

# PRO MOTION REHAB CONCUSSION MANAGEMENT PROGRAM



## Why Athletic Baseline Testing?

### *ONE IN 10 ATHLETES WILL SUFFER A CONCUSSION THIS YEAR.*

The actual number could be much higher as concussions still go unrecognized and underreported.

Baseline testing has been recommended by the National Collegiate Athletic Association (NCAA), the International Consensus on Concussion in Sport, and the American Academy of Pediatrics (AAP).

The Therapists at **Pro Motion Rehab** recommend **every Athlete** take a **Baseline test** every year to establish an individual Baseline of balance, muscle strength, and brain function. This helps in the event that an Athlete suffers an injury or concussion by having a reference point for comparison to determine normal for that individual. Concussion causes subtle changes in the speed and accuracy of cognition (thinking). These changes are usually the last symptoms to go away after a concussion and they can be very slight. In fact, it is very difficult to detect them without a computerized test which compares an individual to themselves when they were “normal.”

**This means that a Baseline test in the pre-season, before any injury occurs is essential.**

- **QUICK** – An Athlete can take the Baseline tests in 30 to 45 minutes that will be retained in our system for later use should the need arise. Results are usually available immediately following the evaluation.
- **EASY TO UNDERSTAND** – The tests features strength assessment, balance testing, range of motion testing, and cognitive testing using playing cards which are universally understood at every age and educational level.
- **CONVENIENT** – No records to bring if the individual suffers an injury because we will already have them in our system. We'll store your test results from year to year, allowing us to share the data as needed with your physician.
- **SCIENTIFICALLY VALID** – The tests that will be done have been validated in peer-reviewed articles and multiple studies. (See <http://www.axonsports.com/index.cfm?pid=50>)
- **WELCOMING** – The test results are easy to understand by most medical professionals and can be used in return-to-play decisions by one of our Staff Therapist, your Coach or Athletic Trainer, and your Physician. Any qualified Medical Provider who can set aside a half hour to review the results can use them effectively to make a decision that could impact the future of the Athlete if an injury either goes undetected or is not fully rehabilitated.
- **WINNING TEAM** – **Pro Motion Rehab has joined with Axon Sports** to utilize the Axon Sports Computerized Cognitive Assessment Tool (CCAT) as part of our Concussion Management Program. It measures what we can't see – cognitive (brain) function.

## **WHO IS AXON SPORTS?**

Axon Sports meets the current best practice standards by providing Athletes a quick and cost-effective online cognitive test paid for by Pro Motion Rehab when completed in the Pro Motion Rehab clinic as part of their baseline testing program. Athletes establish a Baseline or "snapshots" of their brains' speed and accuracy using the Axon Sports CCAT's four simple tasks.

Repeating the same tasks After Injury identifies any cognitive changes from the Baseline performance. This helps indicate whether the brain has fully recovered from the injury. The Qualified Therapists at Pro Motion Rehab use the online concussion test results as one of the evaluative tools (that will be shared with your Physician) to make a definitive decision about when it is safe for the Athlete to return to the classroom, practice, or competitive play.

Axon Sports is proud to lead the way as an innovator in online concussion management tools that address the growing need for Baseline and After Injury testing. Combined with the balance and strength testing done at Pro Motion Rehab the test results will offer a comprehensive and clear picture of the Athlete before and after an injury.

Axon Sports' mission is to protect and train the Athletic brain. They (like Pro Motion Rehab) believe Every Athlete should have access to a Baseline test Every Year.

## Why Play It S.A.F.E.® in our Concussion Management Program

**Play It S.A.F.E.® starts with baseline testing using objective neuro-physical balance testing to complement the neuro-cognitive testing tool used by our Pro Motion Rehab staff. A simple clinical guideline for a sideline assessment and follow-up evaluation provides insight to the question, “Can this athlete return to play?”**

Cognitive testing together with a pre-season evaluation collectively known as Baseline Testing is an essential part of the concussion management process.

### **WHAT IS A CONCUSSION?**

More and more common in sports, a concussion is a Traumatic Brain Injury induced by a traumatic force – either a direct hit to the head or an indirect blow to the body. The injury affects an Athlete’s brain function or cognition. Every Athlete reacts differently. Every recovery is unique to the individual and the injury.

### **What is the Play It S.A.F.E.®**

#### **SIDELINE ASSESSMENT & FOLLOW-UP EVALUATION**

Biodex Medical Systems, a leader in sports medicine and rehabilitation, has teamed up with Bridgett Wallace, a Certified Vestibular Therapist and President of 360° Balance, to develop the Play It S.A.F.E.® Concussion Management Program - a “turn-key” solution to the assessment and management of concussion.

The Play It S.A.F.E.® program brings together cognitive and functional assessment using accepted tools and methods to afford an Athlete a “single source” concussion management program like the one found at Pro Motion Rehab, Inc.

Even for facilities that have a concussion program in place, Play It S.A.F.E.® adds the vital vestibular and objective balance assessment recently found so important in concussion assessment.

The program can be an important addition to an existing program when used in conjunction with accepted neuro-cognitive testing program as described above.

#### **Objective balance testing is critical**

Research shows that athletes demonstrate decreased stability up to three to five days post injury. This can be the result of ineffective use of one or more of their sensory systems. (1) Signs and symptoms will vary following head trauma. With some individuals, signs and symptoms may resolve immediately after a mild head injury (MHI) while others have persistent symptoms. In either case, the recovery period related to MHI appears to coincide with recovery of postural stability as well as normalization of eye-head coordination and return of cognitive function. (1)

#### **Preseason Baseline Testing**

The ability to quantify balance and cognitive function in athletes before an injury occurs is an important consideration in a comprehensive athletic program. The objective data provided by computerized assessments provides a performance baseline against which post-injury performance can be compared.

#### **Post-Injury Assessment**

Traditionally balance control has not been assigned a high priority in evaluating athletic injuries. Recently, there is strong evidence demonstrating the impact of balance deficits on functional performance and increased risk of re-injury. (2,3,4)

Following head trauma, the Play It S.A.F.E.® program provides a simple “guideline” that the medical provider can follow, step-by-step to evaluate the athlete and form fact-based conclusions.

#### **References:**

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2. Kauffman, et al. Balance is a critical parameter in orthopedic rehabilitation. *Orthopedic Physical Therapy Clinics of North America; New Technologies in Physical Therapy* 6:1 1059-1516, 1997
3. Goldie, et al. Postural Control following inversion injuries of the ankle. *Arch Phys Med Rehab* 75:969-975, 1994
4. Lehmann J.F. et al Quantitative Evaluation of Sway as in Indicator of Functional Balance in Post-Traumatic Brain Injury. *Arch Phys Med Rehab* 1990;71: 955-962

