Injuries in children during physical activity are being prevented with a growing number of safety measures and rules. Are we creating a society where the safest option is to keep children immobile?

Is physical activity harmful to children?

Norway tops European statistics regarding sedentary activity in children (1) – up to 40 hours per week. Norwegian eleven-to-fifteen-year-olds are well below the OECD average for physical activity, including the other Nordic countries (2). Studies carried out by Statistics Norway indicate that children's participation in organised sports has not declined (3). This can be interpreted as saying that Norwegian children have become less active in their everyday lives.

The health authorities recommend that children should engage in varied activities of both moderate and high intensity for at least 60 minutes every day (4). Among nine-year-olds in 2005–08, altogether 75 % of the girls and 91 % of the boys complied with these recommendations, compared to only 50 % and 54 % of fifteen-year-old girls and boys respectively (5).

At the same time we have seen a consistent increase over the last 30 years in the proportion of overweight and obesity. The Children's Growth Study monitors the development of height, weight and waist circumference among Norwegian third-graders, and shows that approximately 16 % of all Norwegian eight-year-olds and fifteen-year-olds are overweight or obese (6). Girls are more subject to this than boys, and children from families with a low socioeconomic status are more frequently afflicted than others. Overweight children face a moderate risk of developing overweight in adulthood (7) and are more frequently subject to stigmatisation and bullying.

Physical activity promotes normal growth and development and has a preventive effect on cancer, diabetes, musculoskeletal disorders, hypertension and cardiac disease. In addition, it has a positive effect on mental health and stress management.

Since 2001, one hour of daily physical activity at school has been a health-policy goal for the Norwegian Medical Association (8). Such an intervention will reach out to all children, irrespective of their socioeconomic status. The syllabus for PE states that: «PE is a general-education subject that should inspire an active lifestyle and life-long enjoyment of physical activity» (9). If successful, this can prevent a number of lifestyle diseases later in life.

But is physical activity an exclusively good thing? Will an increase in physical activity result in a higher risk of injury? In this issue of the Journal of the Norwegian Medical Association we provide an overview of school-related fractures, the types of fractures and the kinds of activities that involve the highest risk (10). The findings made by Clementsen and Randsborg indicate that increasing the number of PE classes at school will lead to only a minor increase in the risk of fractures, and also show that the fractures that the children sustain tend to be of an uncomplicated nature.

Inactivity in children may largely be a result of how we organise society. There are rules for where and how children should play. They should not venture out on hikes unaccompanied, and there are rules for ensuring the safety of playgrounds. Safety equipment is more frequently used for common activities such as cycling and skiing – in some countries this is mandatory. Children and adolescents participate in organised activities just as often as previously, but are chauffeured from door to door, whereas cycling or walking were previously seen as natural; perhaps because it is easy, and because it feels safer to accompany them all the way.

Professor Gunnar Breivik at the Norwegian School of Sports Sciences has provoked many with his statement that we need more accidents among children (11). He claims that a dramatic decline in the number of accidents is not necessarily a goal in itself, demonstrating that the number of accidents will decline dramatically if the children are trained to sit still on a level floor indoors. He believes that only those accidents that are life-threatening, leave a permanent injury or become chronic are of an adverse nature. Small accidents are signs of children who are learning and deriving joy from exuberance and experimentation.

A study of injuries that had occurred during school hours during 2000 showed an incidence of 29.2 injuries per 1 000 child years (12). One per cent of the injuries were deemed as serious, and 83 % as slight. A study commissioned by the Directorate of Education and Training in 2010 found that one in ten children sustained an injury during one year in day-care, and that 98 % of the injuries were so slight that they could be treated by comforting the child, with occasional simple first aid (13). These figures illustrate that serious injuries in children are rare.

Fractures and injuries in active children are part of my everyday life as a doctor in a department of orthopaedics and at home as a toddlers' mum. At home, the urge to protect is in constant conflict with the children's need for unsupervised and unrestricted play. I purchase various items of safety equipment, and our collection of helmets has gradually grown to considerable proportions. I believe that it will be difficult, and perhaps even undesirable, to reverse the trend to make children's activities safe. The trend towards inactivity and overweight in children, on the other hand, must be reversed. The health authorities' recommendation of one hour of varied activity daily at a moderate or high intensity is achievable. This ought to be a high-priority collaboration project for day-care centres, schools, supervised after-school activities and parents. We need to embrace children's natural urge to be active and ensure an optimal foundation for their future health.

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