text on their phone, prolonged computer work, complicated homework, etc.** Since symptoms often worsen with fatigue, we recommend that the patient's teachers and/or employers know that work and school demands may need to be adjusted in the upcoming days to weeks. This may include partial or full day absences. Patient may need a note for work/school.

Patients with a concussion should **NOT be allowed to operate a vehicle** of any kind until cleared to do so by their health care provider. They should **not operate machinery**. They should **not drink alcohol**. They should **not start any new medications without checking** with their health care provider.

***HOW YOU CAN HELP:**

The brain needs rest and proper nutrition to heal. Patient should get lots of sleep, eat well, and take a multivitamin if not already doing so. Remember, SLEEP is food for your brain!

***IMPORANT to REMEMBER:**

If patient should develop any acute worsening of symptoms, they should have immediate re-evaluation. Patients that develop an altered level of consciousness, repetitive vomiting, convulsions, severe and worsening headache, disorientation, confusion, weakness in the arms or legs, speech difficulties, sudden vision changes, develop unequal pupils or become combative, they should seek immediate medical attention.

***RESOURCES:**

Further information on Concussions & Concussion Management is available at www.impacttest.com

ADDITIONAL INFORMATION ABOUT CONCUSSIONS

WHAT IS A CONCUSSION:

A concussion, also referred to as a Mild Traumatic Brain Injury, is a disturbance of brain function that occurs following either a blow to the head or as a result of violent shaking of the head. There may or may not be a loss of consciousness when a patient suffers a concussion.

When this occurs, the neurological signals that allow us to think and function normally are interrupted. This can lead to symptoms that include: headache, nausea, vomiting, dizziness, light and noise sensitivity, numbness/tingling, blurred or double vision, ringing in the ears, drowsiness, amnesia and difficulty concentrating. These symptoms may last days or weeks, or may not even become apparent until hours or days following the injury.

A common misconception is that imaging of the brain can exclude a concussion. This is false. While a CT scan or traditional MRI is useful to ensure no other significant problems such as bleeding around the brain or acute brain swelling have occurred, they cannot be used to diagnose a concussion. A patient may have sustained a severe concussion, but have a normal CT or MRI scan. Because a concussion is a metabolic issue rather than a structural issue, structural imaging techniques (like a CT scan) are insensitive to the effects of concussion.

RECOVERY FROM A CONCUSSION:

Most individuals will make a full recovery following a concussion; however, it is important to have the appropriate medical management early on to avoid long term complications and re-injury. Our main goal in managing concussions is to protect the brain from further damage, especially while it is recovering from this current concussion. Getting another head injury while

recovering from one can be devastating to the brain. Generally speaking, adolescents take longer to recover than adults.

On average, about 40% of patients recover from a concussion at the one week mark. About 60% of patients are recovered by the 2 week mark. About 80-90% of patients are better by the 3 week mark. The remaining 10% is variable on recovery timeframes.

COMPLICATIONS FROM A CONCUSSION:

There are 2 very significant complications associated with concussions. The first is Post-Concussion Syndrome and the other is Second Impact Syndrome.

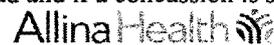
Post-Concussion Syndrome is a set of symptoms that an individual can experience for weeks, months or even years following a concussion. It is characterized by fatigue, headaches, balance problems, difficulty concentrating, emotional/behavioral symptoms. There is no proven correlation between the severity of the injury and the likelihood of developing post-concussion syndrome. For this reason, every concussion, whether mild or severe needs to be taken seriously and followed closely until completed and resolved.

Second Impact Syndrome is a very rare but very serious condition that occurs in individuals who return to sport/activity before their concussion has healed. It is more common in adolescents. A second blow to the head, even a minor one, can result in a sudden swelling of the brain. The result can be catastrophic and even fatal. The risk of Second Impact has no correlation between the severity of the initial concussion. Even the mildest of concussions could lead to second impact syndrome and could occur weeks after the initial injury.

* REVIEW OF SIGNS & SYMPTOMS OF A CONCUSSION:

<ul style="list-style-type: none">• Signs observed at time of injury:<ul style="list-style-type: none">○ Appears to be dazed or stunned○ Is confused about assignment○ Forgets plays○ Is unsure of game, score, or opponent○ Moves clumsily○ Answers questions slowly○ Loses consciousness (even temporarily)○ Shows behavior or personality change○ Forgets events prior to hit (retrograde amnesia)○ Forgets events after hit (anterograde amnesia)	<ul style="list-style-type: none">• Symptoms reported by athlete/patient:<ul style="list-style-type: none">○ Headache○ Nausea○ Balance problems or dizziness○ Double or fuzzy vision○ Sensitivity to light or noise○ Feeling sluggish○ Feeling "foggy"○ Change in sleep pattern○ Concentration or memory problems○ Irritability
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If patient is experiencing any of these signs/symptoms after an injury to the head and if a concussion is suspected, athlete should be removed from play immediately and seek further evaluation.



FACTS ABOUT CONCUSSIONS

CONCUSSION MANAGEMENT INFORMATION for COACHES:

For Coaches/Officials:

#1 Responsibility of Coaches/Officials is to remove the athlete from play immediately if there are signs/symptoms of a concussion or if one is suspected.

#2 Responsibility of Coaches/Officials is to NOT allow that athlete to return to play until medically cleared by a provider trained in concussion management AND that the athlete has successfully gone through the gradual steps for return to play.

Important points:

-Athletes may present to you with delayed concussion symptoms (even multiple days following the injury)...these still count and are VERY important! The same procedures must be followed by removing the athlete immediately and seeking medical care.

-Coaches must obtain WRITTEN clearance for an athlete to return to play from a provider trained in concussion management.

If you have an athlete who is OUT due to a concussion, some things to suggest that may help the healing of the injury include:

- REST!!! Both Mental & Physical Rest is very important!
- Avoid texting, TV, computer use, and try to limit the amount of reading/homework being attempted during the days following a concussion if possible.
- Completely NO physical exertion until cleared to do so by a physician.

Locally, where can we send athletes for treatment??

- *If it is an acute injury that requires immediate referral, an Emergency Department or Urgent Care would be the best location to bring the athlete. After the athlete is cared for acutely, they should be referred for follow-up to a provider trained in concussion management, which can be the Non-Surgical Orthopedics & Sports Medicine Clinic at Cambridge Medical Center.*

What ages and types of athletes does that clinic treat??

- *The Non-Surgical Orthopedics & Sports Medicine Clinic sees ATHLETES between the ages of 5 years old through college graduation for concussion management. ImPACT testing is performed for athletes age 11-college graduation. The physicians will see athletes who play in any sport or activity (activities can include motocross, BMX, equestrian, skateboarding etc. and all other organized sports)*

Websites to check out for more information about concussions:

www.impacttest.com

www.cdc.gov search for information on concussions in Youth Sports

Contact Information for Questions regarding a concussion OR questions about referral of an athlete following a head injury. Please contact:

Nicci Westensee, ATC & Manager of Sports Medicine for Cambridge Medical Center's Non-Surgical Orthopedics & Sports Medicine Clinic: nicole.westensee@allina.com or 763-227-2427. For more information on Baseline Testing, please email cmcbaselineconcussion@allina.com.

Allina Health 

UNDERSTANDING THE MINNESOTA CONCUSSION LAW - EFFECTIVE 9/1/2011

WHO IT AFFECTS:

- ✓ Any municipality, business, or nonprofit organization that organizes a youth athletic activity for which an activity fee is charged.

WHAT THEY MUST DO:

- ✓ **Make information accessible to all participating coaches, officials, and youth athletes and their parents or guardians about the nature and risks of concussions.** The law then outlines this in more detail which can be found at:
https://www.revisor.mn.gov/laws/?year=2011&type=0&keyword_type=all&keyword=concussion&doctype=Chapter&id=90.
- ✓ Require **all participating coaches and officials to receive initial online training** and online training at least once every 3 calendar years thereafter, consistent with program available through Center for Disease Control (CDC) website. This free on-line training course can be found at: http://www.cdc.gov/concussion/headsup/online_training.html
- ✓ **Coach or official must remove a youth athlete from participating** in any youth athletic activity **when** the youth athlete has signs, symptoms or behaviors consistent with a concussion, or is **suspected of sustaining a concussion.**
- ✓ **NOT allow participation until** the youth athlete no longer has signs, symptoms, or behaviors consistent with a concussion AND is evaluated by a provider trained and experienced in evaluating and managing concussions AND the provider gives the youth athlete **WRITTEN PERMISSION** to again participate in the activity.

SUMMARY:

- THE LAW APPLIES ESSENTIALLY TO ALL ORGANIZATIONS WHO CHARGE AN ACTIVITY FEE TO PARTICIPATE IN YOUTH SPORTS/ACTIVITIES.
- IT SAYS WE NEED TO MAKE EDUCATIONAL INFORMATION AVAILABLE TO ALL INVOLVED.
- COACHES & OFFICIALS MUST GO THROUGH TRAINING.
- ATHLETE MUST BE REMOVED FROM PARTICIPATION WHEN CONCUSSION IS SUSPECTED.
- ATHLETE CAN ONLY BE CLEARED BY PROVIDER WHO IS TRAINED AND EXPERIENCED IN CONCUSSION EVALUATION AND MANAGEMENT. CAMBRIDGE MEDICAL CENTER PHYSICIANS ARE DR. BUDD RENIER & DR. MIKE PATTEN.

For questions or concerns please contact:

Nicci Westensee, ATC & Manager of Sports Medicine; nicole.westensee@allina.com

Non-surgical Orthopedics & Sports Medicine Clinic

Cambridge Medical Center