

EXECUTIVE SUMMARY

PHYSICAL ACTIVITY AND HEALTH IN CHILDREN AND ADOLESCENTS

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Based on scientific evidence, the following conclusions can be drawn regarding physical activity patterns in children and youth, the health implications of enhanced physical activity, and the guidelines regarding an active lifestyle.

- There is a *major decline in physical activity with age* and maturation, particularly in the second decade of life. This decline seems to be pervasive, irrespective of the country in which a study was performed.
- Even though there are no universal criteria for “sufficient” physical activity and energy expenditure levels, it seems that *a large percentage of young people are insufficiently active*. This percentage increases markedly *in the second decade of life*. Some information suggests that more young people in Canada are sufficiently active, compared with those in the US. Methodological differences, however, do not allow us to conclude that this indeed is the case..

- *Adolescent females are at particular risk of being sedentary.* Girls are less active than boys and their decline in physical activity starts earlier than in boys. Girls' rate of participation in physical education classes is lower than that of boys.
- Other groups with a high rate of sedentarism among children and adolescents are those with *obesity, motor disabilities and chronic diseases*. In the US, minorities (Afro-Americans in particular) have a low rate of physical activity.
- *Of particular public health importance is the recent increase in juvenile obesity that seems to be associated with a decline in physical activity. The extent of TV watching is strongly related to the prevalence of juvenile obesity and to the likelihood that obesity will be sustained over years.*
- Indices for risk of atherosclerosis can be observed as early as the first decade of life.
- While *enhanced physical activity in adults has been shown to reduce morbidity and mortality from several chronic diseases*, the association in children and adolescents has not yet been fully established.
- Cross-sectional studies often show that *active young people have a better profile of health indices* (e.g., bone mineral density, blood pressure, adiposity, blood lipid profile) than their sedentary counterparts. However, training studies (which typically do not last longer than several months) in healthy young people do not seem to improve this profile.
- In contrast, some *beneficial effect of enhanced physical activity can be discerned in young people who, to start with, are at a high risk* (for example, hypertension, obesity, blood lipid aberrations).

- There is little information on the possible carry-over of activity-related benefits from childhood to adulthood.
- One possible exception is a *higher peak bone mass* that, based on retrospective studies, is higher among adults who were active in earlier years. Weight-bearing activities may be of particular benefit.
- There are no data about dose-response effects of enhanced physical activity on health indicators in children and youth. This is true both for the intensity and the volume of activities. Nor is it known whether there is a threshold of training intensity and volume beyond which activity becomes beneficial to health.
- Recent guidelines for recommended activities combine three elements:
 1. **Daily activities of a “lifestyle” nature** (e.g., walking to and from school, using stairs instead of elevators, working in the garden, walking the dog), in which the volume and intensity are not important.
 2. **Three-per-week exercise bouts** that last 30 to 60 minutes and are of “moderate-to-high” intensity (i.e., require effort that is greater than brisk walking).
 3. **Reduction of at least 1 hour a day in sedentary pursuits** such as TV & video watching and computer games. Encouraging children and youth to *go outdoors* will, in itself, reduce the time they spend on sedentary pursuits.
- To increase children’s motivation to become physically active, the activities should be fun and conducted in a play-like manner.
- To achieve a greater involvement of young people in physical activities and sports, *one needs to address societal and environmental issues* such as:

- *Greater recognition by the educational authorities regarding the importance of physical activities at school as a means of health promotion*
- *Enhanced use of sports facilities after school hours, for all young people and not only for athletes*
- *Increase of child safety in playgrounds, parks and roads*