

## **“SCHOOL BACKPACKS AND SCHOOL DESKS- WHAT DAMAGE ARE THEY DOING TO OUR CHILDRENS BACKS?”**

In recent years there has been an increase in the number of children reporting low back, neck and shoulder pain. Whilst the majority report the occasional ache, there is a small percentage who are affected badly enough to necessitate time off school. Additionally, studies suggest that children who do experience back pain are more likely to suffer the condition in adult life.

It is therefore important to identify, and address the risk factors which may contribute to the development of back, neck and shoulder pain at such an early stage in life.

Two factors which can be implicated include school backpacks, and the posture assumed when doing work at a desk.

It appears that in recent times children are carrying larger and heavier backpacks to school. A number of factors may have led to this phenomenon, including longer school days, heavier text books, the requirement to carry sporting or musical equipment and insufficient numbers of student lockers – or not enough time between lessons to make use of them.

In part, these factors need to be addressed by both parents and teaching staff, but there are ways in which the correct use of school backpacks can limit potential problems, such as back, neck and shoulder pain.

Firstly, general guidelines suggest that the weight of the backpack should not exceed 15% of the child's body weight. Secondly, the type of backpack used, and the manner in which it is carried should be optimised.

The backpack itself should be light weight and sturdy. Backpacks purchased from an outdoor shop are more likely to be ergonomically designed to carry large loads, than gimmicky fashion bags. The straps should be wide and padded. This helps to prevent alterations in blood circulation in the shoulder region – which may lead to pain. The school backpack should also have a waist belt. The bag should be worn with both straps over the shoulders and the waist belt fastened over the hips. This will ensure even weight distribution and prevent asymmetrical postures. All the straps should be adjusted to ensure that the backpack fits snugly, close to the spine. This ensures that the spine does not have to compensate by arching back or bending forwards to try and balance the excess loads.

When the backpack is being filled, the heaviest items should be placed in the bottom so that they are carried close to the pelvis, rather than “hanging” from the shoulders.

Every attempt should be made to ensure that the backpacks are not carried for an extended period of time. Children should be encouraged to take them off, and put them down whenever they are stationary, giving their back and shoulders a much needed rest.

In the corporate world there is an increasing awareness of the importance of ergonomically sound work stations, and changes are often made to suit the particular requirements of the individual. However it appears that less emphasis is placed on good ergonomic practises when it comes to

children. Whilst it is recognised that most schools can't afford to provide individualised desks and chairs, there are changes that can be made.

It is important to sit the bottom as far back in the chair as possible, and not perch on the edge. Children should be encouraged to sit in a tall upright position when reading or writing, and not hunch over or lean on the desk – since this puts extra strain on the muscles and joints of the growing spine. It is also important to remember that children also do a lot of homework, and the table and chair used at home is just as important as the school desk.

Ideally a sloping desk is recommended because it prevents slouching. It is suggested that both the desk and chair are height adjustable so that they can “grow” with the child. Children should be discouraged from slouching on the sofa or lying on the floor when doing homework.

In addition to addressing the school backpacks, desks and chairs, there are a number of other ways that back and shoulder pain in children can be prevented.

Children should be partaking in an hour of exercise a day. They should be encouraged to engage in a game of netball or football rather than the latest play station game. Television watching should be limited to short periods of time, interrupted by physical activity. Everyone should aim to walk short distances to schools or shops, rather than use the car or public transport. This will promote both cardiovascular and musculoskeletal health and fitness. Combined with a balanced healthy diet, regular exercise will keep most aches and pains at bay.

If all these preventable measures have been taken and a child still suffers from spinal or shoulder pain, then a multi disciplinary team approach should be employed to tackle the situation.

The team is comprised of the parents/carers and school teachers, together with the medical team (comprising the doctor, physiotherapist and exercise specialist). Together they will identify adjustments that can be made to both home and school life to address the problems, and institute a corrective and preventative treatment programme.

Food for thought: From our youngest years most people spend at least 2 minutes, twice a day brushing their teeth (which can be replaced!!), but how many people spend 4 minutes a day caring for their irreplaceable spine???

**Alison Dicks**  
MSc MMACP MAACP  
*Specialist Musculoskeletal Physiotherapist*

For more advice on children and back pain or any other medical treatment please contact us on **0870 2000 878** or [info@puresportsmed.com](mailto:info@puresportsmed.com)