

Safeguarding our kids...Concussion Baseline Testing

SWAY...the 1st and only FDA-cleared mobile balance test. Used by Sport Canada and 23 European Sports Federations and more and more US teams from junior football, soccer, lacrosse to NCAA teams.

The Balance Error Scoring System (BESS) is the current gold standard for evaluating balance, one of the best predictors for the need for concussion intervention.

Sway is equally, if not more, sensitive as BESS. Sway leaves little room for human error. The Sway Balance Software (SBS) is a mobile application is software which uses the built-in tri-axial accelerometers of a mobile electronic device to assess postural movement and it has a clearance from food and drug administration to be a balance testing system.

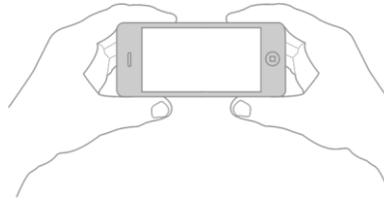
Sway Balance

Sway provides the first and only FDA-cleared mobile balance test. Using the built-in motion sensors of any iPhone, iPad or iPod Touch device, health professionals can administer a medical grade objective balance test in virtually any setting.



Sway Reaction Time

Sway's proprietary algorithms measure reaction time in response to a user's movement of a mobile device. The built-in motion sensors of the mobile device assist in identifying the earliest intentional movement as a response to a stimulus. Sway's Simple Reaction Time is a significant step in bringing accurate cognitive testing to a mobile device.



Recommendations from the 4th International Consensus Statement on Concussion¹³ and the National Athletic Trainer's Association (NATA), suggest the establishment of a neuropsychological and balance baseline for every player. Establishing an individualized baseline for each player, with the simple Sway test, provides an objective assessment for testing on the sideline and in recovery. The use of Sway makes return to play decisions much less about judgment and more about quantitative measures. To establish an effective baseline, athletes should be tested at least three times, with Sway scores falling within an acceptable range of variation.

Patients may not be able to sensitively detect or perceive difficulties (or lack thereof) with postural stability or RT (reaction time) following a sports-related concussion. Baseline balance and RT scores may be more useful for detection of postural instability or RT deficits following a concussion than reliance on subjective measures of balance and RT as patients likely cannot accurately discern whether or not balance or RT deficits are present following injury.

SWAY Balance provides an attractive means of screening dizzy patients for quantitative information associated with their dizziness and balance. The SWAY Balance mobile application provides a convenient and attractive means of obtaining quantitative information on dizzy patients by measuring postural sway while isolating each component of the balance system. Therefore, this mobile application may be a better tool for quantification of sway while standing on foam.

National Athletic Trainers' Association Position Statement: Management of Sport Concussion

NEUROCOGNITIVE TESTING: Neurocognitive testing has historically been viewed as the cornerstone of the concussion-assessment process, yet when used in isolation, this technique does not provide clinically adequate sensitivity to concussion. **Therefore, neurocognitive testing should never be used in isolation but rather in conjunction with symptom and motor-control assessments to support the clinical examination.** **BASELINE TESTING:** The baseline evaluation of an athlete for the purpose of concussion management should include a documented neurologic history with symptoms and physical examination (Table 3). Baseline testing should also involve the objective evaluation of multiple spheres of brain function and, at minimum, assess neurocognitive performance and motor control.

2 videos:

1. [OLDATHLETICTRAINER.COM](https://www.youtube.com/watch?v=rLKuCogJscQ) evaluates SWAY

<iframe width="560" height="315" src="https://www.youtube.com/embed/rLKuCogJscQ" frameborder="0" allow="accelerometer; autoplay; encrypted-media; gyroscope; picture-in-picture" allowfullscreen></iframe>

<https://youtu.be/rLKuCogJscQ>

2. DUKE demo of SWAY test

<iframe width="560" height="315" src="https://www.youtube.com/embed/nqdR8NTvQMk" frameborder="0" allow="accelerometer; autoplay; encrypted-media; gyroscope; picture-in-picture" allowfullscreen></iframe>

<https://youtu.be/nqdR8NTvQMk>