

## ***Screen-Time – What negative effects have the electronic devices on child development?***

According to neuroscientists, the daily use of electronic devices leads to a change of the brain cells. The most effected ones are the children because the brain has the biggest plasticity in the first years of life in which a huge amount of neuronal synapses are built.

In the first years of their life, children learn how to coordinate and evaluate appropriately sensory stimuli. Therefore they need preferably holistic experiences which arise through response of all senses (see, hear, smell, taste, touch). Smartphone, tablet and TV amongst others just make the eyes



and ears respond and, therefore, any exchange is not taking place in all the senses. This is why especially for children is important to have „tangible“ experiences rather than digital experiences.

### **Negative effects on psychological and physical development**

According to the US-scientist Gary Small, children who rised up digital orientated, can interprete worse the signs of the body language of their counterparts. Because they are used to the fast sequences of visual and auditive senses, it is hard for them to focus their attention and concentrate. Hence they are more likely to use more thane one electronic device at the same time and show symptoms of an attention-deficit/hyperactivity-syndrome (ADHS). Cronic and intensive multitasking can retard an appropriate development of the frontal cortex, and later on it is difficult to postpone a reward, evaluate reactions of other people, plan forward-looking and think abstractly.

### **Negative effects on school performance**

Studies verify that children who are watching TV in preschool and school age, find more difficulties regarding reading and writing. An excessive use of electronic devices leads to a higher decrease of the cognitive capacity and their school performance. Scientists think that the violence of adolescents is constantly increasing due to a rise in the use of videogames. These are also associated with a high risk of addiction. As for TV, many investigations have also proven that there is a relation between obesity, sleep disturbances and television consumption. Children who are spending more time in front of the television or the computer, are also meeting less friends than those who do not watch television.

### **Frequent look on the smartphone interrupts the parent-child-relation**

According to a study of the Illinois State University (June 2018), parents who have a heavy digital technology use, are causing more behavioural disorders in their children. The frequent look on the smartphone by the parents, interrupts the parent-child interactions. The more interruptions take place, worse is the internalizing/externalizing child behavior which, at the same time, contributes to a raise in parents' stress. When children are disregarded and electronic devices prioritized, they become more frustrated, hyperactive, cry more, sulk or react with tantrums.

**The German Federal Centre for Health Education (BZgA) recommends:**

Age	Storybooks/books	Audio media (music, radio plays)	Screen media (smartphone, television, tablet, computer, videogames, DVD)
0-3 years	Watch and read storybooks regularly (from around 6 months onwards)	Not more than 30 minutes	<b><u>Avoid it!</u></b>
3-6 years	Watch and read (story-)books regularly	Not more than 45 minutes	Together not more than 30 minutes
6-10 years	Read books regularly	Not more than 60 minutes	Together not more than 45-60 minutes
10-13 years	Read regularly	Around 60 minutes, screen-time negotiable	
14-17 years	Read regularly	Difficult to control screen-time, but you should talk about it to avoid excessive media use	

**Recommendation:** In our opinion, other activities such as physical exercise, family time and „classic“ games should not be forgotten. Therefore you should have an eye on the screen-time of your children and make sure that they do not use screen media every day and not more than the recommendations indicated below. You should switch off any screens preferably one hour before bedtime.

If you want further information on children and the use of electronic devices see:

- <https://www.npr.org/sections/ed/2018/02/06/579555110/what-the-screen-time-experts-do-with-their-own-kids?t=1530465667963>
- <https://www.nsgt.org/screen-time-gifted-student/>
- <https://www.techadvisor.co.uk/feature/digital-home/how-much-screen-time-for-kids-3520917/>

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All information is a summary of other articles (references). The statement does not replace the advice of your doctor.

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- Myrtek, Michael und Scharff, Christian: „Fernsehen, Schule und Verhalten: Untersuchungen zur emotionalen Beanspruchung von Schülern“, 2000
- Süddeutsche Zeitung: „Böse Bildschirme?“ 05.04.2017 (<http://www.sueddeutsche.de/gesundheit/mediennutzung-boese-bildschirme-1.3452119>)
- image: <https://www.nsgt.org/screen-time-gifted-student/>