## Your smartphone is frying your brain: Neuroscientist explains how increased screen time is impacting our lives

With the constant use of smartphones and social media, Dr Wendy Suzuki says we are reducing the potential for brain growth. She also offers ways to look beyond those screens.

By Bijin Jose

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Dr Suzuki pointed out that the increasing dependence on smartphones is rewiring our neural pathways, reducing the potential for brain growth, and eventually impacting our overall well-being. She also talked about how increased screen

time, especially through social media use, is leading to more anxiety, depression, and a decrease in human connections which is crucial for brain health.

## Designed to be addictive

The renowned neuroscientist and memory researcher said smartphones and social media apps are designed to be addictive. She compared the experience of this extensive use to gambling. "Social media is ... like pulling the slot machine handle. I pull down on the feed and I get a ping. 'Oh look there's a nice picture'. 'Oh ping, there's notifications and comments'. It's that constant... dopamine hit," she told Bartlett.

She said that the constant stream of notifications, likes, and new content triggers a release of dopamine in the brain's reward centres. Over time, a user becomes conditioned to crave this stimulation, leading to compulsive behaviours like frequently checking smartphones or social media apps.



Dr Suzuki also pointed to the impact of social media and smartphones on the developing brain. The researcher acknowledged that while smartphone use impacts people of all ages, she expressed a deep concern about its impact on young people. "When kids started getting smartphones and started to spend more than seven hours a day on social media, that's when the anxiety and depression went up."

The neuroscientist noted that the increased use of smartphones and social media correlates with "huge increases in depression and anxiety levels, particularly in young girls". She said the constant comparisons and instant access to metrics such as likes and reach seem to add to the unprecedented stress in adolescents.

Dr Suzuki highlighted that the alarming addiction to smartphones is impairing our ability to hold genuine human connections. "There's no substitute for real human connections when it comes

to brain health and emotional wellbeing," she said.

She added that face-to-face social interactions can activate key regions of the brain in ways that digital interactions simply cannot have. "A lot of the social interaction areas including the insula... part of the brain right in the side here just in the area near the ear deep into the cortex gets activated."

The researcher warned that constantly reaching for our smartphones instead of engaging with those around us may be "atrophying" the neural pathways responsible for empathy, emotional intelligence, and deep relationships.

## How to use smartphones smartly

Dr Suzuki also touched upon strategies people can adopt for a healthier relationship with their digital devices, as she offered several evidence-based approaches for tackling smartphone addiction and nurturing better brain health.

She recommended **digital detox** by taking long breaks from the smartphone

to help reset habitual behaviours such as frequently checking for notifications. This can lead to healthier ways to spend your time, she said.

"Exercise immediately decreases anxiety and depression levels... Ten minutes of walking can significantly decrease your anxiety and depression levels," said the researcher adding that physical activity provides a natural mood boost at the same time reduce stress.

She said conscious breathing helps one to activate the relaxation response, and can counter the stress from constant connectivity. "Take three deep breaths... that's the only thing you have conscious control over that can launch all the rest of that parasympathetic activity slowing your heart rate."

According to Dr Suzuki, mindful meditation strengthens one's ability to be present in the moment instead of constantly seeking stimulation. Having more face-to-face interactions can satisfy one of our most innate needs — that of human connection.

While the common belief is to eliminate anxiety, Dr Suzuki encouraged people to reframe their anxiety. Her advice is to view it as a warning system that reveals what we really care about. The researcher believes that by reframing anxiety, one can use it as a tool for personal growth.

Even though the challenges of smartphone addiction are greater, Dr Suzuki said humans can adapt and thrive. "We have an opportunity every single day to make our brain as healthy as it could be."

## Who is Dr Wendy Suzuki?

Dr Wendy Suzuki is a US-based neuroscientist and the author of the international bestseller 'Healthy Brain, Happy Life: A Personal Program to Activate Your Brain and Do Everything Better.' She currently serves as the Dean of the College of Arts and Science at New York University (NYU).

Dr Suzuki began her career at NYU as a professor of neural science and psychology in January 1998. She holds a BA in physiology and human anatomy from the University of California,

Berkeley, and a PhD in neuroscience from the University of California, San Diego. Throughout her career, Dr Suzuki has won numerous awards for her work in neuroscience and psychology.

A notable speaker, Dr Suzuki's 2018 TED Talk is among the most popular TED Talks. She is also the founder of BrainBody, a cognitive analytics platform that harnesses neuroscience and machine learning to enhance brain function. Dr Suzuki, who has become a popular personality in both television and print, is a staunch advocate for the positive effects of exercise on brain function.

"Screen addiction limits your potential for brain growth and plasticity. It is going to limit your possibility for joy in your life. There are different kinds of joy that you have in real person-to-person social interactions that feels pretty good on social media if you get lots of likes, but it's not the same," Dr Wendy Suzuki, told host Steven Bartlett, the host of the popular podcast The Diary of a CEO. Smartphones 'frying' the brains refers to the increasing negative impact caused by its overuse. It suggests that the state of the brain is overstimulated and possibly harmed by constant dopamine hits and stress responses owing to frequent smartphone use.