

About Baseline Testing

Why Baseline Testing?

Concussions can produce a wide array of symptoms, which poses a challenge for coaches, trainers, parents, and health professionals involved in the care of an injured athlete. The time-course for recovery also varies widely from athlete to athlete, making it impossible to employ a “cookie-cutter” approach to concussion rehabilitation and return-to-play timelines. Currently, there is no reliable diagnostic test or marker that can be used to identify a concussion when it’s occurred, or similarly, determine when a concussion has resolved.

For this reason, a growing emphasis has been placed on objective baseline testing protocols that can be used to track an athlete’s recovery and serve as a tangible measurement for return-to-play readiness. By measuring an athlete’s “normal” level of functioning, we are better able to gauge the level of impairment that may exist post-injury by performing comparative testing. The Shift Team believes this requires a multifaceted approach and that no single test should be used in isolation.

That is why the Shift Concussion Management Program offers several testing components designed to assess:

Neurocognitive Performance (ImPACT)
Balance and Postural Sway
Visual Coordination



Shift baseline testers also review and document previous concussive episodes and history of concussion-like symptoms to aid in individualized post-injury assessments should they be required.

Baseline values can vary widely from one athlete to the next, and in young developing athletes, these measures can change dramatically from year to year. It is therefore important to have record of each player’s baseline level of physical and neurocognitive functioning before the start of each season. Should an athlete sustain a concussion during the season, Shift Practitioners have the ability to compare post-injury testing to baseline values. This allows for a more accurate and objective assessment an otherwise elusive injury, and provides important information when making return-to-play decisions.

Neurocognitive Testing

Recent advancements in concussion management have resulted in the widespread use of computer-based neurocognitive testing protocols, and evidence now shows that concussed athletes demonstrate subtle cognitive deficits that may persist



beyond symptom resolution – emphasizing the fact that return to play once “symptom-free” is no longer an accurate measure of readiness.

For this reason, Shift employs computerized neurocognitive testing as part of all baseline and post-injury assessment protocols. This type of testing provides us with a snapshot of how an athlete’s brain is functioning both pre and post injury by measuring things like reaction time, processing speed, memory, and attention/concentration. These cognitive processes are often affected by concussive injury, and so this type of testing provides us with important information when managing an athlete’s recovery.

Note: computer-based neurocognitive tests that are designed for concussion assessment (eg. ImPACT) are valuable and valid tools that provide objective information on various aspects of neurocognitive performance; however, these tests are not meant to replace a full neuropsychological assessment that would be provided by a qualified Neuropsychologist. When more complex or comprehensive testing is required, specialist referral may be indicated.

Additional Testing

It is well known that neurocognitive performance may be impacted following a concussion, but other aspects of physical performance may also be hindered: e.g. balance and visual coordination skills. This type of testing is often overlooked during traditional baseline evaluations, but all Shift clinical sites offer these additional testing components to gain a more complete picture of our athletes.