

Are they sitting COMFORTABLY?

Lorna Taylor explains why technology can be a real pain in the neck for young people – and what schools can do about it...

Recent research shows that 72% of primary aged children and 64% of secondary aged pupils have experienced back and/neck pain in the past year. Back pain is becoming more common in children – but it should never be considered normal, and all episodes lasting more than two weeks should be reported to a GP.

The findings underline a growing concern among the medical community about the effects computers, games consoles, smartphones and iPad-style tablets are increasingly having on young people's developing bodies.

As a society we have become increasingly sedentary. ICT now plays a huge part in our children's lives both at school and at home. However, very little consideration is given to the postures children frequently adopt – sitting over handheld mobile devices, working at laptops whilst sitting on the floor, sitting on one-size-fits-all furniture (despite 11-year-olds now often varying over half a metre in height), and spending more time sitting in the car going to structured activities and to/from school because of safety fears. For younger children, there is less opportunity to simply play and develop the strong core muscles they need to maintain a healthy spine.

"Back pain is a rising problem, causing great concern. It is often under-reported and multifactorial in cause," says Helena Webb, a paediatric physiotherapist from NHS ABMUHB, Swansea. "While talking with patients during treatment sessions, I gain an insight into the situations pupils feel contribute to their pain – sitting on the floor, in assemblies, uncomfortable school furniture, working at computers and carrying heavy bags in the absence of lockers."

The spine is a vulnerable structure as it needs to provide strength to keep us upright, but also flexibility to help us move. This helps explain why it is prone to

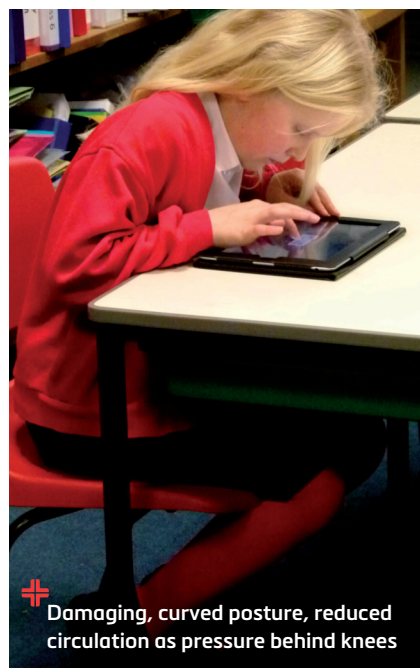
damage. As the leading cause of sickness absence from work, back pain costs the UK economy £37m every day (BackCare.org.uk). Studies show that children who suffer back pain are four times more likely to experience it as an adult. It's vital we instil healthy habits so children can be comfortable, concentrate, reach their full potential and play and learn, and not be limited by discomfort, pain and preventable disability. We need to make sure that children's backs are fit for their future.

How schools can help

Schools play a vital role in instilling in good habits and learning through observation. It's important staff are on board with the concept of back health and how to support it.

1. Flexed, curved postures should be limited for children and staff where possible, and regular changes of position

Fig. 1



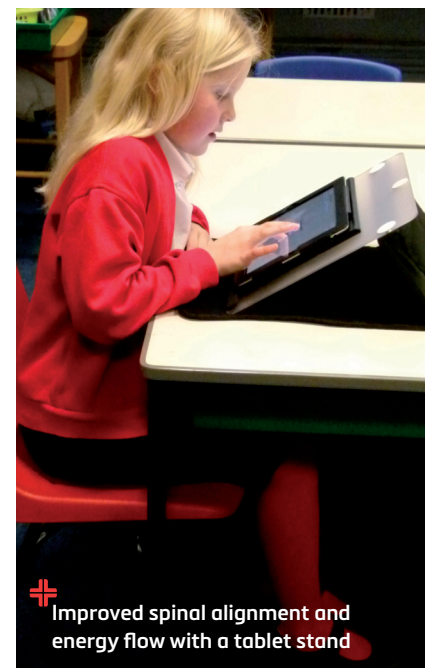
+ Damaging, curved posture, reduced circulation as pressure behind knees

72%
of primary school children have suffered back or neck pain in the past year

and movement should be encouraged. Have in mind a '30:30 stretch and wriggle' – every 30mins, move and stretch for 30 seconds.

2. Physical activity and healthy movement are fundamental to the back health – helping to build up muscle strength, maintain flexibility of muscles, tendons and ligaments, and improve circulation which helps nourish the spine and removes toxin build up from poor postures. Physical activity will already be an integral part of your day in school – keep up the good work and keep promoting its benefits at home too!

Fig. 2



+ Improved spinal alignment and energy flow with a tablet stand

Fig. 3



dlb MAX II

The dlb Max II chairs offer superior ergonomic lower back support, good ventilation and have a waterfall front seat design to improve pupils' circulation, sitting posture and comfort. These chairs can help contribute to a healthier, learning environment.

3. When purchasing tablet equipment, budget for a protective case with stand or raise the tablet up so it is at an angle for viewing (see edu-ergo.com for further advice and ideas). If used on a flat desk, a damaging, curved posture will be encouraged. (See images, left)

4. Laptops maybe more portable but best practice suggests children and adults should use computers with the top of the screen level with their eyes. If using a laptop on a flat desk or table, raise the screen (on books or a stand) and use a separate keyboard and mouse. If it is not possible for children and adults to safely use a computer screen set at the same height for a sustained period, take time before starting to make the correct adjustments to protect both children and staff. This applies at home too.

5. Participate in and share the new free Health Working MOVE eLearning

64%
of secondary school children have suffered back or neck pain in the past year

course. Developed by Cardinus Risk Management in conjunction with the Health & Safety Laboratory, Healthy Working Move explains to young people how using electronic devices, carrying school bags and adopting different postures when working and relaxing can affect their bodies. It teaches them how to use technology in a healthy, comfortable and safe way. There is a version for primary, secondary and post-18 aged young people and free advice sheets for teachers and parents. It takes about 20mins to complete and can be accessed via ergonomics4kids.com

6. Encourage children to have a sight check if there are concerns with pupils flexing over and looking very closely at a screen.

7. Learning to touch type reduces repetitive neck movements when looking between the keyboard and the screen, and benefits computer users.

8. Correctly supporting 'ergonomic' school furniture should be seen as a good investment in both pupils' health and attainment. A new study has found that by improving sitting posture, pupil concentration, behavior and attainment have also improved. For further information and ideas see dlb.co.uk.

9. As our shock-absorbing spinal discs are over 80% water, adequate hydration is essential for optimum back health. Schools can help by providing accessible water stations for pupils.

10. Children and young people should not carry more than 15% of their body weight as studies have suggested that this causes spinal damage. Young, growing spines are especially susceptible to injury from twisting forces which occur when pupils re-adjust their bags whilst wearing them. Additional

Children as young as **15** have shown posture related early arthritic changes on x-rays

damaging forces can occur through awkward postures when pupils pick up and put down their bags. A healthy aim is for pupils to carry 10% of their body weight. Encourage them to re-pack their school bag each night so they only carry what they need.

If lockers can be provided, that's a great solution. Just to note, if schools have budget or space restrictions, lockers will benefit Year 7 pupils the most. These young people can vary over half a meter in height, can be starting puberty (which causes ligaments and tendons to become more elastic and therefore be more prone to injury) and are often lighter in terms of body weight (therefore are able to carry less weight as a percentage of their body weight before damage occurs). Advice covering healthy school bag design and correct adjustment for pupils can be downloaded at ergonomics4kids.com.

11. Could healthy and safe use of ICT be included in your school's good practice / policy guidelines to help ensure improved practices continue?

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ABOUT THE AUTHOR

 **Lorna Taylor is a paediatric physiotherapist with over 12 years' experience. Known as a passionate and active campaigner for improved back health and ergonomics within the education sector she is the founder of Jolly Back. If you have any question or queries, please get in touch via jollyback.com**