



ImPACT™

The Best Approach to Concussion Management



Working together to make a difference in our community.

Proper management of concussion is the best form of prevention of serious injury.

What is a Concussion?

- A disturbance in brain function that occurs following either a blow to the head or as a result of the violent shaking of the head.
- One of the most serious and prevalent medical problems in competitive athletics.
- A difficult condition to diagnose and treat.
- Relying solely on self report of athlete leads to premature return-to-play and increased risk of serious injury.

How Does ImPACT Work?

Athletes are given a baseline test on the computer at the beginning of the season. If an athlete has a concussion, they retake the test.

Post concussion test results are compared to the baseline test. The clinical use and analysis of ImPACT is an integral part of the protocol which assists clinicians in return to play decisions.

Why ImPACT?

- A “physical” of the brain.
- A sophisticated, research-based computer test developed to help clinicians evaluate recovery following concussion.
- A 20-minute test battery that can be administered in the pre-season for a baseline and post-injury to track a concussion.

ImPACT >
Immediate Post-Concussion
Assessment and Cognitive Testing

- Traditional neurological and radiologic procedures, such as CT, MRI, and EEG, helpful in identifying anatomic injury (e.g. skull fracture, hematoma, contusion), are not useful in identifying the effects of concussion.
- Uses a battery of scientifically-validated computerized neurocognitive tests.
- Consists of a Self-Report Symptom Questionnaire (21 symptoms commonly associated with concussion), a Concussion History Form, and seven tests of neurocognitive functioning.

“The athletes at Cathedral High School have benefited greatly...
...from ImPACT since we implemented testing three years ago. Comparing post-injury test scores to baseline scores has provided valuable information that is used to determine if the athlete is ready to resume activity. ImPACT allows our medical staff to make return to play decisions based on individual, objective information.”

~ Mike Hunker, Certified Athletic Trainer
Cathedral High School, Indianapolis



ImPACT Measures

- *Attention Span*
- *Working Memory*
- *Sustained Attention*
- *Reaction Time*
- *Response Variability*
- *Visual & Verbal Memory*
- *Selective Attention*
- *Non-Verbal Problem Solving*

Our Approach

Our approach is reliable, valid, and extremely sensitive in determining whether an athlete has recovered sufficiently from a concussion in order to safely return to play.

Key Factors

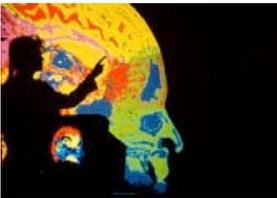
Key Factors in determining an athlete's recovery is to compare post-concussion performance and symptoms to their "baseline" (preconcussion) levels.

Baseline Administration

- The most effective utilization of ImPACT is to obtain a preseason baseline as part of the athlete's physical at the beginning of the season.
- Baseline testing takes approximately 20 minutes.

Post-Concussion Testing

ImPACT may be re-administered if an athlete is deemed to have sustained a concussion, even if it is considered mild without loss of consciousness. ImPACT post-concussion follow-up evaluations can be conducted within 24-72 hours after injury (to help determine severity of injury) and subsequently as needed (e.g. days 5 and 10 post-injury).



Who uses ImPACT?



- 31 NFL Teams
- Major League Baseball
- Major League Soccer
- US Lacrosse
- USA Rugby
- Indy Racing League
- Formula One
- New Zealand Rugby Football Union
- U.S. Soccer
- Swedish World Cup Soccer
- 1500+ High Schools
- 300+ Universities
- 300+ Sports Medicine Centers and Neuropsychology Clinics

“We consider the implementation of ImPACT concussion testing to be the single most significant addition to the medical care we provide our athletes. ImPACT testing has undoubtedly helped to protect our athletes from further, if not lifetime, head trauma.”

~ Chuck Jones, Athletic Director
North Central High School, Indianapolis

WHAT IS THE BEST WAY TO TEST LARGE NUMBERS OF ATHLETES?

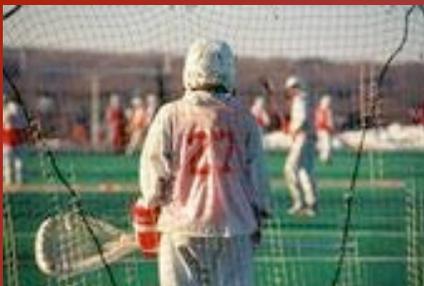
Schedule groups of athletes in the computer lab. The test is 20 minutes long and you can schedule athletes every half hour to take the test. Athletes should be supervised by someone familiar with ImPACT.

Schedule the test to be taken during your annual physicals. Install the program on the computers where you conduct your physicals and have the athletes take the test as part of their physical. Test athletes two times in high school, (Freshman and Junior years) and one time in college (Freshman year).

WHAT DO WE DO AFTER A CONCUSSION? WHO SHOULD INTERPRET THE TEST RESULTS?

Once taken, ImPACT generates a six-page clinical report. The ImPACT Clinical Team will train you, your staff and your team doctors on reading and interpreting the test results.

1. 24 to 48 hours post injury, have the athlete sit down to take the Post-Concussion Test.
2. Ask your athletic trainer, team physician / medical staff to get involved. We have found that MANY clinicians want to be involved. We find that many sports medicine clinicians want to learn to interpret the test results AND WE WILL TRAIN THEM ON USING THE INSTRUMENT. We can also provide names of specialists (e.g. neuropsychologists) in your area who are trained in proper interpretation.



WHO CAN ADMINISTER IMPACT?

- Athletic Trainer
- Physician
- Nurse
- Neuropsychologist
- Sports Medicine Clinician

HOW OFTEN SHOULD ATHLETES BE GIVEN A BASELINE TEST?

High School – Although each athlete can be tested only once in high school, we recommend the adolescent athlete taking the baseline test every two years as the brain is developing.

College – One time [Freshman Year]

Professional Level – One time

WHAT IF I DON'T HAVE A BASELINE ON AN ATHLETE?

ImPACT performance following a concussion can be compared to our large normative database to assist in determination of recovery.

WHEN SHOULD IMPACT BE GIVEN FOLLOWING A CONCUSSION?

We suggest initial evaluation 24-72 hours after injury. If ImPACT results are abnormal or the athlete remains symptomatic, follow-up evaluations should be conducted at approximately five-day intervals.

“An important tool to aid in the diagnoses of head injuries and the decision-making process to allow an athlete to return to action.”

~ Brent Miller, Athletic Director
Western Boone High School, Thorntown

DO YOU HAVE FORMS TO INTRODUCE THE PROGRAM TO THE PARENTS AND ALSO GET PERMISSION FROM THE PARENTS ON TESTING THEIR KID?

Yes. You can insert your school logo in the document and send it home with all the athletes. There is also a one page intro that tells the parents everything they need to know.

CAN I GET A DEMO OF THE IMPACT PROGRAM AND MARKETING MATERIALS?

Yes

WHO DO I CALL FOR MORE INFO?

Indiana Sports Concussion Network
317.571.8233

WHO DO I CALL FOR TECH SUPPORT?

Andy Merida-IT Specialist
317.208.1566

WHO SHOULD OUR ATHLETIC TRAINERS CALL FOR MEDICAL AND CLINICAL REPORT QUESTIONS?

Local Contact: Todd Arnold, MD | Pat Kersey, MD | Dan Kraft, MD
Methodist Sports Medicine / The Orthopedic Specialists
317.817.1200 or 800 SPORTS – MED
methodistsports.com

WHERE DO I GO FOR MORE INFORMATION ON IMPACT?

<http://www.methodistsports.com/concussionmanagement/index.html>