

## RISK INFORMATION – SCHOOLS

### ERGONOMIC ISSUES

The Risk Information contained in this paper provides input to the establishment of sound ergonomic practices in schools to reduce the risk of musculoskeletal injuries.

Duty of care and WHS/OHS legislation requires schools to provide suitable and safe premises and working conditions.

The potential for musculoskeletal injuries increases as a consequence of the types of topics outlined later in this publication.

A school should undertake a risk assessment for each type of activity or topic with the potential to negatively impact a safe working environment.

#### Laptop Computers

- Consider postural and eyestrain issues, particularly if separate keyboard and screen are not employed. Posture principles:
  - Feet flat on floor
  - Arms level with table, wrists straight
  - Mouse held loosely
  - Keyboard pressed not pounded
- Laptops were not originally designed for daily continuous operation, pay attention to the position of the screen (top of screen at eye level) and consider use of an external keyboard and a pointing device
- Continuous operation may contribute to Repetitive Strain Injury (RSI) and eye strain – recommend students and staff take regular breaks incorporating an exercise regime (including eyes) and performance of other tasks
- Reflections and glare on the screen can exacerbate eye strain, give attention to measures to minimise reflections and glare in classrooms and workspaces
- The extra weight of a laptop carried between school and home could contribute to skeletal damage. Refer to guidelines on maximum loads for bags set out below
- Because of the need to maintain electrical safety, laptops should be subject to a test and tag regime. Consider use of safety switches on circuits used to power or recharge laptops
- There is an increased risk of theft and/or damage. Insurance may provide some comfort for this risk area, however regular back-up practices are also important.

#### Tablet Computers

- The use of tablet computers solves many of the weight related issues associated with carrying a laptop, however reduced options for correct positioning of screen and data

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entry functions may reintroduce postural problems with increased risk of chronic neck and shoulder pain

- Consider use of separate keyboards if lots of typing involved.

#### **Desktop Computers**

Other than the weight of carrying and potential for loss or damage, issues associated with laptop computer usage are generally similar for desktop usage. Because a desktop computer is composed of separate components, options for safe use are greater.

#### **Bags / backpacks**

- Suggested criteria for design of backpack bags purchased for school students:
  - Lightweight
  - Wide padded straps
  - Padded back
  - Separate compartments
  - Waist strap
  - Size to be not larger than a child's back – same width as chest and length from shoulders to waist
- Make sure that the bag is correctly adjusted and carried - correctly adjust straps – use both shoulders for carrying (not one) – bag should not be below the line of hips – use the waist belt
- Maximum recommended bag load (weight) for a student is 10% of bodyweight (e.g. 25 kg student should carry a maximum of 2.5 kg)
- Maximum weight items should be carried closest to the body (near to the hips)
- Students should be encouraged to unpack and pack each night – eliminate unnecessary items from being carried
- Wheeled / rolling bag designs are not recommended because:
  - Variety of terrains likely to be encountered– bumpy and uneven, causing arm strain
  - Need to lift and carry on stairs
  - Minor injuries as bags flip, sore arms from pulling with the one arm, back injuries when lifting up stairs / slopes etc.

#### **Other relevant topics where risks will need to be assessed**

- Working with technology at home
- Use of technology while travelling (e.g. iPad on a bus)
- Desk and chair design (particularly if computers are being used).
- Noise (where technology is the noise source)

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### Definitions

#### *Ergonomics*

The assessment and design of the relationships between people and their work, objects, tools, equipment and environments. The working environment may include:

- workstations (sitting and standing);
- equipment layout and operation;
- computer systems;
- maintenance tasks performed on a plant item\*

*\*VDEECD "Ergonomics Procedure", April 2013*

## RISK INFORMATION – SCHOOLS ERGONOMIC ISSUES

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