

A Mobile Game That CAN DETECT ALZHEIMER'S RISK

► *Trend Watch: From Games to Wrist Bands to at Home Diagnostic Tests, Healthtech Applications Expand Personalized Treatment or Therapy*



A specially designed mobile phone game can detect people at risk of Alzheimer's, according to research from the University of East Anglia.

University researchers used the smartphone game called Sea Hero Quest to better understand dementia by seeing how the brain works in relation to spatial navigation.

As players make their way through mazes of islands and icebergs, the research team is able to translate every 0.5 seconds of gameplay into scientific data.

The team studied how people who are genetically pre-disposed to Alzheimer's disease play the game compared with people who are not.

The results, published in the journal PNAS, show that people who are genetically at risk of developing Alzheimer's disease can be distinguished from those who are not on specific levels of the

Sea Hero Quest game.

The findings are particularly important because a standard memory and thinking test could not distinguish between the risk and non-risk groups.

The data collected by the Sea Hero Quest app is vital for research because every two minutes spent playing the game is equal to five hours of lab-based research. And having three million players globally equates to more than 1,700 years' worth of lab-based research.

The team studied gaming data taken from 27,108 UK players aged between 50 and 75 — the most vulnerable age group to develop Alzheimer's in the next decade.

They compared this benchmark data with a smaller lab-based group of 60 people who underwent genetic testing.

FDA Gives Marketing Clearance to Loop WEARABLE WRISTBAND THAT REMOTELY MONITORS COPD PATIENTS

Spry Health's Loop wristband device, which remotely monitors the condition of patients with chronic diseases, such as COPD, has received marketing clearance from the FDA. Loop measures pulse oximetry, respiration rate, and heart rate through its optical sensors.

Connected to a software platform that analyzes the data, the device allows clinicians to monitor the condition of patients remotely, and detect early signs of worsening disease, before symptoms are noticeable.

This simple-to-use wearable doesn't require

any input or data from patients and does not require a smartphone or app, according to Elad Ferber, co-founder and chief technology officer of Spry Health.

A pilot study on user engagement with Loop showed that 92% of patients followed their doctor's recommendation, and wore the monitor every day for at least three hours (20% is considered a success rate with other monitoring tools).

The FDA clearance allows the Loop device to be commercially available in the United States through physicians and health systems.

Smartphone URINALYSIS TEST KIT

Healthy.io developed a smartphone urinalysis test that provides end-to-end service using a smartphone camera to scan a dipstick. Results are sent directly to doctors and integrated with existing medical records. Healthy.io's digital urinalysis pathway is already being used by more than 100,000 patients via strategic partnerships throughout Europe and Israel.

Over the past year, Healthy.io has earned U.S. FDA clearance, entered into a global partnership with Siemens Healthineers and launched a consumer-focused UTI testing service in partnership with Boots UK, a subsidiary of Walgreens Boots Alliance.

Healthy.io's kidney testing service has been assessed with Geisinger Health in conjunction with the U.S. National Kidney Foundation, achieving a 71% adherence rate among patients with hypertension who have never been tested before. Of the patients who took the test, 10% tested positive for elevated levels of protein, indicating a previously unknown kidney disease.



TytoCare and Best Buy Partner FOR AT-HOME MEDICAL EXAMS

TytoCare and Best Buy join up to offer a handheld examination device with attachments to enable the remote diagnosis of acute care situations. TytoHome is a first-of-its-kind medical examination device that can be used at home to take recordings of pain points and allows contact with a doctor.

The device comes with various attachments that examine the heart, lungs, skin, ears, throat and abdomen for acute illnesses — from a sore throat and fever to bug bites and skin rashes.

Users can perform medical exams and send captured data to a primary care provider for diagnosis 24/7, no matter their location.

TytoHome visits will cost \$59 or less, depending on the visit and the user's health insurance plan. The company also works with telehealth platforms across the country, including LiveHealth Online, powered by American Well. **PV**