

# What Cell Phones Can Do To Youngster's Brain In 2 Minutes

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## **THE CHILD SCRAMBLER**

THESE are the first images that show the shocking effect that using a mobile phone has on a child's brain.

Scientists have discovered that a call lasting just two minutes can alter the natural electrical activity of a child's brain for up to an hour afterwards.

And they also found for the first time how radio waves from mobile phones penetrate deep into the brain and not just around the ear.

The study by Spanish scientists has prompted leading medical experts to question whether it is safe for children to use mobile phones at all.

Doctors fear that disturbed brain activity in children could lead to psychiatric and behavioural problems or impair learning ability.

It was the first time that human guinea pigs were used to measure the effects of mobile phone radiation on children. The tests were carried out on an 11-year-old boy and a 13-year-old girl called Jennifer.

Using a CATEEN scanner, linked to a machine measuring brain wave activity, researchers were able to create the images above.

The yellow coloured part of the scan on the right shows how radiation spreads through the centre of the brain and out to the ear on the other side of the skull. The scans found that disturbed brain wave activity lasted for up to an hour after the phone call ended.

Dr Gerald Hyland -- a Government adviser on mobiles -- says he finds the results "extremely disturbing".

"It makes one wonder whether children, whose brains are still developing, should be using mobile phones," he adds.

"The results show that children's brains are affected for long periods even after very short-term use.

"Their brain wave patterns are abnormal and stay like that for a long period.

"This could affect their mood and ability to learn in the classroom if they have been using a phone during break time, for instance.

"We don't know all the answers yet, but the alteration in brain waves could lead to things like a lack of concentration, memory loss, inability to learn and aggressive behaviour."

Previously it had been thought that interference with brain waves and brain chemistry stopped when a call ended.

The results of the study by the Spanish Neuro Diagnostic Research Institute in Marbella coincide with a new survey that shows 87 per cent of 11- to 16-year-olds own mobile phones and 40 per cent of them spend 15 minutes or more talking each day on them. And disturbingly, 70 per cent said they would not

change the use of their phone even if advised to by the Government.

Dr Hyland plans to publish the latest findings in medical journal The Lancet next year.

He said: "This information shows there really isn't a safe amount of mobile phone use. We don't know what lasting damage is being done by this exposure.

"If I were a parent I would now be extremely wary about allowing my children to use a mobile even for a very short period. My advice would be to avoid mobiles."

Dr Michael Klieseisen, who conducted the study, said: "We were able to see in minute detail what was going on in the brain.

"We never expected to see this continuing activity in the brain. "We are worried that delicate balances that exist -- such as the immunity to infection and disease -- could be altered by interference with chemical balances in the brain."

A Department of Health spokesman said: "In children mobile phone use should be restricted to very short periods of time."