Q. What is NeuroTracker?
A. NeuroTracker is a tool to train awareness and attention, which are the cognitive abilities you need to safely cross the street, drive a car, and generally navigate life. NeuroTracker is easy to use; it is safe; and it is scientifically validated. In normal healthy aging, there is a significant decline in the ability to process movement that you see – this can lead to confusion when in crowds, inattention when driving as well as increased fall risk. NeuroTracker trains you to deal with this information so that you can continue to be safe, independent and socially active.

Q. How does NeuroTracker work?
A. NeuroTracker is simple. It takes 5-6 minutes, and you can do it sitting down! NeuroTracker trains attention, awareness and visual processing using a method called “3D Multiple Object Tracking (3D MOT).” What is 3D MOT? You are presented with 8 yellow balls in a virtual cube. 3 of the balls flash orange for a moment – those are your targets. Your goal is to track your targets and ignore the decoys. After you’ve seen your targets identified, all the balls start bouncing around the cube. This lasts six seconds. At the end of six seconds, all the balls stop moving and you have to identify your original three targets. If you are correct, the speed increases (for extra difficulty). If you are incorrect, the speed decreases. One 5-6 minute session has 20 of these 6-second trials.

During NeuroTracker training, the brain must make complex predictions of where the objects will end up just moments into the future. When objects cross in front of one another, it adds another layer of complexity because the brain has to use its working memory to infer the hidden object’s motion while it is out of sight.

Q. What are the benefits of training with NeuroTracker?
A. Enhanced awareness and attention are universally important skills. This is especially true in situations that are potentially dangerous, like driving and crossing the street. Specifically, NeuroTracker improves your ability to:
- Make sense of a crowded scene so that you can cross the street safely.
- Predict trajectories when driving so that you don’t get surprised on busy urban roads.
- Deal with everyday scenes more efficiently and reduce the risk of visual overload-induced fall risk. This can help in healthy aging, but can also help to improve the quality of life in those with dementia or head injury.

Q. What is the science behind NeuroTracker?
A. NeuroTracker is the result of years of research at the University of Montreal, with peer reviewed papers published in dozens of journals showing its relevance and effectiveness for training; validation studies are also ongoing at several institutions across North America, Europe and Asia. Specifically, researchers have demonstrated that:
- Awareness and attention are highly relevant skills for people who are aging – that is, awareness and attention have a meaningful impact on everyday life.
- Awareness and attention naturally decline as people age
- NeuroTracker is proven to consistently improve awareness and attention – and aging adults show some of the largest improvements
- Improvements from NeuroTracker training are transferable to real life situations.

Q. What are the risks of training with NeuroTracker?
A. Training with NeuroTracker is like watching a 3D movie. The vast majority of users have experienced no side effects whatsoever. Occasionally, Users report minor fatigue at the end of training sessions because NeuroTracker is a cognitively demanding activity. Less than 1% of users have experienced minor headaches after early training sessions. Typically, Users do not experience headaches as a recurring problem. All users who report headaches are referred to an optometrist because improperly corrected visual impairment is the most likely cause of discomfort when using 3D technology.

Q. How soon will I see results?
A. The most significant gains from NeuroTracker training take place over the first 15 sessions (typically done over 3-5 weeks). CogniSens recommends no more than 3 NeuroTracker sessions in a day. The ideal training regimen is 2-3 training visits per week. There is no risk in training with NeuroTracker every day.