# A parent's guide to spinal health and the safe use of portable computers
## Health and Safety Directorate

Laptop and Tablet computers are a useful tool if used for appropriate periods and attention is given to their proper use. This factsheet outlines some key considerations in the safe use of these devices.

## Spinal Health

As the spine is growing and developing it is vitally important to address spinal health issues for a number of reasons. Firstly, to prevent spinal stress and dysfunction that causes pain, which may affect study and participation in sport and recreation. Secondly, to develop good techniques for spinal health that will carry through into adulthood.

Parents and carers play a vital role in nurturing children's health. The following are suggestions on how to encourage your child to take care of their spine.

In general, any load a young person carries should not exceed 10% of their body weight. When your child is carrying a heavy load, it is important that they carry only what they need and pack the heavier items so that they will be nearer to their back and ensure that the load is kept close to their spine. It is also important that children wear their backpack over both shoulders and if possible, have a pack with a waist strap that when fastened, helps to keep the load in place. Many schools now have backpacks as part of their uniform – check with your child's school about the regulation bag.

If your child spends time studying and / or using the device at home, it is important for them to have an appropriate chair and that they sit correctly when using the device.

Encourage your child to be physically active. This is particularly important when young people are studying for major exams and are spending long periods of time sitting and reading, etc.

Encourage your child to take regular breaks and stretch or walk around.

Be a positive role model for your child. When you carry loads on a family outing, choose a backpack. The same applies when you are sitting and using a computer.

## Recommended practices for using portable computing devices

To reduce the risk of injury, these devices must be used correctly. Get your child into good habits before pain or an ache starts as neck, shoulder and back problems build up over time. Some simple solutions include:

**Work area**

Never place the device on your child's lap. It is hot, uncomfortable and potentially dangerous to their health.

Ensure adequate space is available and other regularly used equipment is within their reach.

When available, the use of a monitor with an external keyboard and mouse is recommended, particularly for prolonged periods of use or when working from a desk.

Using this set up allows for the most ergonomic set up of a workstation. If a monitor is not available, then a laptop stand can be utilised in conjunction with an external keyboard and mouse.

If available, use a document holder and place it in front or next to the screen. This prevents neck and eye strain.

Ensure your child changes position occasionally; sitting in one position for an extended period of time can interfere with circulation.

Create a surface that allows for the following body positioning while typing and using a mouse:

- Shoulders relaxed
- Upper arms hanging by sides
- Right angle at the elbow
- Forearms, wrists and hands in alignment—no bent wrists
- Fingers resting lightly on keys (or in case of Tablets, the screen).

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## Chair

Adjust the height of your child's chair to use the keyboard and mouse. If their feet cannot be placed flat on the floor, use a footrest. This encourages good posture, enables proper sitting height, avoids pressure placed on the back of the thigh and promotes circulation.

Help your child adopt a good sitting posture with lower back support.

## Mouse / Pointing Device

Instead of using the small in-built touchpad, touchscreen or trackball, if available, use an external mouse or stylus-pen.

Ask your child to place the mouse on the side of the hand that is most comfortable. This places the arms in a neutral and relaxed position and prevents overreaching and twisting of the shoulder, arm and wrist.

## Keyboard

Wherever possible, an external keyboard should be used. This will allow the laptop or tablet computer screen to be located at an optimum angel and distance.

Remind your child to not press hard on the keys. With laptops, the touch is often lighter as the keyboard bed is shallow.

Position the keyboard so their forearms are parallel to their thighs when their feet are flat on the floor. This helps maintain blood flow in the hands and arms and decreases muscle strain and tension.

## Monitor / Screen

Centre the monitor / screen in front of your child at a comfortable viewing distance from them. This places the body in a neutral position.

Position the monitor / screen to minimise reflective glare from overhead, windows or surrounding light sources

Adjust the monitor / screen so that the top of the monitor / screen is at your child's eye level. This will reduce the need to bend their head forward and encourage the use of their eyes, instead of their neck, to adjust the line of vision.

Clean the monitor / screen regularly; dust and grime on the screen can make it difficult to read and increase eye strain.

## Taking breaks

Encourage your child to incorporate breaks every 20-30 minutes to rest eyes, stretch hands, muscles and joints; and to break up repetition and static postures.

## Transporting the device

When your child is carrying a laptop or tablet computer:

- Select a bag purpose-designed to hold only the device and associated cords. Larger bags have a tendency to fill up with other items, making for a heavier load
- Most laptop and tablet computers are now small enough to fit in backpacks so they can be carried on the back and both shoulders, distributing the weight
- When placing the device down anywhere, set the weight down close to the body. Avoid over-reaching while holding the weight of the device.

## Tablets and Smartphones

It is not recommended that smartphones and tablets are used for prolonged periods or general computer based work.

Whenever possible, use a separate keyboard and stand for extensive text entry. If available, sync the device with a television or monitor to increase screen size.

Alternate hands and fingers regularly when typing or holding a device and reduce keystrokes with the use of shortcuts.



Tablet Stand and Keyboard

## Further Information

[Spinal health and young people](#)