

An illustration of four stylized human figures standing in a row against a light blue background with faint white speckles. From left to right: a woman with dark hair in a teal top, a man with dark hair in a white shirt, a woman with long blonde hair in a dark blue top, and a man with dark hair in a teal top. Each figure is holding a black smartphone to their face, completely obscuring their eyes and mouth. The overall style is flat and modern.

Screen Time: How Much is Too Much?

Cognitive Risks & Benefits of Screen Time for Children & Adolescents

Screens Are a Big Deal. Let's Talk About:

THE STATS

**THE BAD,
THE GOOD,
& THE
IMPORTANT**

**WHAT THE
EXPERTS
RECOMMEND**



Did you know?

42% of children under age 8 have their own touchscreen device.¹

83% of children are exposed to television before the age of 2.²

Media Consumption³

- TV is the most common media source consumed by youth.
 - *Nearly a third* of TV is watched on alternative screens (iPads, tablets, smartphones, etc.)
- Children aged 8-10 spend on average **8 hours a day** looking at screens of various types, with TV watching accounting for roughly **4 of those hours**.
 - *This can reach up to **11 hours a day** for young adolescents*



71% of teenagers have a TV in their room.

The Bad:

Watching more TV may contribute to poorer communication skills.

- **Interactions with caregivers in early childhood** (talking, babbling, storytelling etc.) **are crucial to language development.**⁴
- Watching TV in the morning before school AND not discussing TV content with parents could increase likelihood of language problems, ranging from simple speech impediments, to more severe issues, by up to 6x.⁵
- Watching over 2h of TV per day may contribute to poorer (i.e. delayed) development of skills such as communication, **executive function**, and language in childhood.⁶

Executive function includes skills such as working memory (memory in action!), problem solving, inhibitory control (controlling impulses), and attention.

Kids & Teens Need Lots of Sleep

It is recommended that children aged 9-13 get between 9-11 hours of sleep a night, and that ages 14-17 aim for 8-10 hours⁷.

Longer uninterrupted sleep at night can contribute to improved academic achievement, AND improved regulation of stress.⁷

HOWEVER,

Youth (12-17) are far less likely to get the recommended amount of sleep than children (5-11)⁷.



Over 60% of teens report staying up late texting, and then feeling tired in school.⁸

7. Statistics Canada (2019)

8. Strasburger & Hogan (2013)

New Media Keeping Teens Up?

The rapid rise in popularity of smartphones has been connected to the rapid rise in teens reporting they do not get enough sleep⁹.

Teens are often getting fewer than 7 hours of sleep a night⁹

Getting enough sleep is crucial to mental function!⁹



Children with *higher levels* of screen time per day are also more likely to show *poorer global cognition*¹⁰.

Global cognition encompasses all the building blocks for mastering new skills, problem solving, and achievement¹¹.

The Good:

Easy access to media via smartphones can:

1. *Promote* positive behaviours (like sharing and cooperation⁸) as well as learning¹² for younger children.
2. *Provide* children and teens with valuable information about adolescent health¹²
3. *Teach* children to understand others' feelings, racial and ethnic tolerance, and encourage other social skills.¹²



Information about health and other important knowledge for adolescents is convenient and increasingly available via media!¹³

12. Strasburger & Hogan (2013)

13. Committee on Public Education (2001)

Interactive Media Can Be an Effective Learning Tool

- While an excess of screen time is not recommended, **interactive media can serve as a convenient and effective learning tool!**¹⁴
- In casual settings, children aged 4-8 can memorize a story **equally well** when it is told to them in person, versus from an iPad.¹⁴
- Children get progressively better at memorizing as they age but show no differences between face-to-face learning and screen learning!¹⁴



Smart device use can also contribute to better **fine motor** development!¹⁵

Fine Motor Skills involve coordinating small muscles, like hands and fingers! Pinching, grasping, writing, holding small objects, etc.

14. Kwok et al. (2016)

15. Moon et al. (2018)

Learning From Devices

Smartphones, tablets, and other touchscreen devices are the most popular, because they are interactive, and easy to hold.¹⁶

Mobile devices are extremely convenient and can be used like an **external memory drive** for your brain!

These devices can help overcome the limits of **working memory**.¹⁷

Working memory involves keeping information in mind while completing other tasks (memory in action).

Young children can learn just as well, if not better, from interactive screen use. The physical interaction of dragging across the screen, tapping buttons, etc. is helpful for learning in many settings.¹⁸



71% of parents have apps downloaded onto their phones for their children to use¹⁹. Many apps marketed toward children advertise themselves as educational.²⁰



The Important: Media Content

The content in the TV shows is more important than the amount that is watched.²¹

Children's shows that feature lots of scene changes and fast-moving graphics or plots can impair immediate executive function, even after only 10 minutes of viewing.²²

Quality is more important than quantity!

While there are many negative effects of television, they are only detrimental when inappropriate (not child-friendly), or when poor-quality TV is consumed *in excess from a very early age.*²³

21. Christakis et al (2004); Lillard & Peterson (2011); Moon et al. (2018)

22. Lillard & Peterson (2011)

23. Foster & Watkins (2010)

Less screen time, especially less TV, is overall associated with better health²⁴.

So, What do Experts Recommend?

1

Keep TVs out of children's bedrooms.²⁵

2

Make use of parental controls for content on devices.²⁶

3

Enforce a smartphone / device curfew.²⁶

24. Tremblay et al. (2016)

25. Committee on Public Education (2001); Strasburger & Hogan (2013)

26. Strasburger & Hogan (2013)

What To Remember

1. Too much screen time can impair language and communication^{5,6}, and contribute to poor sleep^{8,9}.
2. Quality over quantity. Look out for appropriate and inappropriate sources^{21,22,23}.
3. It's not all bad! Children can learn from devices^{14,18,20}.
4. Media and devices are extremely prevalent in today's world, so it is best to learn to use them in a **safe and healthy way**.

5. Collet et al. (2018) | 6. Moon et al. (2018) | 8. Strasburger & Hogan (2013)
9. Twenge et al. (2017) | 14. Kwok et al. (2016) | 18. Kwok et al. (2016); Xie et al. (2018)
20. Xie et al. (2018) | 21. Christakis et al (2004); Lillard & Peterson (2011); Moon et al. (2018)
22. Lillard & Peterson (2011) | 23. Foster & Watkins (2010)