# The Technology We're Dying For: Research on Kids, Smartphones, and Screens

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The following is a partial list of research conducted to study the effects on kids from wireless radiation exposure emitted by smartphones, screens, and other electronic devices. They are categorized by impact.

### Addiction

- U.S. teens average nine hours a day on screens for entertainment excluding schoolwork.
  - "US teens use screens more than seven hours a day on average — and that's not including school work" by Kristen Rogers, CNN
  - "Landmark Report: U.S. Teens Use an Average of Nine Hours of Media Per Day" Common Sense Media

## **Depression and Suicide**

Screen overuse is linked to skyrocketing rates of depression and suicide attempts.

Mojtabai, Olfson, and Han 2016; Twenge et. al
2017; Twenge et. al 2019; Memon et. al 2018

### Self Hate

More hours of social media use equals decreased self esteem

and poor body image

• Kelly et. al 2018.

## **Eye Damage**

Children who spend more hours on "smart" phones, devices, and computers have worse eyesight and increased risk for myopia than those who spend less time on these electronics.

• <u>Guan et. al 2019; Ma et. al 2021; McCrann et. al 2020; Foreman et. al 2021</u>.

Higher reading on screens is linked to poor eyesight. Blue light from screens can damage cells in the retina and children's eyes have less protections. Myopia rates are increasing. Outdoor time has been shown to delay myopia onset yet kids' time spent outdoors is decreasing — in an inverse relationship to the increase in screen use.

- Zhao et. al 2018.

# Attention Deficit and Hyperactivity Disorders

Children with two+ hours of screen-time per day had a 7-fold increased risk of ADHD

Tamana et. al 2019.

## Sleep Disturbances

Higher screens at bedtime = poor sleep quality, shorter sleep time, and later bedtime.

Access to a screen-media device in the bedroom at night is associated with shorter sleep duration, later bedtime, and poorer sleep quality

Hale and Guan 2014; Christensen et. al 2016.

# Cancer and Brain Damage

Cell phone radiation can increase risk of brain cancer,

damages memory and brain development. Pregnant rats exposed to cell phone radiation produced offspring with fewer brain cells, specifically <u>in the hippocampus</u>, the part of the brain responsible for impulse control, memory, balance, and other essential functions.

Other animal experiments report <u>DNA damage</u>, <u>brain</u> <u>damage</u>, <u>memory problems</u>, <u>hyperactivity</u>, <u>cellular impacts</u>, and <u>oxidative stress in the brain</u>. Women who used cell phones regularly when pregnant had significantly increased risks of <u>premature birth</u>, and increased <u>emotional</u> and <u>behavior problems</u>, <u>hyperactivity</u>, and <u>headaches</u> in their children.

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