

## **10 Reasons Why Handheld Devices Should Be Banned for Children Under the Age of 12**

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From *The Huffington Post*

February 19, 2015

[http://www.huffingtonpost.com/cris-rowan/10-reasons-why-handheld-devices-should-be-banned\\_b\\_4899218.html](http://www.huffingtonpost.com/cris-rowan/10-reasons-why-handheld-devices-should-be-banned_b_4899218.html)

The American Academy of Pediatrics and the Canadian Society of Pediatrics state infants aged 0-2 years should not have any exposure to technology, 3-5 years be restricted to one hour per day, and 6-18 years restricted to 2 hours per day (AAP 2001/13, CPS 2010). Children and youth use 4-5 times the recommended amount of technology, with serious and often life threatening consequences (Kaiser Foundation 2010, Active Healthy Kids Canada 2012). Handheld devices (cell phones, tablets, electronic games) have dramatically increased the accessibility and usage of technology, especially by very young children (Common Sense Media, 2013). As a pediatric occupational therapist, I'm calling on parents, teachers and governments to ban the use of all handheld devices for children under the age of 12 years. Following are 10 research-based reasons for this ban. Please visit [zonein.ca](http://zonein.ca) to view the Zone'in Fact Sheet for referenced research.

### **1. Rapid brain growth**

Between 0 and 2 years, infant's brains triple in size, and continue in a state of rapid development to 21 years of age (Christakis 2011). Early brain development is determined by environmental stimuli, or lack thereof. Stimulation to a developing brain caused by overexposure to technologies (cell phones, internet, iPads, TV), has been shown to be associated with executive functioning and attention deficit, cognitive delays, impaired learning, increased impulsivity and decreased ability to self-regulate, e.g. tantrums (Small 2008, Pagini 2010).

### **2. Delayed Development**

Technology use restricts movement, which can result in delayed development. One in three children now enter school developmentally delayed, negatively impacting literacy and academic achievement (HELP EDI Maps 2013). Movement enhances attention and learning ability (Ratey 2008). Use of technology under the age of 12 years is detrimental to child development and learning (Rowan 2010).

### **3. Epidemic Obesity**

TV and video game use correlates with increased obesity (Tremblay 2005). Children who are allowed a device in their bedrooms have 30% increased incidence of obesity (Feng 2011). One in

four Canadian, and one in three U.S. children are obese (Tremblay 2011). 30% of children with obesity will develop diabetes, and obese individuals are at higher risk for early stroke and heart attack, gravely shortening life expectancy (Center for Disease Control and Prevention 2010). Largely due to obesity, 21st century children may be the first generation many of whom will not outlive their parents (Professor Andrew Prentice, BBC News 2002).

#### **4. Sleep Deprivation**

60% of parents do not supervise their child's technology usage, and 75% of children are allowed technology in their bedrooms (Kaiser Foundation 2010). 75% of children aged 9 and 10 years are sleep deprived to the extent that their grades are detrimentally impacted (Boston College 2012).

#### **5. Mental Illness**

Technology overuse is implicated as a causal factor in rising rates of child depression, anxiety, attachment disorder, attention deficit, autism, bipolar disorder, psychosis and problematic child behavior (Bristol University 2010, Mentzoni 2011, Shin 2011, Liberatore 2011, Robinson 2008). One in six Canadian children have a diagnosed mental illness, many of whom are on dangerous psychotropic medication (Waddell 2007).

#### **6. Aggression**

Violent media content can cause child aggression (Anderson 2007). Young children are increasingly exposed to rising incidence of physical and sexual violence in today's media. "Grand Theft Auto V" portrays explicit violence, as do many movies and TV shows. The U.S. has categorized media violence as a Public Health Risk due to causal impact on child aggression (Huesmann 2007). Media reports increased use of restraints and seclusion rooms with children who exhibit uncontrolled aggression.

#### **7. Digital Dementia**

High speed media content can contribute to attention deficit, as well as decreased concentration and memory, due to the brain pruning neuronal tracks to the frontal cortex (Christakis 2004, Small 2008). Children who can't pay attention can't learn.

## 8. Addictions

As parents attach more and more to technology, they are detaching from their children. In the absence of parental attachment, detached children can attach to devices, which can result in addiction (Rowan 2010). One in 11 children aged 8-18 years are addicted to technology (Gentile 2009).

## 9. Radiation emission

In May of 2011, the World Health Organization classified cell phones (and other wireless devices) as a category 2B risk (possible carcinogen) due to radiation emission (WHO 2011). James McNamee with Health Canada in October of 2011 issued a cautionary warning stating "Children are more sensitive to a variety of agents than adults as their brains and immune systems are still developing, so you can't say the risk would be equal for a small adult as for a child." (*Globe and Mail* 2011). In December, 2013 Dr. Anthony Miller from the University of Toronto's School of Public Health recommend that based on new research, radio frequency exposure should be reclassified as a 2A (probable carcinogen), not a 2B (possible carcinogen). American Academy of Pediatrics requested review of EMF radiation emissions from technology devices, citing three reasons regarding impact on children (AAP 2013).

## 10. Unsustainable

The ways in which children are raised and educated with technology are no longer sustainable (Rowan 2010). Children are our future, but there is no future for children who overuse technology. A team-based approach is necessary and urgent in order to reduce the use of technology by children.

The following Technology Use Guidelines for children and youth were developed by Cris Rowan, pediatric occupational therapist and author of *Virtual Child*; Dr. Andrew Doan, neuroscientist and author of *Hooked on Games*; and Dr. Hilarie Cash, Director of reSTART Internet Addiction Recovery Program and author of *Video Games and Your Kids*, with contribution from the American Academy of Pediatrics and the Canadian Pediatric Society in an effort to ensure sustainable futures for all children.

### Technology Use Guidelines for Children and Youth

Developmental Age	How Much?	Non-violent TV	Handheld devices	Non-violent video games	Violent video games	Online violent video games and or pornography
0-2 years	none	never	never	never	never	never
3-5 years	1 hour/day	✓	never	never	never	never
6-12 years	2 hours/day	✓	never	never	never	never
13-18 years	2 hours/day	✓	✓	limit to 30 minutes/day		never