# Magnetic test for brain disorders

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By Clive Cookson
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Tiny magnetic fields produced by electrical activity in the brain could be the basis of a powerful new diagnostic tool.

Research at the University of Minnesota shows that patients with a range of brain disorders including multiple sclerosis, Alzheimer's and schizophrenia can be distinguished from healthy people, by measuring the magnetic fields outside the head with an imaging technique called magnetoencephalography (MEG).

Apostolos Georgopoulos and Minnesota colleagues believe their discovery, described in the Journal of Neural Engineering, will provide a simple clinical test for neurologists and psychiatrists, whocurrently have to rely on time-consuming and uncertain behavioural examinations to diagnose the onset of brain diseases.

MEG is quick, non-invasive and painless. The subject sits under a helmet-shaped magnetic detector, which scans the brain in less than a minute. Prof Georgopoulos says his team can test 20 people a day and already has a database of about 300 readings - 200 on healthy subjects and 100 on patients in six different disease categories.

The diagnosis is better than 90 per cent accurate and will be refined further as the database grows. The university has set up a medical software company, Orasi Medical, to commercialise the discovery.