

# Overview and Features of the ImPACT® Test

ImPACT (Immediate Post-Concussion Assessment and Cognitive Testing) is the first, most-widely used, and most scientifically validated computerized concussion evaluation system. ImPACT was developed to provide useful information to assist qualified practitioners in making sound return to play decisions following concussions.

Developed in the early 1990's by Drs. Mark Lovell and Joseph Maroon, ImPACT is a 20-minute test that has become a standard tool used in comprehensive clinical management of concussions for athletes from age 10 through adulthood. ImPACT Applications, Inc. was co-founded by Mark Lovell, PhD, Joseph Maroon, MD, and Michael (Micky) Collins, PhD.

Given the inherent complexities of concussion management, it is important to manage concussions on an individualized basis and to implement baseline testing and/or post-injury neurocognitive testing whenever possible. Neurocognitive 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. In fact, neurocognitive testing has been called the "cornerstone" of proper concussion management by an international panel of sports medicine experts.

ImPACT can be administered by an athletic trainer, school nurse, athletic director, team doctor or psychologist, provided that they have completed training in the administration of the test. Post-concussion care and the management of concussion should only be administered by professionals with specialized training in concussion management. ImPACT assists doctors in making return-to-play decisions and should **never** be used as a stand-alone tool or as a diagnostic instrument.

ImPACT is the most widely used computer-based testing program in the world and is implemented effectively across high school, collegiate, and professional levels of sport participation.

## Test Features

- Measures player symptoms
- Measures verbal and visual memory, processing speed and reaction time
- Reaction time measured to a 1/100th of second
- Assists clinicians and athletic trainers in making difficult return-to-play decisions
- Provides reliable baseline test information
- Produces a comprehensive report of test results
- Results are presented as a PDF file and can be emailed
- Automatically stores data from repeat testing
- Testing is administered online for individuals or groups
- Compatible with PC and MAC

The test battery consists of a near infinite number of alternate forms by randomly varying the stimulus array for each administration. This feature was built in to the program to minimize the "practice effects" that have limited the usefulness of more traditional neurocognitive tests.

ImPACT takes approximately 20 minutes to complete. The program measures multiple aspects of cognitive functioning in athletes, including:

- Attention span
- Working memory
- Sustained and selective attention time

- Response variability
- Non-verbal problem solving
- Reaction time

## **Test Overview**

- [Section 1: Demographic Information & Health History Questionnaire](#)
- [Section 2: Current Symptoms and Conditions](#)
- [Section 3: Neuropsychological Tests](#) (baseline testing and post-injury testing)
- Module 1: Word Memory
- Module 2: Design Memory
- Module 3: X's and O's
- Module 4: Symbol Matching
- Module 5: Color Match
- Module 6: Three Letter Memory
- [Section 4: Injury Description](#)
- [Section 5: ImPACT Test Scores](#)