## You Can Now Sue Facebook And Google For Causing Your Child's Mental Illness

# Smartphone addiction twists your BRAIN: Scans reveal how grey matter of tech addicts physically changes shape and size in a similar way to drug users

- German researchers examined the brains of 48 participants using MRI images
- Total of 22 people smartphone addicts and 26 nonaddicts made up the cohort
- Researchers found diminished grey matter volume in key regions of the brain
- Similar phenomenon observed in people who suffer with substance addiction

#### By Joe Pinkstone

Smartphone addiction physically changes the shape and size of the human brain in a similar way to the organ of a drug addict, a study has found.

Images taken by an MRI scanner revealed the brains of people with SPA (smartphone addiction) have lower grey matter volume in some key parts of the brain.

The images also revealed decreased activity in the brains of smartphone addicts compared to non-addicts.

Similar patterns and trends of dwindling grey matter have also been recorded in the mind of drug addicts.

Scroll down for video

Images taken by an MRI scanner revealed the brains of people with SPA (smartphone addiction). Pictured the grey matter volume (GMV) of the brain in the right anterior cingulate cortex. Blue represents the shape of the region in a non-addict and the red represents the brain region of a smartphone addict +2

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#### WHAT IS SMARTPHONE ADDICTION?

The term 'smartphone addiction' has often e been criticised in the scientific literature.

Some experts argue the lack of severe negative consequences compared to other forms of addiction make the name misleading.

Some say the issue isn't with the smartphone, but it is merely a medium to access social media and the internet.

Alternative terms such as 'problematic smartphone use' and concepts have been proposed instead.

Despite the controversy on the term 'smartphone addiction', as described above, it is still the prevailing term in the scientific world.

Additionally, the psychometric instruments used in many studies explicitly refer to the concept of 'smartphone addiction'.

In the upcoming years, a shift away from the term 'smartphone addiction' towards more appropriate terms, as discussed above, might be seen.



German researchers examined 48 participants using the MRI images — 22 with smartphone addiction and 26 non-addicts.

Writing in the study, published in the journal <u>Addictive</u> <u>Behaviors</u>, the researchers write: 'Compared to controls, individuals with smartphone addiction showed lower gay matter volume in left anterior insula, inferior temporal and parahippocampal cortex.'

Decreased grey matter in one of these regions, the insula, has previously been linked to substance addiction.

They add that this is the first physical evidence of a link between smartphone use and physical alterations to the brain.

The authors, from Heidelberg University, write: 'Given their widespread use and increasing popularity, the present study questions the harmlessness of smartphones, at least in

individuals that may be at increased risk for developing smartphone-related addictive behaviors.'

Smartphone addiction is a growing concern among scientists and medical professionals as children especially spend more and more time on the handsets.

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A damning report recently found most children (53 per cent) own a mobile phone by the age of seven years old.

The report, which was based on a survey of 2,167 five to 16-yearolds in the UK, goes on to say that by age 11, nine in 10 children have their own device.

Phone ownership is now 'almost universal' once children are in secondary school, it revealed.

It also found 57 per cent of children sleep with their phone by their bed and almost two in five (39 per cent) youngsters say they could not live without their phone. Researchers said the findings show the extent to which phones can 'dominate children's lives'.

The ubiquity of phone use in society is a cause for concern as the physiological and health implications remain poorly understood, experts of the latest research warn.

### A Dark Consensus About Screens and Kids Begins to Emerge ...

< <u>https://www.nytimes.com/2018/10/26/style/phones-children-silicon-valley.html</u>

A Dark Consensus About Screens and Kids Begins to Emerge in **Silicon Valley** ... in **Silicon Valley** now is about how much exposure to phones is O.K. ... these gadgets do to the human **brain**. Suddenly ...

# <u>The 'Brain-Enhancing' Drugs That Are Sweeping Silicon Valley</u>

< <a href="https://www.inc.com/vicky-castro/the-brain-enhancing-drug-thats-sweeping-silicon-valley.html">https://www.inc.com/vicky-castro/the-brain-enhancing-drug-thats-sweeping-silicon-valley.html</a>

The 'Brain-Enhancing' Drugs That Are Sweeping Silicon Valley In an effort to optimize their bodies and brains to power through long startup hours, tech employees are turning to so-called smart ...

### Why many Silicon Valley parents are curbing their kids ...

< <u>https://www.cbsnews.com/news/silicon-valley-parents-are-raising-their-kids-tech-free/</u>

**Silicon Valley** parents limit tech for kids . In **Silicon Valley**, devices are an essential part of daily life. But many of the tech titans creating these products choose to power down when they

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# What is "brain hacking"? Tech insiders on why you should ...

c <a href="https://www.cbsnews.com/news/brain-hacking-tech-insiders-60-minutes/">https://www.cbsnews.com/news/brain-hacking-tech-insiders-60-minutes/</a>

What is "**brain** hacking"? Tech insiders on why you should care. **Silicon Valley** is engineering your phone, apps and social media to get you hooked, says a former Google product manager.

#### <u>Silicon Valley parents are raising their kids</u> <u>tech-free ...</u>

< <u>https://www.businessinsider.com/silicon-valley-parents-raising-their-kids-tech-free-red-flag-2018-2/?op=1</u>

**Silicon Valley** parents can see firsthand, either through living or working in the Bay Area, that technology is potentially harmful to kids. Many parents are now restricting, or outright banning ...

## <u>Is Silicon Valley a Breeding Ground for Asperger's ...</u>

< <u>https://www.kennethrobersonphd.com/silicon-valley-breeding-ground-aspergers-syndrome/</u>

After two **children** with the disorder, the odds are 1 in 3. The 2001 Wired article suggested that the high incidence of Asperger's Syndrome in **Silicon Valley** is due not just to the large number geeks working in the high tech industry but also because they are having **children** together and in doing so passing the predisposition to Asperger's ...

#### **Sorry, Silicon Valley Won't Save Your Kids From Tech Addiction**

< <u>https://www.fastcompany.com/40543266/sorry-silicon-valley-wont-save-your-kids-from-tech-addiction</u>

To find out what parents think about their kids' use of tech, Fast Company surveyed nearly 400 parents. We tried to look at the issue from all angles, from the amount of screen time kids get to

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#### <u>At Waldorf School in Silicon Valley,</u> <u>Technology Can Wait ...</u>

<u>https://www.nytimes.com/2011/10/23/technology/at-waldorf-school-in-silicon-valley-technology-can-wait.html</u>
Oct 23, 2011— The chief technology officer of eBay sends his **children** to a nine-classroom school here. ... we make technology as **brain**-dead easy to use as possible. ... annual tuition at the **Silicon Valley** ...

#### Over 2 hours of screen time a day can affect children's ...

< <u>https://www.insider.com/how-screen-time-affects-childrens-brains-nih-study-2018-12</u>

A new and ongoing study from the National Institutes of Health is testing how screen time affects **children's brains**, CBS News reported. When complete, the study will have followed more than 11,000 **children** for a decade, monitoring how digital screens like smartphones, video games, and tablets are changing the young **brain**.