

The Importance of a Baseline Evaluation

**The quotes below do not necessarily endorse or recommend our baseline technology or reflect the views of our company.*

"The problem is, **without a baseline test** from an athlete, doctors and trainers don't have data for comparison, which makes it more difficult to decisively say a player has been concussed."

"**It's important to have baseline data** for young athletes because they're at a higher risk for head and brain injuries." "They don't have the core strength yet and there's more of what's called the bobble-head effect. And because they don't have that core strength, there's a lot more of the whiplash or snap-back mechanism to the brain – leading to concussion."

Dr. Joseph Congeni, The Director of the Children's Hospital's Sports Medical Center, Akron Ohio

OHSAA Confirms that Girls Soccer Is 'Starting to Rival Football'

The Ohio High School Athletic Association (OHSAA) has reported the frequency of concussions in girls soccer is "starting to rival football. Also noted is that while the majority of concussions in football happen during games, practices are more dangerous in soccer.

"Baseline testing isn't mandatory in Ohio, but that's the goal."

Dr. Dan Ross, 2015, OHSAA Commissioner

"Kids are not just small adults," **"Kids' brains have unique factors that put them at greater risk for injury than we adults."** **"A smaller brain also accelerates faster when moving inside the skull and does not require a large impact to cause damage and this can result in 80 or 90 Gs of force on the brain, even when the speeds the children collide at is very slow."**

Dr. Cantu, Co-Director of the Center for the Study of Traumatic Encephalopathy, Boston University, Boston MA

"**It is better to have a baseline test** that future tests can be compared with after a possible concussion. By having a baseline done prior to any concussions, it is possible to see if there are any significant changes that may indicate a concussion. Some schools will have student athletes complete these tests once a year to establish a baseline."

Dr. Steven Carr, Nationwide Childrens Hospital, Columbus Ohio

"The younger brain is more vulnerable to concussion," "A lesser degree of trauma, of blunt force, would produce a concussion in a younger person and it takes longer for them to recover." **"Baseline testing should happen every single year,"** "It gives us a sense of how their brain is functioning at their baseline. So if they are concussed we'll be able to at least judge them compared to their baseline and we'll know when they get back to their baseline level of functioning."

"More than 50 percent of brain pathways are responsible for controlling eye movement, so injuries to the brain almost universally affect eye movement."

Dr. David Dodick, Mayo Clinic Director of the Sport Neurology and Concussion Program.

"It's important that all athletes get a baseline test. Each child is unique; therefore having a baseline for your child is much more helpful in managing a concussion, should one occur.

Comparing the pre- and post-concussion test scores can help determine when an athlete is ready to return to normal activities."

Dayton Children's Hospital, Dayton Ohio

"Often young athletes return to sport too soon and that puts them at risk for future head injuries. Being able to compare pre and post injury data is of great value when determining return to sport."

Pam Lanter, PT, DPT, NCS, Director of Rehabilitation Services, St. John Medical Center, West Lake Ohio

"**Baseline testing is ideal**, because it gives us some objective data to work with if an injury is suspected,"

Dr. Nick DenBesten, Neurologist specializing in traumatic brain injuries, Firelands Regional Medical Center, Toledo Ohio

"**Baseline concussion tests**, administered before the start of a sports season, are meant to measure the normal levels of brain activity in a healthy student-athlete. When a concussion is suspected, the athlete retakes the test, and a medical professional compares the results. The larger the difference in the responses, the higher the likelihood of a concussion.

"Recent research suggests **baseline concussion tests are critical** for accurate diagnosis, yet no state currently requires schools to use them."

"The benefits of athletes getting a **baseline screening** prior to a concussion may help to **decrease recovery time and get the athletes back to play faster.**"

Dr. Paul Gubanich, OSU Medical Center, Columbus Ohio

"**Consult with counsel about pre-season baseline testing.** Widely used in varsity programs and **recommended by the NCAA.** Many colleges and universities offer baseline tests for all club athletes, or those participating in contact sports, such as field hockey, lacrosse, rugby, and soccer, and wrestling. Athletes that opt out are asked to sign a waiver or assumption of risk form. Institutions choosing not to offer testing should document their reasoning."

Ohio Educators Insurance, Columbus Ohio

"**The best way to manage concussions is to conduct a baseline test prior to the sports season starting.** Then if there is a head injury, repeat the test for comparison. By having a comparison between the athletes pre-injury status and post injury status allows the clinician to make a better decision on the follow-up care of concussion."

Dr. Scarpone, Trinity Sports Medicine, Steubenville Ohio

- 1) NEVER LET A SYMPTOMATIC ATHLETE RETURN TO PLAY
- 2) Normal CT scan/MRI does not rule in/out concussion
- 3) Most concussions occur without loss of consciousness
- 4) Many concussions are not brief/transient – may last weeks, months
- 5) **Neuropsychological/baseline testing best performed preseason**
- 6) Educate all parties involved: coaches, parents, trainers, teachers etc.

American Academy of Pediatrics

“Ideally a **baseline** or pre-injury test **should be obtained** before the start of the athlete’s season.”
Dr. Halstead, ME; Dr. Walter, KD; American Academy of Pediatrics, Council on Sports Medicine and Fitness

“**Baseline testing** is a pre-season exam conducted by a trained health care professional. **Baseline tests** are used to assess an athlete’s balance and brain function as well as the presence of any concussion symptoms. Results from **baseline tests (or pre-injury tests) can be used and compared** to a similar exam conducted by a health care professional during the season if an athlete has a suspected concussion. Results from baseline testing can be used if an athlete has a suspected concussion. Comparing post-injury test results to baseline test results can assist health care professionals in identifying the effects of the injury and making more informed return to school and play decisions. **If baseline testing is used, research suggests that most components of baseline testing be repeated annually to establish a valid test result for comparison.**”
Centers for Disease Control and Prevention (CDC)

“Genesis Rehabilitation Services is **offering a concussion baseline test** to help determine when student athletes can safely return to play. The students take a **baseline test**, and if the student is suspected of having a concussion, a follow-up test is done. The **results are compared** to evaluate if the athlete is ready to return to play.”
Genesis Healthcare System, Zanesville, OH

“**Baseline testing is the cornerstone for any comprehensive concussion program** – not only for comparative data but to identify impairments before the season begins that could be considered “at risk” indicators.”
Concussion Health.Com

“Given the inherent difficulties in concussion management, it is important to manage concussions on an individualized basis and to **implement baseline testing** and/or post-injury neurocognitive testing. This type of concussion assessment can help to objectively evaluate the concussed athlete's post-injury condition and track recovery for safe return to play, thus preventing the cumulative effects of concussion.”
Dr. John Brannan, Beacon Orthopaedics, Dayton Ohio

“**It is extremely important that the athletes get “baseline” tested prior to the start of competition.** Should a concussion be suspected during the season, information acquired at the time of injury can then be compared to the baseline to determine and track the athlete’s recovery.”
Cleveland Clinic Concussion Center, Cleveland Ohio

"As awareness increases about concussion risks, many high **schools are now taking a more proactive approach to baseline testing** and injury management, making the decision to put a player back in the game less subjective. In addition to symptom checklists and cognitive and physical field tests, **new tools and methods are being developed to make such testing easy to administer.**"

Athletic Business, 2015

"In order to provide Ohio Wesleyan University Student Athletes the best possible care and prevention of multiple concussions and second impact syndrome, team members of the following sports will **perform baseline testing**: Football, Volleyball, Men's and Women's Soccer, Field Hockey, Men's and Women's Basketball, Diving, Men's and Women's Lacrosse, Softball, Baseball, and certain Field events (high jump and pole vault)."

Ohio Wesleyan University, Delaware Ohio

"The **National Collegiate Athletic Association (NCAA)** guidelines recommend that member institutions formulate a concussion management plan with **recommendations for baseline testing**, neuropsychological evaluation and a return to play pathway."

NCAA Guidelines, 2013

"**Baseline testing** is a scientifically accepted measure of determining when a player should return to the playing field. **Baseline testing provides a comparison** between a player's normal brain function tested at the beginning of the season against the player's post-concussive brain function."

RUTGERS LAW JOURNAL, "IT'S JUST A CONCUSSION"

"**There still are a lot of coaches and directors of youth organizations that have their "head in the sand" when it comes to offering a concussion baseline test to their youngsters.** In general, coaches often believe that if they know about something that could be harmful(a concussion), they have a *duty* to try to minimize its harm(a concussion baseline test)."

"If they don't know about something(a concussion baseline test), then obviously they can't be blamed for not making it available to their athletes. So many coaches are still trying to avoid finding out important information that would impose an unpleasant *duty* on them."

"Obviously, for the safety of the kids, this behavior must be addressed and mandating a concussion baseline test within a youth organization or @ the State level would alleviate this problem and take the burden off the coaches."

Concerned Parent, Concussion Blog, 2015