

## **SWAY Concussion Testing**

SWAY testing is new to Pius X High School Athletes for the 2020-21 school year. Similar to IMPACT, which had been used for 10+ years, SWAY also includes balance testing to the memory and cognitive components. SWAY will allow more athletes to be tested in a more efficient manner, using school owned iPADS.

The Sway System combines objective balance and cognitive measures to support healthcare professionals in performing accurate and informed evaluations. Sway pioneered mobile balance testing with our patented technology that uses nothing more than the mobile sensors built in to the device you already own. Sway allows healthcare professionals to administer a medical grade balance test in virtually any setting. The Sway System allows you to accurately assess cognitive function with quick and easy tests of visual processing, reaction time and memory. With Sway's patented technology, you get a quick snap shot of key cognitive measures anywhere you want to test.

### **Baseline Testing**

Baseline Testing refers to neurocognitive testing under normal conditions before injury, typically conducted in the pre-season. The baseline test provides a snapshot of how one's brain functions in normal, everyday circumstances. Baseline testing is conducted on-site at schools by trained school staff with assistance from athletic trainers trained in concussion diagnosis, treatment, and care. It takes ~25 minutes to complete the baseline test. The testing application formulates "baseline data" which are stored on a secure, HIPPA compliant which can be retrieved anytime at a later date if an athlete sustains a concussion.

### **Post-Injury Testing**

In the event an athlete sustains a concussion, the athlete is tested again post-injury. Post-injury testing composite scores are then compared to the baseline scores acquired earlier before a concussion injury affected brain function. Therefore, concussion baseline testing only becomes of value if, and when, post-testing is utilized after a concussion injury. An estimated 10% of athletes on average (~15%-20% of football players) in collision and contact sports will risk concussion injury necessitating post-injury testing.

Post-Injury Testing is conducted by medical or appropriate health care professionals having specialized training and credentialing to interpret and evaluate post-testing composite scores for deficiencies or abnormalities. These trained professionals will objectively base concussion management decisions and the decision for return to play on post-test comparisons, depending on when post-test scores return to baseline, among other clinical considerations. Hence, more consistent, objective, and safer decisions can then be made about an injured athlete returning to play. Subjectivity is far less apparent, and an athlete can potentially be allowed back sooner, rather than their return to play being delayed by uncertainty.

Post-Injury Testing is usually conducted once a concussed athlete is symptom-free (asymptomatic), or as early as 24-72 hrs. post-injury, depending on the healthcare provider managing the athlete's condition. When post-concussion testing is opted for online, another form of the test is selected having a different word and design lists, as well as other randomized stimuli. On occasion, multiple post-tests (serial testing) may be conducted to monitor an athlete's recovery over time.

If post-testing scores have not recovered in sufficient time, (usually within 3-4 weeks) the athlete may be referred to a neuro-specialist with advanced, formal training in treating head injuries, i.e. Neurosurgeon, Neuropsychologist, or Neurologist.

### **Testing Cycle**

Baseline testing will be available for 9th through 12th grade athletes participating in collision and contact sports having the highest incidence of concussions [football, volleyball, basketball, wrestling, diving, soccer, track-jumpers, baseball, and softball]. An athlete's baseline is acquired on a 2-year cycle, with testing of incoming 9th graders and 11th grade each year. Anyone new to an athletic program or having sustained a concussion the previous year is tested each year as well.

### **Concussion Information**

**All Parents and Athletes should review signs and symptoms of Concussions.**

**Signs and symptoms of a concussion may include:**

Headache or a feeling of pressure in the head  
Temporary loss of consciousness  
Confusion or feeling as if in a fog  
Amnesia surrounding the traumatic event  
Dizziness or "seeing stars"  
Ringing in the ears  
Nausea  
Vomiting  
Slurred speech  
Delayed response to questions  
Appearing dazed  
Fatigue

**You may have some symptoms of concussions immediately. Others may be delayed for hours or days after injury, such as:**

Concentration and memory complaints  
Irritability and other personality changes  
Sensitivity to light and noise  
Sleep disturbances  
Psychological adjustment problems and depression