NeuroTracker
YOUR PATH TO IMPROVEMENT

Sports Vision Enhancement for Baseball

NeuroTracker is a unique 3D training system that improves on-field performance for elite-level players. NeuroTracker improves visual information processing speed, increases situational awareness and sharpens focus - all key mental skills that allow athletes to make better decisions and execute more effectively in the game.

Pitch Recognition – Batters have about 250 milliseconds to identify the type of pitch being thrown, predict its path into the strike zone and direct the bat to that location. The more efficient batters are in processing this rapid stream of visual information the more effective they will be in getting hits. NeuroTracker increases the batter's ability to identify key visual cues in the pitcher's wind up and release. This permits them to accurately predict where and when the pitch will cross the plate and determine whether to swing.

Effective Playmaking – Once the ball is in play runners and fielders have to rapidly assess the situation, anticipate what's next, evaluate their options and execute, often in a split second. When the game is tight the pressure on these athletes can be enormous. NeuroTracker enhances athletic performance by improving the perceptual-cognitive functions that are used to make rapid decisions under pressure.

Mental Endurance - Baseball interposes long periods of inactivity with brief episodes of intense action. But the periods of inactivity are only physical. Mentally, the players on the field and at the plate must remain cognitively sharp and in the moment. NeuroTracker increases cognitive stamina, much like strength and conditioning training increases physical stamina. NeuroTracker also helps improve attention and focus, so players can maintain situation awareness and retain their competitive edge throughout the entire game.

How does NeuroTracker work?

NeuroTracker was designed to produce ***maximum benefits within the shortest time possible*** with immersive ***3D Multiple Object Tracking (3D MOT)*** technology. Finding the right speed to challenge athletes without overwhelming them is crucial in training efficiency. NeuroTracker achieves this with adaptive training algorithms that dynamically match the degree of difficulty in each session to the individual's performance threshold. Just as with strength and conditionin training, the athlete continuously pushes their performance envelope. NeuroTracker offers customized *profiles* to identify specific cognitive skills that need improvement and provides training protocols that address those specific needs. NeuroTracker also incorporates expertise training with Tactical Awareness mode to help the athlete develop automaticity in their sport.

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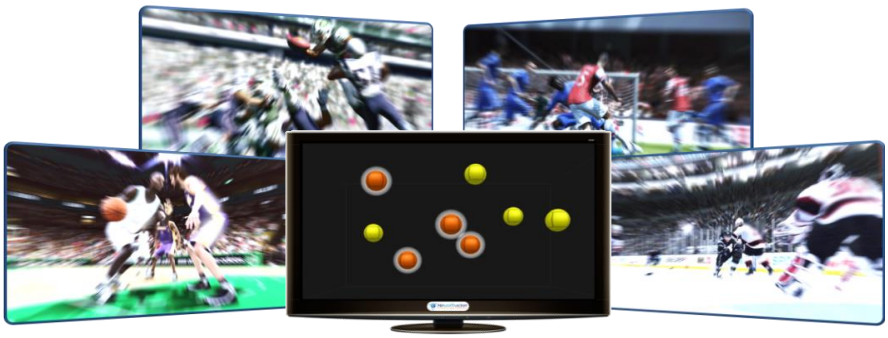
Does NeuroTracker training transfer to the field?

Yes. Over the past five years, we have seen the evidence keep piling up. We've seen the evidence in elite teams, and in the lab. In 2010, the Vancouver Canucks adopted NeuroTracker and had one of the most dominant seasons a hockey team has ever had (with the same coach and core group of players). In 2011, researchers proved that NeuroTracker enhances 'biological motion perception,' the fundamentals of body language. In 2014, we showed that NeuroTracker improved soccer passing accuracy by over 20% in university-level athletes. In 2015, the Golden State Warriors won the NBA Championship and Providence College won the NCAA Men's Hockey Championship. Both teams train with NeuroTracker. The brain is the most adaptive organ in the body – it should be no surprise that cognitive training has big effects.

How soon will I see results?

The most significant gains from NeuroTracker training take place over the first 15 sessions (typically done over 3-5 weeks). The ideal training regimen is 2-3 training visits per week. There is no risk in training with NeuroTracker every day and most elite athletes incorporate NeuroTracker into their standard strength and conditioning regimen. One training session can take as little as 5 minutes, making it easy to integrate into existing programs – or it can be coupled with other types of NeuroTracker sessions to get more extensive cognitive training (i.e., working from general to specific).

NeuroTracker is also an ideal scouting tool to assess a prospect's cognitive ability to perform at elite levels. A study in Nature magazine (world's most cited scientific journal) indicated that there are clear differences in dynamic scene processing between professional athletes, Division I amateurs and college non-athletes.



NeuroTracker is the result of twenty years of research in human perception and cognition by the Visual Psychophysics and Perception Lab at the University of Montreal.