

Executive  
Summary

# e-Report

Report of Advisory Group on  
Health Effects of Use of Internet and  
Electronic Screen Products



Department of Health  
The Government of the  
Hong Kong Special Administrative Region

In view of the rapid development of Internet and electronic screen products including computers, video games, e-books and magazines, televisions, smartphones and other electronic entertainment and communications screen products, and the related health concerns on children and adolescents, the Department of Health convened the Advisory Group on Health Effects of Use of Internet and Electronic Screen Products (Advisory Group) with the following Terms of Reference:

1. To discuss and comment on harmful health effects arising from use of Internet and electronic screen products (with or without Internet connection) for children and adolescents.
2. To work out a set of recommendations on healthy use of Internet and electronic screen products for children and adolescents, parents and teachers.

### **Position Statements on Health Effects**

The Advisory Group has reviewed information on health effects of 14 health concerns. The following are the position statements of the Advisory Group on health concerns grouped under physical health and psychosocial health:

#### **Physical Health**

##### ***1. Physical fitness and obesity***

The Advisory Group agrees that there is strong evidence to support proportional relationship between obesity and screen time. As this is more relating to sedentary lifestyle and other associated behaviours during these activities like snacking and decreased sleep time, recommendations should be focused on the encouragement and facilitation of physical activities and other healthy lifestyles.

## **2. *Vision***

The Advisory Group agrees that prolonged use of electronic screen products will lead to eye and visual symptoms like ocular discomfort, eyestrain, dry eye, headache, blurred vision and even double vision. It is advisable to adopt measures like regular breaks with eye blinking, make reference to international occupational safety guidelines in computer set-up, choose to view with bigger text size and use stands for tablet personal computers and smartphones, and to maintain an appropriate visual distance with the screen. At present, there is limited evidence to conclude the long term adverse effects on eye and vision problems in relation to use of electronic screen products, but related studies should be observed continuously and overuse of these products is not recommended.

## **3. *Musculoskeletal problems***

The Advisory Group agrees that prolonged use of electronic screen products in a fixed posture can cause or exacerbate musculoskeletal symptoms. It is advisable to adopt ergonomic measures and regular breaks with relaxation exercise to avoid over stressing the muscles. There is limited evidence at the moment to conclude long term adverse effects on the musculoskeletal health relating to use of electronic screen products, but related studies should be observed continuously and overuse of these products is not recommended.

## **4. *Hearing***

The Advisory Group agrees that mobile electronic screen products with audio entertainment function could generate sound at harmful levels. Prolonged exposure to excessive sound levels generated by these products would result in permanent hearing damage. Healthy listening habits should be established at young age.

## **5. *Injury and accident***

The Advisory Group considers use of mobile electronic screen products while doing other tasks may relate to injury and accident. Public awareness and promotion on safe use of mobile electronic screen products to prevent injury and accident is recommended.

## **6. Infection**

The Advisory Group considers that there is potential risk to spread pathogens through the use of smartphones and other mobile electronic screen products. Awareness should be raised to the users to adopt hygiene precautions like hand washing and avoidance of sharing of such products between different users, especially with individuals who have symptoms and signs suggestive of active infections.

## **7. Health concerns relating to radiofrequency electromagnetic field**

The Advisory Group notes that there is no conclusive evidence at this stage to show that radiofrequency signals from wireless networks or mobile phones cause cancer in human beings. It is recommended to keep in view the latest scientific information for the health effects of wireless networks or mobile phone use in children.

## **Psychosocial Health**

### **1. Addiction**

The Advisory Group agrees that the increasing time spent by children on Internet and electronic screen products is a concern. While it is noted that more research and evidence are needed on Internet addiction, the Advisory Group considers that it is more important to prevent children from spending excessive amount of time on Internet and electronic screen products that would affect their other more important tasks or daily routine. Measures that help to increase the protective factors and reduce the risk factors of Internet addiction, which are also consistent with principles of positive parenting, should be promoted.

### **2. Cyber-bullying**

The Advisory Group agrees that the characteristics of the current Information and Communications Technology make cyber-bullying happen more easily and has a more damaging effect. The association of the serious psychosocial consequences among victims of cyber-bullying is a concern. Early prevention programme involving the schools are recommended to be continued and further strengthened.

### ***3. Cognitive development and learning***

The Advisory Group agrees that there is currently no conclusion on the effects of learning with electronic screen products including video games in different age groups or use of media in young children under two years of age. The Advisory Group considers that use of Internet and electronic screen products may have other adverse effects on health and development, especially for children under two and children using these products without proper guidance or supervision. To help children have a healthy whole person development and enjoy the benefits brought by the new technology, the Advisory Group recommends parents to provide appropriate guidance and supervision. Parents should discourage children under two years of age to use Internet and electronic screen products.

### ***4. Social development***

The Advisory Group notes the concern that spending too much time on Internet and electronic screen products may hinder the social skill development of children. While more research and evidence are needed on this aspect, the Advisory Group considers that it is more important for parents to facilitate the age appropriate social skill development of children e.g. cultivate more quality time and family activities involving face to face interaction, encourage and facilitate more participation in cooperative group activities.

### ***5. Sleep deprivation***

The Advisory Group agrees that excessive use of smartphones and electronic screen products relates to sleep deprivation which affects growth and development in children and adolescents. Sleeping guide should be advised including establishment of a bedtime routine, suggested sleeping time for different age groups, parenting skills and setting up of stimulation-free and comfortable sleeping environment.

## **6. *Online sexual risky behaviour***

The Advisory Group considers the increasing popularity of Internet use may render adolescents easier to engage in online sexual risky behaviour, especially the vulnerable ones with psychosocial risk factors. Such behaviour may be associated with other adverse psychosocial or mental health problems. Parents, teachers and professionals working with adolescents should be aware of such behaviour in adolescents. Awareness and education programme to address this issue are recommended to be further strengthened.

## **7. *Aggressive behaviour***

The Advisory Group considers that violent content of the video and online games would have adverse effects on the behaviour of children. Parents should choose appropriate video games for their children and give them relevant guidance. Information and measures to help parents and children choose such games e.g. censorship, rating system, parents' guides would be helpful.

## **Recommendations**

The Advisory Group has made reference to the information on health effects and recommendations by overseas and local authorities. The following are recommendations of the Advisory Group:

### ***General Principles for Parents and Teachers: SAFE ACTS***

#### ***Show***

To show children and adolescents the right attitude and be role models

#### ***Aware***

Be aware of the basic functions, benefits and potential harms of the technology; content of the websites and games that the children are visiting and playing; and consequences of engaging in social networks

### ***Facilitate***

To facilitate children and adolescents to have a balanced and healthy life

### ***Empower***

To guide and coach children and adolescents to be capable of facing challenges

### ***Agree***

To discuss and agree among parents, teachers, children and adolescents on the rules in using Internet

### ***Communicate***

To have open, caring and non-judgmental communications

### ***Trust***

To trust and respect children and adolescents with proper guidance and open communications

### ***Seek***

To seek help from experts and professionals when necessary

### ***General Principles for Children and Adolescents: DARES***

#### ***Development***

To develop a balanced life

#### ***Awareness***

Be aware of the benefits and potential risks of the technology

#### ***Respect***

To respect and trust parents and teachers

#### ***Effective communication***

To have open and effective communications with parents and teachers, and share their feelings and joy

#### ***Seeking help***

To seek help from parents, teachers, experts and professionals when necessary

## Health Tips

After taking considerations of guidelines and suggestions by relevant local and overseas institutions, as well as local situations, the Advisory Group suggests the following 10 health tips:

### **1** *Be physically active, go outdoor*

- 1.1 Consecutive use for more than one hour of Internet and electronic screen products is discouraged
- 1.2 Accumulate at least three hours physical activities daily for pre-schoolers and at least one hour for school children

### **2** *Engage in interactive activities in real life*

- 2.1 Play and talk with children especially the younger ones, encourage group activities and appreciate non-academic achievements

### **3** *Limit screen time and choose screen activities wisely*

- 3.1 Under 2 years old: Avoid screen time as far as possible
- 3.2 2 to 6 years old: If electronic screen products have to be used, screen time should be limited to no more than two hours a day and under the guidance and supervision by parents or teachers
- 3.3 6 to 12 years old: Limit recreational screen time to no more than two hours a day
- 3.4 12 to 18 years old: Avoid prolonged screen time

### **4** *Blink, break and rest*

- 4.1 Rest for 20 to 30 seconds after every 20 to 30 minutes of screen use
- 4.2 Change position, blink eyes, do muscle relaxation exercise

### **5** *Adopt proper setting*

- 5.1 Adjust brightness, font size and workstation
- 5.2 Reading distance no less than 50 cm for computers, 40 cm for tablet personal computers and 30 cm for smartphones



## ***6 Protect hearing, prevent accident and pay attention to hygiene***

- 6.1 60-60 Rule: Listen at no more than 60% of the mobile product's maximum volume for less than cumulative 60 minutes a day
- 6.2 Avoid using mobile products while doing other tasks requiring attention
- 6.3 Clean the surface of the screen regularly and avoid sharing electronic screen products with others

## ***7 Ensure adequate sleep time and appropriate environment***

- 7.1 Turn off the computer and keep other electronic screen products out of reach during sleep

## ***8 Be aware of cyber-safety***

- 8.1 Protect privacy, do not meet online "friend" and do not respond to inappropriate messages

## ***9 Behave oneself when using Internet and social networking sites***

- 9.1 Do not bully, harass or flam others, and do not spread rumours

## ***10 Restrict access to inappropriate content***

- 10.1 Parents should actively involve in children's Internet use, choose age-appropriate video games for them and monitor their use

## **Practical Advice**

Practical advice in the format of frequently asked questions (FAQs) to address common scenarios through applying the general principles and health tips are prepared. Four sets of recommendations including respective general principles, FAQs and health tips are produced for parents, teachers, primary school students and secondary school students.

For further information on healthy use of Internet and electronic screen products,  
please visit website: [http://www.shs.gov.hk/english/internet/health\\_effects.html](http://www.shs.gov.hk/english/internet/health_effects.html)

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