Overview
ImPACT is the most researched neurocognitive assessment tool and has been validated through multiple independent studies. In fact, a recent search through the Pub Med database yielded over 260 peer-reviewed publications in which ImPACT was utilized. Given the depth and breadth of research as cited above, ImPACT clearly meets criteria for an evidence-based approach to concussion assessment.

The “Summary of evidence-based guideline update: evaluation and management of concussion in sports,” featured in Neurology (Giza et al. 2013) discusses the state of evidence-based practice as it pertains to concussion assessment and reviews the concepts that are crucial to the ImPACT Best Practice Model. This model highlights the need for ongoing research and investigation into scientifically based assessment tools.
Over the past two decades, medicine and other allied health fields have been in a state of evolution. This is particularly true regarding sports-related concussion. This evolution has been based increasingly on the adoption of an Evidence-Based Model (2001) that also has been adopted by psychology (2006), nursing (Rosswurm, Larrabee, 1999), dentistry (Richards, Lawrence, 1995), and other related fields. Although these models have varied somewhat depending on the specific field, they all share certain characteristics that can be broadly stated as:

1. Healthcare decisions should be based on research rather than on experience or clinical lore.
2. Research studies should be selected and interpreted according to specific guidelines or rules and should be based on quantitative rather than on theoretical studies.

Embodied within these central tenets is the theme of avoiding practice based on anecdotal observations and a focus on the development of research questions that can be explored scientifically through observation, experimentation and replication.

Since the ImPACT Test was developed in the 1990's and ImPACT Applications, Inc. was established in 2000, the development of our assessment tools (both neurocognitive and other) has been guided by systematic clinical research, conducted internally and by independent researchers. Over the past five years, the majority of research studies have been completed by individual researchers who have no ties to ImPACT. We welcome and indeed encourage this independent and transparent approach to research and feel it has resulted in better products that are both scientifically validated and “user friendly” to the healthcare professionals that utilize them in their day to day clinical practice.

Similar to the initial Institute of Medicine model published in 2001, the ImPACT Best Practice Model that was implemented in 2010 was constructed based on a round table discussion with a panel that consisted of neuropsychologists, sports medicine physicians and athletic trainers who were all highly experienced in the care of concussed athletes and in clinical research. Although this model will continue to evolve as new scientific evidence is published, we feel strongly that this model represents an evidence-based approach to the assessment of the concussed athlete and to his or her eventual return to play.

More recently, other organizations have sponsored and conducted similar multi-disciplinary reviews and have issued Evidence-Based reviews. One such review was recently published by the American Academy of Neurology in 2013 (Giza et al. 2013) and consisted of a review of all relevant research articles published between 1997 and 2012.

The review process involved review of core content areas such as identification of injury, assessment tools and return to play procedures. Neuropsychological and neurocognitive assessment was specifically discussed and was noted to be of value in the management of concussion, particularly in combination with other tools such as balance assessment, sideline testing and symptom monitoring. This is completely consistent with the ImPACT multi-disciplinary model that has been discussed elsewhere (Reynolds et al. 2014). These more recent AAN evidence-based guidelines represent a significant improvement over the prior statement published in 1997, which was based on expert opinion and not on a systematic review of the literature.

**A Brief Summary**

In summary, the field of concussion management has evolved significantly over the past two decades and will no doubt continue to change with new advances in technology. ImPACT will continue to grow with this evolution and will hopefully add substantially to the development of scientifically based tools to assess concussion.

**References**


**ImPACT's Ongoing Commitment to Research**

ImPACT's database of clinical research contains more than 215 peer reviewed and over 145 independent studies to date. Click here or visit www.impacttest.com/research to read more.