

BACKPACKS

Every morning, on the way to schools, we see kids loaded with books and school supplies that despite being essential during the development of their education, their excessive weight and inadequate transport, entail postural changes that can cause skeletal and muscular alterations in the neck, shoulders, and back, besides being able to have a negative impact on adulthood.



Official recommendations:

The World Health Organization (WHO) recommends that the weight of school bags **not exceed 10% -15% of the weight of children** who must carry them. This means that a child weighing 30 kilos should carry a maximum of 3 kilos behind his back, however, the reality is that they carry the same weight as a child whose body weight reaches 45 kilos.



Risks. When carrying overweight backpacks, body posture is significantly affected:

- ⊕ Improper alignment of the spine at the cervical level since the head tends to pull forward.
- ⊕ Muscle tension located in the lower back due to the inclination of the trunk forward.
- ⊕ Increased lumbar curvature (lumbar hyperlordosis).
- ⊕ Asymmetry of the shoulders in case of transporting the backpack hanging on a single strap or loading it with uneven weight distribution. In both cases, the risk of suffering from scoliosis or spinal deviation increases.

How should the backpack be?

- ⊕ The size of the backpack must be determined by the weight and height of the child.
- ⊕ The design must allow the weight to rest on the dorsal vertebrae.
- ⊕ The lower part of the backpack should be about five centimeters below the waist, so as not to overload the lower back.
- ⊕ It is necessary to be careful with the fashion of carrying the backpack very low, separated from the back and resting the weight on the lower back and on the buttocks.
- ⊕ The straps should be wide and padded, allowing the backrest to be regulated, which will preferably also be padded.

VERY IMPORTANT: When loading the backpack, heaviest objects should be placed **close to the body**. The further the load of the body moves away, the greater the effort and risk for the back.

Similarly, **distribute the load evenly** to ensure a balanced weight distribution over the shoulders.

