

GUIDELINES ON PHYSICAL ACTIVITY, SEDENTARY BEHAVIOUR AND SLEEP FOR CHILDREN UNDER 5 YEARS OF AGE

This information below was produced in a document by the **World Health Organisation**, under the same title.

Physical inactivity has been identified as a leading risk factor for global mortality and a contributor to the rise in overweight and obesity. Early childhood is a period of rapid physical and cognitive development and a time during which a child's habits are formed and family lifestyle habits are open to changes and adaptations.

To meet daily physical activity time recommendations, particularly in children, the pattern of overall activity across a 24-hour period needs to be considered, since the day is made up of sleep time, sedentary time and light, moderate-or vigorous-intensity physical activity.

The primary audiences for these guidelines are policy makers in ministries of health, education and /or social welfare, working in high-as well as low- and middle-income countries, persons working in non-governmental organisations and early childhood development services, and those providing advice and guidance

To caregivers, such as community or family nurses or doctors, paediatricians or occupational therapists.

These guidelines are intended to assist officials as they develop national plans to increase physical activity, reduce sedentary time and improve time spent sleeping in young children through guidance documents and critical elements of childcare services and pre-service training for health care and early childhood development professionals.

The overall goals of these guidelines are to provide recommendations on the amount of time in a 24-hour day that young children, under 5 years of age, should spend being physically active or sleeping for their health and wellbeing, and the maximum recommended time these children should spend on screen-based sedentary activities or time restrained. By providing this guidance, the recommendations, a gap in the WHO recommendations on physical activity, as children under 5 years of age were not included in the *Global recommendations on physical activity for health in 2010* and will also contribute to the implementation of the recommendations of the *Commission on Ending Childhood Obesity* and the *Global Action Plan on Physical Activity 2018-2030*.

These guidelines also contribute to the broader *Nurturing care for early childhood development* framework. *Nurturing care* encompasses health, nutrition and safety needs, as well as early learning opportunities. These guidelines do not specially address the physical activity, sedentary and sleep needs of children with disabilities or chronic disease. The recommendations may be appropriate for children with disabilities or chronic disease, but parents and caregivers should seek additional

advice from health professionals, or those involved in providing early intervention services for a child.

The recommendations will be updated within ten years, unless further research in the area provides additional evidence to warrant an earlier update. Practical tools to support dissemination, adaptation and implementation of the recommendations will be developed.

RECOMMENDATIONS FOR 24-HOUR PHYSICAL ACTIVITY, SEDENTARY BEHAVIOUR AND SLEEP FOR CHILDREN UNDER 5 YEARS OF AGE.

These guidelines are for all healthy children under 5 years of age, irrespective of gender, cultural background or socio-economic status of families and are relevant for children of all abilities; caregivers of children with a disability or those with a medical condition, however, may seek additional guidance from a health professional.

For the greatest health benefits, infants, and young children should meet all the recommendations for physical activity, sedentary behaviour and sleep in a 24-hour period. Replacing restrained or sedentary screen time with more moderate-to vigorous-intensity physical activity, while preserving sufficient sleep, can provide additional health benefits.

Children 3-4 years of age should:

Spend at least 180 minutes in a variety of types of physical activities at any intensity, of which at least 60 minutes is moderate- to vigorous- intensity physical activity, spread throughout the day; more is better.

Not be restrained for more than 1 hour at a time (e.g. prams) or sit for extended periods of time. Sedentary screen time should be no more than 1 hour; less is better. When sedentary, engaging in reading and storytelling with a caregiver is encouraged.

Have 10-13 hours of good quality sleep, which may include a nap, with regular sleep and wake-up times.

BACKGROUND

Physical inactivity has been identified as a leading risk factor for global mortality and a contributor to the rise in overweight and obesity. In 2010 WHO published Global recommendations on physical activity for health which detailed interventions for the primary prevention of noncommunicable diseases (NCDs) through physical activity at population level. Estimates from 2012 indicate that not meeting current physical activity recommendations are responsible for more than 5 million deaths globally each year. Although we know that over 23% of adults and 80% of adolescents are not sufficiently physical active, there are currently no comparable data for younger children.

Recommendations have been established for three population-age groups (5-17, 18-64 and over 65 years), but up until this point did not include children under the age of 5 years. The recommended physical activity for children 5-17 years old to improve cardiorespiratory and muscular fitness, bone health, cardiovascular and metabolic health biomarkers and reduce symptoms of anxiety and depression is an accumulation of at least 60 minutes of moderate- to vigorous-intensity physical activity each day, through play, games, sports, transportation, recreation and physical education, in the context of family, school and community activities.

Amounts greater than 60 minutes would provide additional health benefits. Vigorous-intensity activities, including those that strengthen muscle and bone, should be incorporated at least three times per week.

Early childhood (under 5 years of age) is a period of rapid physical and cognitive development and a time during which a child's habits are formed and family lifestyle routines are open to changes and adaptations. Lifestyle behaviours developed in early life can influence physical activity levels and patterns throughout the life course. Active play and opportunities for structured and unstructured physical activity can contribute to the development of motor skills and exploration of the physical environment.

To meet daily physical activity time recommendations, particularly in children, the pattern of overall 24-hour activity needs to be considered, since the day is made up of sleep time, sedentary time and light-, moderate- and vigorous-intensity physical activity. Sedentary behaviours, whether riding motorised transport rather than walking or cycling, sitting at a desk in school, watching TV or playing inactive screen-based games are increasingly prevalent and associated with poor health outcomes. Sleep time is also known to influence health outcomes and short sleep duration is associated with overweight and obesity in childhood and adolescence, as well as mental health issues amongst adolescents.

Chronic insufficient sleep up to 7 years of age has been associated with increased adiposity in later childhood and adolescence.

RATIONALE

Improving the physical activity, sedentary and sleep time behaviours of young children will contribute to their physical health, reduce the risk of developing obesity in childhood and the associated NCDs (Non-Communicable Disease) in later life and improve mental health and wellbeing. The important interactions between physical activity, sedentary behaviour and adequate sleep time on physical and mental health and wellbeing were recognised by the Commission on Ending Childhood Obesity, that called for clear guidance on physical activity, sedentary behaviour and sleep in young children in their recommendation.

Healthy physical activity, sedentary behaviour and sleep habits are established early in life, providing an opportunity to shape habits through childhood, adolescence and into adulthood.

Physical activity in children under 5 years of age is favourably associated with health indicators such as adiposity, bone and skeletal health, cardio metabolic health, cognitive and motor skills development.

It is increasingly recognised that too much sedentary time can have detrimental effect on health and there are recommendations to limit the exposure to screens in children particularly in young children and is a common cause for concern amongst parents, who seek guidance from health professionals on this topic.

The WHO (World Health Organisation) guideline process is a rigorous, systematic and transparent process for the development of recommendations that takes into consideration the strength of the evidence as well as values and preferences, benefits and harms, equity and human rights.

SCOPE AND PURPOSE OF GUIDELINES

The overall goals of these guidelines are to provide recommendations on the amount of time in a 24-hour day that young children, under 5 years of age, should spend being physically active or sleeping for their health and wellbeing, and the maximum recommended time these children should spend on screen-based sedentary activities or restrained.

The guidelines do not address how these durations of activity, sedentary time or sleep should be achieved. Additional resources and tools will be developed to address these issues and support early childhood educators, carers and parents to help children achieve these recommendations.

These guidelines also contribute to the broader Nurturing care for early childhood development framework . Nurturing care encompasses health, nutrition and safety needs, as well as early learning opportunities. These guidelines on physical activity, sedentary behaviour and sleep set out the recommended time to be spent on each of these behaviours, recognising that:

- a. the combined recommendations do not account for every hour in a child's day;
- b. physical activity in young children is largely expressed in the form of active play;
- c. quiet play (play that is not energetic and so not deemed as physical activity and may be done while sedentary) is very important for development and can take many forms;
- d. adequate sleep is important for children to benefit from early childhood development opportunities.

As such, these guidelines do not aim to address all aspects of early childhood development, but rather contribute to this broader context through recommendations specifically on physical activity, sedentary screen-time and time spent restrained or sitting and sleep.

These guidelines do not specifically address the physical activity, sedentary and sleep needs of children with disabilities or chronic disease. The recommendations may be appropriate for children with disabilities or chronic disease, but parents and caregivers

should seek additional advice from health professionals, or those involved in providing early intervention services for a child .

Early identification of developmental delays or disabilities will enable care providers to assess and plan for early interventions for a child with disability that can include encouraging physical activity, appropriate sedentary or screen-time and sleep as part of programmes and services .

PHYSICAL ACTIVITY

Children 3-4 years of age

should spend at least 180 minutes in a variety of physical activities at any intensity, of which at least 60 minutes is moderate- to vigorous-intensity physical activity, spread throughout the day; more is better.

SEDENTARY TIME

Children 3-4 years of age

should not be restrained for more than 1 hour at a time (e.g. in prams/strollers) or sit for extended periods of time. Sedentary screen time should be no more than 1 hour; less is better. When sedentary, engaging in reading and storytelling with a caregiver is encouraged.

SLEEP TIME

Children 3-4 years of age

should have 0-13 hours of good quality sleep, which may include a nap, with regular sleep and wake up times.

INTEGRATED RECOMMENDATIONS

- For the greatest health benefits, infants, and young children should meet all the recommendations for physical activity, sedentary behaviour and sleep in a 24-hour period.
- Replacing restrained or sedentary screen time with more moderate- to vigorous-intensity physical activity, while preserving sufficient sleep, can provide additional health benefits.

