

Back-healthy technology use for children and schools

Lorna Taylor, paediatric physiotherapist, SEND Governor and Director of Jolly Back.

As a paediatric physiotherapist, I am passionate about the importance positioning and healthy postures to enable a child's full potential. As therapists, we are all aware of the direct and fundamental benefits correct positioning and posture can have on a child's development, access to play opportunities, their education, feeding and to reduce pain and injury. However, since delivering "healthy backs" education to children in local primary schools I have been alarmed at seeing the poor postures, even very young children are adopting and the lack of understanding about its potential effects amongst education staff.

Children spend approximately 30% of their waking hours at school, yet there are no regulations to keep posture and back health in check, despite the numerous benefits to concentration, health and learning it also brings. Recent research and physiotherapy caseloads show that increasing numbers of younger children are experiencing back and neck pain (Webb, 2014; Rodriguez-Oviedo, *et al.* 2012; Murphy, *et al.* 2007). Many are seeking treatment, taking pain-controlling medication and are increasingly absent from school because of it.

Research by Abertawe Bro Morgannwg University Health Board, Swansea (2012) found 72% of primary and 64% of secondary children reported experiencing back pain at school. Studies show that children who experience back pain are 4 times more likely to experience it as an adult - prevention and the formation of good habits during childhood really are key.

Currently in the UK, back pain and other musculoskeletal conditions account for a quarter of all sickness absence, that's 31 million working days lost every year. The costs to the economy are more than hosting the 2012 Olympics EVERY YEAR. Back pain has huge social and emotional costs too.

Over the past several years, whilst delivering back-health education workshops to 8-9 year old children in mainstream schools, I've routinely found that their hamstring tightness is such that only a half to two thirds can touch their toes! Of course, this is not scientific research but I continue to find it of concern. It started me thinking - children today spend much of their day sitting at school, less walking to and from school and often at home watching the TV or using mobile technology. With the use of mobile technology increasing and particularly within schools, the risk to children's musculoskeletal health from prolonged sitting and poor postures is here to stay.

Recently, I have been working with the Health and Safety Laboratory and Cardinus Risk Management Ltd to help develop the **Healthy Working MOVE Programme**, a free e-learning programme designed to keep children and young people comfortable, safe and healthy when using technology. Healthy Working MOVE, the first of its kind, is based on an award-winning training programme called Healthy Working which helps to protect adult workers around the world.

There are 3 courses tailored to children in KS2 (primary), secondary school and those in higher education. All three versions use short multiple-choice questions to reinforce points and check learning. The emphasis is on fun with the use of appealing illustrations, designs and humour to engage students.

As children and students work through the 20 minute programmes, they learn about their bodies, healthy postures and how various activities affect them. Information and guidance is positive, helping them get the most from their devices and enjoy the benefits of technology while lessening

associated musculoskeletal risks. Information is also shared on carrying school bags and maximum carrying weight advice.

Healthy Working MOVE aims to ensure children, parents/carers and teachers are aware of the behaviours to avoid and the good habits to instil. Information sheets for teachers, parents and therapists are freely available to download and share e.g. "Handy hints and tips for using a desktop computer...a games console....tablet/smartphone....a laptop". The "Technology in Schools Guide" is also available.

In addition to Healthy Working MOVE, here are 6 other top tips for healthy backs in schools. The advice below is generic and as professionals we will be aware of how best to tailor these suggestions for our individual patients.

1. Limit cross-legged floor sitting to 10 minutes. Encourage movement, side sitting to alternate sides, straight-legged sitting or cross-legged sitting on a seat wedge cushion.
2. Ensure all children have a clear view of the board without twisting. If not, can they turn their chair around or move position? Can they move places during the term so they do not develop muscles imbalances.
3. Report eyesight concerns home if children are excessively hunching over their work or a screen.
4. Ensure the top of a computer screen is level with the user's eyes when they are sitting upright. Never regularly use a laptop flat on a desk, it should be raised up on a stand so the top of the screen is at eye level and a separate mouse and keyboard should be used.
5. Physical activity is essential for back health. Exercise and movement should be encouraged within break time, PE and class. It is important to promote adequate hydration too.
6. School bags should weigh a maximum of 15% of a child's body weight as studies have shown spinal damage can occur over this amount (Brackley and Stevenson, 2004). It's safest to aim for 10%. Studies have shown that children are often carrying a quarter of their body weight which is the equivalent of a 70Kg (11 st) adult carrying 17.5kgs (2st 10lbs) in weight.

For every child to be safe, healthy and reach their full potential, maybe greater emphasis needs to be placed on the school working environment, awareness of ergonomics and healthy posture when using technology. Perhaps Ofsted should place greater emphasis on pupil health and wellbeing too?

As paediatric therapists, we have a great opportunity to help raise awareness of children's back health and offer practical solutions be it through our patients and their families, the schools we visit or through our own families and friends.

If you would like to get in touch of for further information please see www.jollyback.com
www.ergonomics4kids.com

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