

Argus Orthopaedic Zone

Backpack Connection To Back Pain

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Transforming patient information into patient understanding.

Like adults, young children and adolescents can have back pain. It certainly isn't as common as it is in adults, but I do see a fair number of children with back pain.

Girls have it more often and I see it more during growth spurts. The most common cause seems to be strains due to participation in athletic activities. Back pain however, is also seen in children who are not physically active and spend too much time watching television or playing video games.

Carrying overly heavy backpacks can cause back pain and fatigue in children whether they are physically active or not. It's amazing how much weight children carry in backpacks compared with their body weight. No wonder they hurt.

Children's Skeletons

Kid's skeletons still have a lot of cartilage in them and cartilage is more vulnerable to shear stresses and repetitive trauma. Their spines don't become complete bone structures until the early 20s. Arm and leg bones ossify completely much earlier.

Did you also know that during adolescent growth spurts there seems to be a decrease in flexibility of soft tissue leading to increase susceptibility to injury?

Heavy back packs increase stress on the spine such as discs, facet joints and ligaments which are growing rapidly in children. Shoulder pain can also accompany back pain.

Posture

To balance the load on the back a wearer leans forward at the trunk which causes the head to stick out and the shoulders to round. Permanent postural change is unusual, but it does cause compressive spine forces and can lead to back problems that last.

Many very sophisticated studies regarding the weight of backpacks have been done on children (poor kids!), which are way too complicated to describe here. Just know that the statements are backed up by a lot of data.

Posture changes can affect gait and the lower back also and are not confined to the upper back and shoulders.

Immediate effects

Too heavy backpacks cause changes in posture and gait leading to temporary discomfort and pain in the back and shoulders. This alone would be cause for concern, because we don't want kids to hurt unnecessarily.

Later effects

The long term consequences of backpack wearing are less certain. We do know however, that in long term studies back pain in adolescence is a risk factor for pain as an adult.

Other causes

I always have in mind that other causes of back pain in children exist. If pain is persistent it really needs to be checked and the cause (if possible) discovered and not simply blamed on the backpack.

Hopefully, all of you parents and grandparents out there are interested to know what can be done about the problem which needs to wait until next week since we are out of space.

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