THE BENEFITS OF DYNAMIC SITTING FOR CHILDREN IN SCHOOLS

Levent Çaglar, Chief Ergonomist at Furniture Industry Research Association (FIRA), explains the ill effects on children from having to adopt static postures for prolonged periods versus the health and learning benefits of dynamic sitting.

Back pain among schoolchildren is on the rise. About 12 per cent of 12-year-olds and 22 per cent of 16-year-olds experience recurrent back pain, and 15 per cent of 12–16-year-olds seek medical care for this. Causes of this back pain include using ill-fitting, inappropriate furniture during the 15,000 hours they spend sitting at school when their body is growing. Another factor is carrying heavy loads of books and equipment when appropriate storage is not made available.

The importance of posture for health and learning

Ill-fitting and static chairs can also limit children's learning capabilities by forcing them to adopt postures where their abdomens and chests are compressed. This reduces their oxygen intake and consequently restricts the supply of oxygen to their muscles and brain, making their limbs feel tired and their brains less alert. It inhibits their learning and may affect their healthy growth. Seating that allows children to increase the angle between their legs and torso, such as through a forward-tilting seat, helps them to breathe better and improves oxygenation of their muscles and brain. Chairs like Acclivity (by Learniture) and RAY (by Labofa) nicely allow children to open up the angle between their torso and thighs, enabling them to improve their breathing and keeping their back in the natural S-shape.

Prolonged sitting on inappropriate furniture can restrict the blood supply to the lower legs and feet, making children become restless and fidgety in class, resulting in a decrease in concentration as the lesson progresses and an increase in disruptive behaviour. To achieve a good fit does not necessarily mean physical adjustments in the chair; a good design can have integrated solutions to achieve a better and wider fit for varying sizes of children. Shining examples of this are Newton (by Orangebox), Tip Ton (by Vitra) and Level (by VS) chairs.

Promoting crucial movement

Children naturally move all the time, especially at young ages. Movement is essential to their growth and for strengthening their muscles. For example, rocking sideways, backwards and forwards when standing and sitting are key actions for children to develop their balance and strengthen their back muscles to maintain good postures. Artificially stopping them from moving by giving them furniture which prevents them from doing so results in children tipping their chairs backwards on the back legs, creating both a danger of falling and a distraction in lessons. Because children cannot make small movements while sitting, they make gross movements, such as sitting sideways or resting their upper body on the table, which can be disruptive and prevent them and others from concentrating. Chairs like Tip Ton, Newton, Level and Situ (by Jackie Lightfoot) enable children to rock gently, comfortably and safely.

Teaching methods and the use of technology generally force children to work in static unhealthy postures – and teachers often associate movement with misbehaviour and ask children to sit still and not move, when, in fact, being able to adopt healthy dynamic postures increases alertness and productivity. To get children to adopt dynamic postures, they need chairs that will allow them to rock or recline a little, turn round to talk to others or watch as the teacher moves.

LEVENT ÇAGLAR AND JACKIE LIGHTFOOT ON SITU, AN ERGONOMIC SEAT FOR PRIMARY SCHOOLCHILDREN

With children's increasingly sedentary lifestyle outside school and during break times, it is essential that school seating promotes dynamic postures and that furniture and activities support shorter periods of sitting, such as when working standing up at higher-level work surfaces and frequent alternation between sitting and standing.

In order to promote healthy movement, schools need to take broader account of the link between healthy bodies and minds. Schools need to go beyond increasing healthy eating and promoting bouts of exercise. The environment, furniture and teaching activities need to promote natural movement and healthy postures throughout the day.

What we need from school furniture for the future

In order to improve children's health, well-being and learning ability, and reduce disruptive behaviour in schools, seating solutions considered should:

- promote the well-being of children, especially their backs.
- provide dynamic sitting, such as a built-in rocking motion, and encourage movement during and between activities.
- accommodate healthy use of technology and equipment, without putting children's necks, shoulders and wrists at risk.
- ensure a good fit to all sizes of children.
- be flexible and adaptable to a range of activities and children.
- be comfortable and perceived to be comfortable.
- be aesthetically pleasing and inviting to use so that children will have ownership. ■