

# This scan can watch concussion recovery inside your brain

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An Israel-based health firm with Chicago ties is developing its non-invasive brain scan, used to evaluate concussions, to take on depression, Alzheimer's and Parkinson's disease.

ElMindA, an Israel-based firm founded in 2006 by Amir Geva, builds a Brain Network Activation [test](#) that helps clinicians assess [brain health](#), in hopes of better diagnosing or treating neurological disorders.

The company has its U.S. headquarters in north suburban Glenview, Ill., with 12 employees and has received funding from private Chicago investors. Late last year, the company received a \$28 million Series C funding round to perform clinical studies, develop its technology and take it to new clinics, ElMindA CEO Ronen Gadot said.

The firm has FDA clearance to test working memory, attention and sensory processing in individuals ages 14 to 24.

Its first U.S. customer, Oak Brook-based Athletico Physical Therapy, offers BNA tests in its Niles, Aurora, Bannockburn, Orland Park and LaGrange Park, Ill., locations. During a \$199 test, customers are outfitted with a net of sensors, intended to indicate how brain stimulation - or "neuronal firings" - are behaving under the surface.

"We're measuring the electrical field on top of your skull and trying to analyze it with sophisticated tools and algorithms in order to infer what's going on inside the brain," Gadot said.

Patients wear the sensor net to measure brain activity as they hit a button during a reaction test, then the system uploads results into a web portal - where findings can be shared with the patient and medical professionals.

Michael Palm, manager of concussion services at Athletico, said the company markets the test to youth athletes. The company offers discounts on the test for teams or groups. ElMindA hopes screening tests will one day become a regular part of a patient's checkups, even before a concussion or emergence of another brain disorder.

"If I will be able to follow your brain and how it is working, I will be able to early detect signs of deterioration, signs of change - that could be very helpful for diagnostics and also making better treatment decisions," Gadot said.

Such a test might also have implications for disorders like Alzheimer's disease or depression, Gadot said. Earlier detection could allow pharmaceutical companies to test drugs on patients in earlier stages of disease.

"It has never proven to be very effective to treat a disease at its later stage," he said. "The earlier you start intervening, the better chances you have for success. But for that, you really need to have better tools to early detect those changes."

Stephanie Kolakowsky-Hayner, [chief operating officer](#) of the New York-based Brain Trauma Foundation, said a number of new technologies to diagnose and treat brain injuries have emerged. But they require extensive research and testing before [brain](#) injury experts endorse one over another.

"All of these things are really actively being researched," she said. "Nothing shoots out above anything else."

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