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INTERNATIONAL
STEP by STEP
ASSOCIATION

SUPPORTING FAMILIES FOR **NURTURING CARE**

20

HEALTHY WEIGHT, PHYSICAL ACTIVITY AND SEDENTARY TIME

Young Child Health, Development and Wellbeing

DRAFT

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CONTENTS

KEY MESSAGES - why is this topic important for you?

- Rates of overweight and obesity have increased dramatically over the past 40 years in all age groups.
- Overweight and obesity are primary contributors to the burden of non-communicable diseases throughout the lifespan with significant costs to the individual and to society.
- The foundations of a healthy life style – healthy weight, an adequate amount of physical activity, and sufficient sleep – have their roots in the early years.
- The level of physical activity and quality of sleep significantly affect child health, development and wellbeing. The right information and behaviors, starting at (or even before) **conception through the early years**, can create the foundation for life long health and wellbeing.
- Many parents and caregivers are unaware of the importance of balance between physical activity, sedentary time, sleep, and screen time. This might be the result of prevailing beliefs in families and communities. As someone who promotes the health and wellbeing of young children, it is your role to challenge these beliefs not only with parents, but also with family members, and the community at large.
- Since you, as the family's home visitor, are seeing parents during pregnancy, you have an opportunity to promote the importance of healthy pregnancy weight and physical activity during the pregnancy. This could prepare parents to engage in healthy eating habits and physical activity with their baby from birth on.
- In your contacts with the family, you have a unique opportunity to observe and discuss levels of physical activity and sedentary time in the home, learn about sleep routines and patterns, and screen time. With your expert knowledge and position of trust, you can advise families on how to adopt daily routines that contribute to their children's health and wellbeing.
- By supporting healthy lifestyles in the families you visit, you contribute to optimal child development and the prevention of non-communicable diseases throughout the life course.

LEARNING OUTCOMES

After completing this module, you should be able to to understand:

- the importance of physical activity and sleep for infants and young children, from birth on.
- the importance of family living style related to physical activity, healthy nutrition and sleep and their influence on child health, wellbeing and development.
- what is a good balance over a 24 – hour day between sleeping, physical activity and sedentary behaviour and how this contributes to overall health and wellbeing of infants and young children under five.
- how to advise parents on the amount of time infants and young children should spend in physical activity, sedentary time and sleep.
- how to motivate parents to become active role models for physical activity, reduce their own and family screen time, and provide them with tips on how to get involved with children in vigorous physical activities and play in safe, but developmentally supportive environments.
- the role of screen time for various ages and how to advise parents and answer their questions and concerns regarding children watching TV and digital devices.

As recommended in other modules, use your reflective diary to note down topics that are important to you, including some of your responses in the **Reflection and Discussion** exercises. This gives you an opportunity to review your comments and appreciate how you can integrate new information into your practices.

PRETEST FOR WHOLE MODULE

Note: The answers can be found at the end of the module in the post-test.

1. Overweight and obesity: Mark all responses that apply
   a. Is rarely a problem during infancy
   b. Is a problem that infants born with low birth weight will not experience
   c. Is often found in poor and marginalized populations
   d. Is primarily driven by the person's genes
   e. Is associated with an overall decrease in physical activity at all ages

2. During the first 1-2 months of life, babies should be held and rocked soothingly, but not engaged in any physical activity with their caregivers. (T/F)

3. Sedentary behavior becomes a problem during the preschool years and is best addressed by the preschool teacher (T/F)

4. Physical activity, i.e. taking babies on walks and interacting with other mothers/caregivers has been used as an intervention to counteract maternal post-partum depression (T/F)

5. Active play focuses primarily on the development of fine motor and cognitive skills (T/F)

6. Childhood obesity is considered one of the major public health concerns of the 21st century. (T/F)

7. WHO and many pediatric associations recommend that infants should not have more than 30 minutes of screen time (T/F)

8. Children by nature have so much energy, and they know how to be active. They should learn to be calm and sit down. (T/F)

9. WHO and many pediatric associations recommend that infants have less than 30 minutes of screen time (T/F)

10. Infants can learn new things from digital devices (T/F).

11. Which of the following factors contribute to overweight and obesity in young children? Mark all that apply
    a. Unsafe urban environments that make parents afraid to take young kids to parks or for walks
    b. Processed sweet and fat foods and drinks that are advertised on TV and the media and are more affordable and accessible
    c. The fact that infants don't yet participate in organized sports
    d. The difficulties families might have to make changes in their daily routines
    e. The cost of organized physical activities for young children

12. Overweight and obesity rates have increased globally, but with increased health promotion, the rates have fallen in Europe and Central Asia. (T/F)

13. Which of the following factors might contribute to overweight or obesity later on in life? Mark all that apply
    a. Maternal under-nutrition during pregnancy
    b. Low access to healthy and nutritious foods
    c. Breastfeeding for more than a year
    d. Being born small-for-gestational age
    e. Societies that find chubby babies most appealing

14. Infants and young children differ a lot in how much sleep they require, so it is impossible to make recommendations to parents. (T/F)

15. Young children can sleep even when the TV or another kind of screen is on. When they fall asleep nothing can disturb them. (T/F)

16. What are some of the reasons why infants should not have screen time and screen time for toddlers should be limited? Mark all that apply.
    a. Infants and toddlers get too frustrated when they play with phones and tablets, and they could also break them.
    b. Infants and young children learn through relationships with engaged caregivers who scaffold their activities and can respond to their cues.
    c. Screen time is mostly time spent sitting and inactive and can take away from the time young children should spend on moderate to vigorous activity.
    d. Screen time is always 2-dimensional and does not attract young children.

17. Engaging fathers has some of the following benefits for increasing active play of children: Mark all that apply
    a. It can reduce paternal depression and increase the father's sense of wellbeing
    b. Fathers are stronger and have more energy to engage in rough and tumble play
    c. It can increase the father's bond with his child
    d. Positive benefits have been reported for child development when fathers engage in active play.

18. Infants should not be restrained for more than one hour at a time and need to spend at least 30 min per day engaged in physical activities. (T/F)

19. Children older than 1 year can be restrained in a high chair or in a stroller more than 3 hours at a time especially if they are enjoying the walk with their parents or caregivers. (T/F)

20. Tummy time is: Mark everything that applies.
    a. Time an infant spends on the floor on the stomach, alone.
    b. Time an infant spends on a parent's lap while they are establishing eye contact, talk with the child and cuddle him/her.
    c. A physical activity that can be applied from birth and at the beginning should not last more than a minute or two.
    d. Is necessary for children to learn to be on his/her own and can last as long as the child is not crying.
    e. Time an infant spends lying on their front (in prone position) while awake with unrestricted movement of limbs interacting with a caregiver.

GLOSSARY AND DEFINITIONS[1]

Active play is equivalent to moderate-to-vigorous physical activity, when children get out of breath and feel warm. This may take many forms, is freely chosen and fun, and may involve other children, caregivers, objects or not[2]. "Active play tends to occur sporadically, with frequent rest periods, which makes it difficult to measure over time.

Body Mass Index. Calculated as weight in kg/height in metres[3].

Executive Function and Self-Regulation "are the mental processes that enable us to plan, focus attention, remember instructions, and juggle multiple tasks successfully[4]."

Exercise. Physical activity that is planned, structured, generally repetitive and has purpose.

Fine motor skills. The ability to make movements using small muscles in the fingers, hands and forearms.

Floor-based play. Supervised play for infants, where children move on the floor and develop motor skills.

Gross motor skills. Those movement skills that involve large muscle groups and are generally categorised into locomotor, stability, and object-control skills. They reflect the status of motor development at a specific age. For example, running, jumping, hopping, kicking, throwing, galloping, balancing, catching, and striking.

Light-intensity physical activity. For young children, this can include slow walking, bathing, or other incidental activities that do not result in the child getting hot or short of breath.

Moderate to vigorous intensity physical activity. For young children, this includes brisk walking, cycling, running playing ball games, swimming, dancing etc. during which the child gets hot and breathless.

Motor development. Development of a child's musculoskeletal system and acquisition of gross motor skills (sometimes referred to as fundamental movement skills), and fine motor skills, including object control.

Nap. Period of sleep, usually during the daytime in addition to usual night time sleep.

Non-screen-based sedentary time. Usually refers to time spent sitting, not using screen-based entertainment. For young children, this can include lying on a mat, sitting in a high-chair, pram or stroller with little movement, sitting reading a book, playing a sedate game, colouring.

Obesogenic environment. An environment that promotes high energy intake and sedentary behavior. This includes the foods that are available, affordable, accessible and promoted; physical activity opportunities; and the social norms in relation to food and physical activity.

Overweight in children aged 0 to 59 months. Weight-for-height above +2 SD (standard deviation) of the WHO Child Growth Standards median for children of the same height and sex. Severe overweight (above +3 SD) is referred to as obesity.

Physical activity. Movement of the body that uses energy over and above resting. For young children, this can include walking, crawling, running, jumping, balancing, climbing in, through and over objects, dancing, riding wheeled toys, cycling, jumping rope etc.

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[1] Unless otherwise indicated, definitions are from *WHO guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age* (WHO, 2019, pp. iv-v) and UNICEF (2019). *UNICEF programming guidance: Prevention of overweight and obesity in children and adolescents.*

[2] Truelove S, Vanderloo LM, Tucker P. Defining and measuring active play among young children: A systematic review. *Journal of Physical Activity & Health.* 2017;14(2):155-166.

[3] from "Core physical Indicators" https://www.activehealthykids.org/tools/ Active Healthy Kids Global Alliance

[4] from Center on the Developing Child, Harvard University.
https://developingchild.harvard.edu/science/key-concepts/executive-function/

Play. Play is defined as being for its own sake (without a specific goal), voluntary, enjoyed by participants and imaginative. It can be solitary or social, and with or without objects. Young children acquire and consolidate developmental skills through playful interactions with people and objects.

Restrained time. Time when an infant or child is strapped or harnessed into a cradle, pram, stroller, high chair, or is carried on the caregiver's back or front and is unable to move freely.

Sedentary screen time. Time spent watching screen-based entertainment (TV, computer, mobile devices). This does not include active screen-based games where physical activity or movement is required.

Sedentary behaviour. Any waking behaviour while in a sitting, reclining or lying-down position. For children under 5 years of age includes time spent restrained in car seat, high-chair, stroller, pram or in a carrying device or on a caregiver's back. Includes time spent sitting quietly listening to a story, colouring, and singing.

Tummy time. Time an infant spends lying on their front (in prone position) while awake with unrestricted movement of limbs. For sleeping, infants should be placed on their back.

I INTRODUCTION

1. NURTURING CARE – A HOLISTIC APPROACH TO YOUNG CHILD HEALTH, DEVELOPMENT AND WELLBEING

Over the past decades, neuro-science and child development research have identified what newborns and young children need to survive, thrive, and lead healthy and productive lives. In May 2018, this critical body of scientific knowledge was brought together in the *Nurturing Care Framework* by WHO, UNICEF, the World Bank and other partners. Compelling and robust scientific evidence was translated it into 5 easily understandable and mutually supporting components that are essential for children to thrive:

- Good health
- Adequate nutrition
- Opportunities for early learning
- Responsive caregiving, and
- Security and safety

Figure 1. The components of Nurturing Care and their Interconnectedness

To survive, thrive and reach their developmental potential, infants and young children need all 5 components of the Nurturing Care wheel. The components are not additive, but are interactive and provide synergies with each other. For example, "responsive caregiving" creates an enabling environment for safeguarding the other components: that is, a caregiver who is responsive to a child will be able to detect early signs that the child is feeling ill, tired, overwhelmed, anxious or threatened and will be able to respond in a way that protects the wellbeing of the child. Similarly, a responsive caregiver will be sensitive to the signs that a child is feeling well, alert, ready to play, and explore, and will be able to respond with appropriate activities.

While parenting is one of the most challenging tasks of adult life, preparation for parenthood and education in parenting is more often available in high and middle income countries. When it is available in low and middle income countries, it tends to be most frequently accessed by middle and high income families. In many countries in Europe and Central Asia, families are fortunate to benefit from universal maternal and child health care and home visiting services provided by the public sector during the critical time of pregnancy and the first few years of life. While the number of visits provided to families is often limited

today, home visiting can be an effective entry point to provide trustworthy child development information and parenting and child rearing advice. Universal home visiting services can also be used to identify those families that are vulnerable or have additional needs for targeted services. Both, providing evidence-based information and advice to all families and to identify families with additional needs requires the knowledge and special skills of working in a true supportive partnership with families from all walks of life.

The resource package for home visitors "Supporting Families for Nurturing Care" consists of a growing set of training modules. Its purpose is to strengthen home visitor **knowledge** of the key components of Nurturing Care and **skills** to work with families to enable and empower them to provide the best start in life to their children. While most directly targeting home visitors, many of the modules are also suitable for other health professionals interacting with pregnant women and families of young children.

Each of the modules responds to one or more components of Nurturing Care and builds capacity and skills needed by the home visitor to provide supportive home visits. In addition, each module aims to help home visitors reflect on professional attitudes and practices that engage families that are diverse and face different needs and challenges in an inclusive and respectful approach.

The modules have been developed by well-known experts and can be translated and adapted to different country contexts. In some countries, the modules have already become a mainstay of lifelong learning and continuing professional development for health care workers and social service providers engaged with families of young children. You will find hardcopies of all modules hosted on the ISSA website at https://www.issa.nl/modules_home_visitors and on UNICEF Agora.

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Figure 2. Supporting Families for Nurturing Care
(complementary pre-existing training packages are star marked)

Module 20. Healthy weight, physical activity, sleep and sedentary time

*IMCI**
Module 21: The Care of Small and Sick Newborns
Module 22: Addressing Vaccine hesitancy

*IYCF**
*BFHI**
Module16: Responsive Feeding

Module 6: The Art of Parenting - Love, Talk, Play, Read

*Thinking Healthy**
*Care for Child Development**
Module 4: Falling in Love - Promoting Parent-Child Attachment
Module 5: Engaging Fathers
Module 8: Common Parenting Concerns

Module 9: Home Environment and Safety
Module 14: Keeping Young Children Free from Violence, Abuse and Neglect

Knowledge	Skills
Module 1: The Early Childhood Years - a Time of Endless Opportunities	*Module 2:* The New Role of the Home Visitor
Module 7: Parental Wellbeing	*Module 10:* Caring and Empowering - Enhancing Communication Skills for Home Visitors
Module 11: Working against Stigma and Discrimination - Promoting Equity, Inclusion and Respect for Diversity	*Module 13:* Developmental Monitoring and Screening
Module 12: Children Who Develop Differently - Children with Disabilities or Developmental Difficulties	*Module 15:* Working with Other Services
Module 18: Gender Socialisation and Gender Dynamics in Families - the Role of the Home Visitor	*Module 17:* Supervsion - Supporting Professionals and Enhancing Service Quality
Module 19: Early Childhood Education Programmes	

2. THE ROLE OF A HEALTHY WEIGHT, PHYSICAL ACTIVITY AND SLEEP FOR CHILD HEALTH, DEVELOPMENT AND WELL-BEING - BRIEF OVERVIEW

There is strong evidence that all aspects of children's development (i.e. cognitive, fine and gross motor, language, social-emotional, and executive function) benefit from young children growing adequately, being physically active and engaging with the caregivers, family and the world around them from birth. Physical activity and active play contribute to improved sleep and help children cope with stressful situations.

Yet, over the past decade, overweight and obesity have been soaring globally and co-exist, in many countries, with acute and chronic undernutrition. Overweight, physical inactivity and insufficient and poor quality sleep are associated with increased mortality and morbidity over the life course and are a major driver of the epidemic of non-communicable diseases.

Adequate physical activity also benefits adult caregivers who are likely to feel healthier and sleep better when there are more active during the day. In addition, physical activity can protect individuals against depression throughout the life course[5], and specifically reduce stress, low mood and depression and anxiety in pregnant women and new mothers. Building on this evidence, a popular program to counteract maternal depression in the UK, "Ready Steady Moms" uses "community-based walking groups" to help new mothers strengthen their social network and increase their motivation to get out into the fresh air" with their babies.

A child's enjoyment of physical activity is shaped early on by the child's family and the environment. Oftentimes, parents and main caregivers, particularly when residing in urban areas, may already be less physically active. They may equate being physically active to exercising to lose weight and keep in shape, rather than for pleasure.

Helping families to engage more in physical activities may seem challenging, but can have a positive impact for all family members. As a families' home visitor, you have the unique opportunity to observe and discuss with the family how to maintain a healthy weight, how to engage in physical activities, develop good sleep routines, and make prudent use of screen time. Fortunately, pregnancy and the early years create a special window, as families often have high motivation to establish healthy life styles and take on new habits and routines that support child development.

This module will make you better-equipped to guide families with relevant tips and advice on how to adopt a healthy lifestyle. As a home visitor, you may draw on your "salutogenic" role (***see Module 2 – The New Role of the Home Visitor***) of creating health in your community by, for example organizing community support groups where caregivers meet to play with their children or advocate with community leaders to create spaces where young children can engage safely in active outdoor play.

[5] WHO Europe 2019. Motion for your mind: Physical activity for mental health promotion, protection and care. http://www.euro.who.int/__data/assets/pdf_file/0018/403182/WHO-Motion-for-your-mind-ENG.pdf

II

A HEALTHY WEIGHT DURING THE EARLY YEARS

1. WHAT CONSTITUTES A HEALTHY WEIGHT IN YOUNG CHILDREN?

Reflection and discussion

In your community how do parents and other caregivers talk about the physical growth of their young children? Have you heard of parents who are concerned that their child might be too small? Too short? Too tall? Too heavy? Have caregivers asked you about what constitutes a healthy weight? How do you advise caregivers when you think a young child is clearly overweight?

Overweight and Obesity in Children 0-59 Months

Weight-for-height above +2 SD (standard deviation) of the WHO Child Growth Standards median for children of the same height and sex. Severe overweight (above +3 SD) is referred to as obesity.

The monitoring of physical growth from pregnancy through the early years is a standard activity of antenatal and well-child visits in most doctors' offices. Having a fetus or young child that is growing well, both in terms of height and weight usually indicates to parents that the fetus or the young child is healthy and thriving. The fact that the child has "scored" in the high end of the growth chart was often considered good news. Yet, our understanding of the risks of overweight and obesity has changed, and you need to advices caregivers of what constitutes a healthy weight in a child.

2. THE RISKS OF OVERWEIGHT AND OBESITY

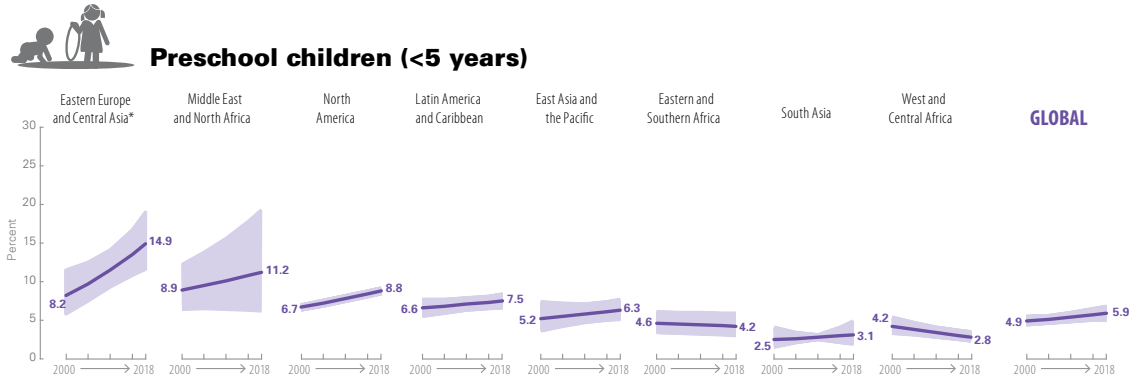
Globally, about 40 million children under five years were overweight in 2018 compared to 30 million in 2000, a 33% increase. The World Obesity Federation expects that by 2030, more than 240 million children and adolescents (5-19 years) will be obese. The Europe and Central Asia region reported the largest and steepest increase in overweight (from 8.2 to 14.9%) in the youngest age group (0-5 years)[6]. WHO Europe has warned that obesity and overweight is one of the greatest public health challenges of our century[7]. "Childhood obesity is associated with immediate adverse consequence, such as psychological problems and lower educational attainment, and a higher risk for many comorbidities later in life"[8]. Overweight and obesity of course also **result from and contribute to low levels of physical activity**.

[6] UNICEF (2019). *UNICEF programming guidance: Prevention of overweight and obesity in children and adolescents.* New York: UNICEF.

[7] WHO Europe. http://www.euro.who.int/en/health-topics/noncommunicable-diseases/obesity/obesity

[8] Spinelli, A., Buoncristiano, M. et al. (April 26, 2019). Obesity Facts. The European Journal of Obesity. p. 245. Open Access. https://www.karger.com/Article/Pdf/500436

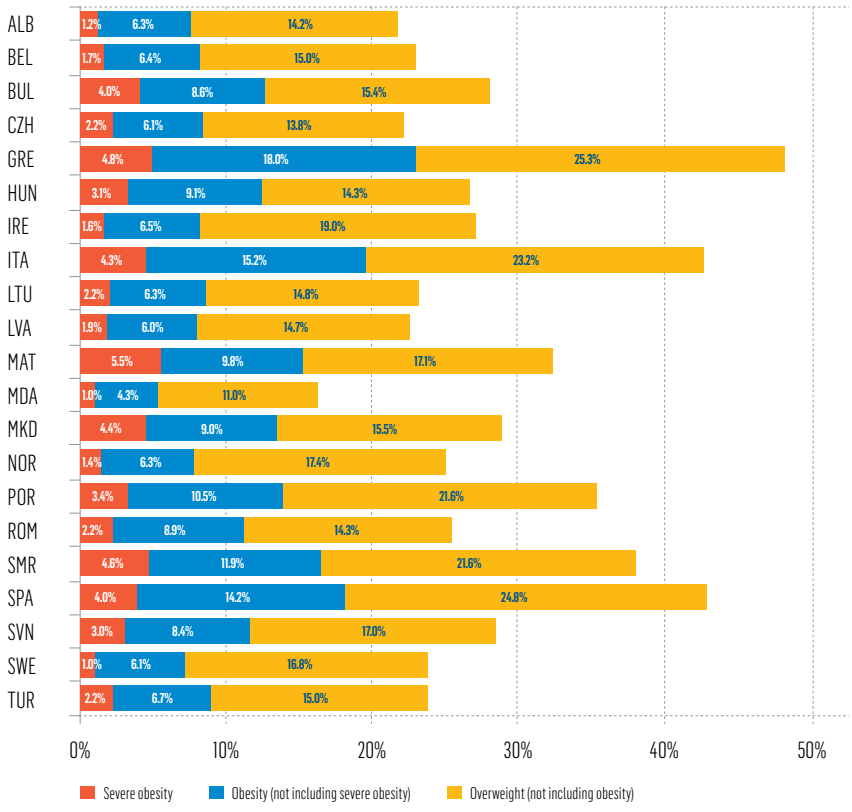
Figure 3. Percentage of overweight in children under-five by UNICEF region (2000–2018)



Source: UNICEF/WHO/World Bank Group Joint Malnutrition Estimates, May 2019 edition. 8
Note: The shaded areas represent the 95 per cent confidence intervals.

Figure 4 displays data for children 6-9 years (similar data were not available for children under five) for a selection of countries from the Europe region. There are clearly significant differences across countries in the region, as well as differences within countries for different population groups.

Figure 4. Prevalence of pre-obesity, obesity (not including severe obesity) and severe obesity in child ages 6-9 years[9]



[9] WHO Europe. Childhood Obesity Surveillance Initiative.
http://www.euro.who.int/__data/assets/pdf_file/0019/400654/COSI-Severe-Obesity-FS-ENG-LowRes.pdf?ua=1

Overweight is a result of

- **Individual factors** (genetic, diet and food preferences, and physical activity patterns over the life course), as well as increasingly
- An **obesogenic environment** that promotes high energy intake and sedentary behaviour[10].

Poorer and socially and economically disadvantaged groups are often disproportionately affected by obesogenic environments, when they live in urban, polluted or over-crowded environments that discourage enjoyable and safe physical activity, when access to quality and affordable healthy foods is limited, or when they are facing food insecurities.

UNICEF (2019)[11] has identified 10 main risks for overweight and obesity:

- Maternal and paternal overweight
- Maternal undernutrition and undernutrition in early life, including newborns that were born "small-for-gestational-age" or infants that suffered from wasting (were severely under-nourished) during their first years of life
- Inadequate breastfeeding practices
- Inappropriate complementary feeding practices (see also ***Module 16. Responsive Feeding***), including also the early introduction of processed foods.
- Unhealthy food habits in older children and adolescents
- Obesogenic food environments
- Inadequate physical activity (mediated by lack of safe physical space and an active lifestyle and increasing acceptability of sedentary behaviors, including screen time)
- Obesogenic cultural environments
- Changes in the external environment that modify the expression of genes, and
- Socio-economic status (income, access to and affordability of healthy foods…).

[10] UNICEF (2019). *UNICEF programming guidance: Prevention of overweight and obesity in children and adolescents.* New York: UNICEF, p. 15.

[11] UNICEF (2019). *UNICEF programming guidance: Prevention of overweight and obesity in children and adolescents.* New York: UNICEF.

3. A HEALTHY DIET

There is a number of WHO and UNICEF guidance documents on the diet of pregnant and lactating women, and on Infant and Young Child Feeding. To remind you what to focus on with your families, a brief summary with key nutrition information is provided[12] below.

KEY ADVICE FOR A HEALTHY DIET[13]

Adults

- FRUIT AND VEGETABLES
  Eating at least 400 g or five portions, of fruit and vegetables per day
- FATS
  Reducing the amount of total fat intake to less than 30% of total energy intake and replacing both saturated fats and trans-fats with unsaturated fats
- SALT, SODIUM AND POTASSIUM
  Reducing salt intake, often found in processed foods and increase the intake of potassium by consuming fresh fruit and vegetables.
- SUGARS
  Reduce the intake of free sugars to less than 10% of the total energy intake by limiting the consumption of foods and drinks containing high amounts of sugars, such as sugary snacks, candies and sugar-sweetened beverages and eating fresh fruit and raw vegetables as snacks instead of sugary snacks.

Pregnant women[14]

- 12.5-18 kg weight gain for women of normal pre-pregnancy weight.
- Adequate energy, protein, vitamin and mineral consumption through variety of foods.
- Oral iron and folic acid supplementation.
- Gestational Diabetes Melitus (GDM) can increase the risk of childhood obesity. Hence all mothers should check for GDM during 24 and 28 weeks of pregnancy.

Infants and young children

Advice on a healthy diet for young children is similar to that for adults, but note the following:

- Infants should be breastfed exclusively during the first 6 months of life.
- Lack of breastfeeding and the use of formula milk as a substitute can increase the risk of childhood obesity.
- Infants should be breastfed continuously until 2 years of age and beyond.
- From 6 months of age, breast milk should be complemented with a variety of adequate, safe and nutrient-dense foods. Salt and sugars should not be added to complementary foods.
- Ready to use commercial complementary foods often have sugar, fat and salt content beyond the standard permitted amount, hence home-made complementary foods are preferred.

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12 https://www.who.int/en/news-room/fact-sheets/detail/healthy-diet

13 WHO (October 23,2018). Healthy Diet.
https://www.who.int/en/news-room/fact-sheets/detail/healthy-diet

14 WHO (2016). WHO recommendations on antenatal care for a positive pregnancy experience.
https://apps.who.int/iris/bitstream/handle/10665/250796/9789241549912-eng.pdf?sequence=1

4. SUPPORTING FAMILIES IN MAINTAINING HEALTHY CHILD GROWTH

Your role of helping families adopt healthier life styles has become even more important today, as families struggle with

- the "temptations" of calorie-rich, processed foods that may also be more accessible and affordable than quality nutritious foods;
- an increasingly sedentary life style combined with caregivers that are often "hooked" on screens, and
- environments that may not always be safe and clean enough for children to be allowed to play outdoors.

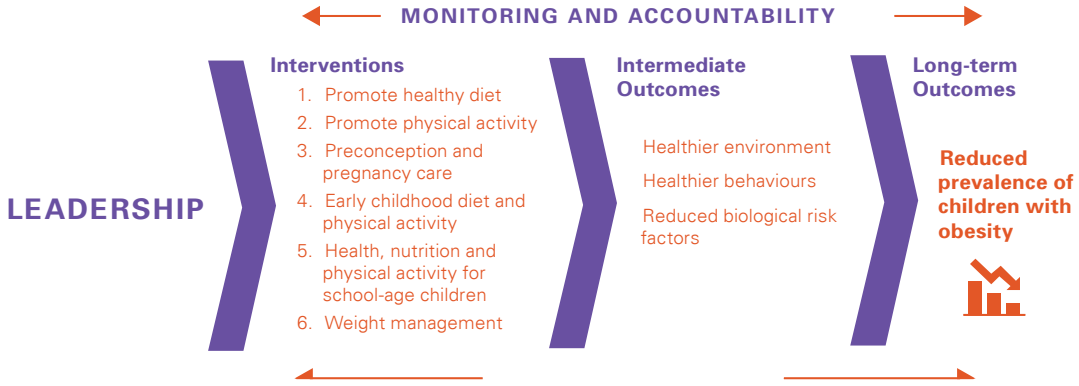
As a family's health visitor, your understanding of the importance of a healthy diet and an active lifestyle, combined with practical suggestions that families can implement, might encourage families to adopt healthier practices.

If families are supported with cash transfer programmes to reduce poverty and undernutrition, if targeting of vulnerable groups is not done adequately, subsidization of foods are not designed carefully, and supplementation is not accompanied by guidance, then families and their children might be at higher risk of obesity. Hence you can support families to make wiser choices of healthy food products using their subsidies, to prevent obesity.

Reflection and discussion

When looking at the interventions of the UNICEF Action framework[15] (Figure 5. Action framework for the prevention of overweight and obesity in children), you can see how interventions contribute to better long-term outcomes. Reflect and discuss which interventions you can engage in and what specific activities you could propose to your families to prevent overweight in young children and other family members. (See also, Information Card 1).

Figure 5. Action framework for the prevention of overweight and obesity in children



Source: Implementation Plan of the Commission on Ending Childhood Obesity

IMPORTANT

Remember, telling families what to do or scolding them if you think they are doing something wrong rarely works. *Refer to Module 10. Caring and Empowering. Enhancing communication skills for home visitors* to use effective promotional and motivational communication approaches that help families to change for healthier life styles.

[15] UNICEF (2019). *UNICEF programming guidance: Prevention of overweight and obesity in children and adolescents*. New York: UNICEF.

III

PHYSICAL ACTIVITY

1. PHYSICAL INACTIVITY – A HIGH COST TO THE INDIVIDUAL AND SOCIETY

Physical inactivity is a major contributor to premature mortality and morbidity across the globe due to its contribution to weight gain and reduced cardio-vascular fitness. There is good evidence that physical activity in children and adolescents improves physical health and contributes to all domains of development. Additionally, evidence is emerging that being physically active can enhance wellbeing and reduce depression in children and adolescents[16].

Despite the strong evidence, a recent report of the Active Health Kids Global Alliance[17] comparing 49 countries from all continents and income levels, concluded that "childhood physical inactivity levels have reached crisis levels" and that "children around the world are not moving enough to maintain healthy growth and development." While data was not available for the youngest age group, WHO Euro (2018[18]) reported that close to one in five 11-17 year olds are insufficiently active. Nearly half of adults in the Europe region (46%) never exercise and only 7% exercise regularly (five times per week)[19].

Information about infant and young children's activity levels is limited. A review[20] and a recent study[21] concluded that infants and young children spend little time in vigorous physical activity; most time is spent being sedentary, with television viewing and other screen time starting already during infancy.

A 2019 review of "active outdoor play" of toddlers and preschool-age children has also noted that outdoor play has been declining[22]. This is a disconcerting trend, since outdoor play (running, jumping, tumbling, climbing, skipping, rolling, balancing, building, and throwing) is usually more vigorous than indoor play where children have less space to move freely. This trend was attributed to

- Real and assumed safety risks (unsafe environment, traffic, fears of abduction, lack of play areas and open green spaces).
- An increase in sedentary activities, particularly screen time, and
- A tendency for scheduling structured "educational" activities (often in-doors) for children in high- and middle-income countries (HMIC) and from middle- and upper-class families.

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16 Biddle, SJH, Ciaccioni, S., Thomas, G. & Vergeer, I. (2019). Physical activity and mental health in children and adolescents: An updated review of reviews and an analysis of causality. *Psychology of Sports and Exercise*, 42, 146-155.

17 Healthy Kids Global Alliance. The Global Matrix 3.0 on Physical Activity for Children and Youth. https://www.activehealthykids.org/global-matrix/

18 WHO (2018). Situation of child and adolescent health in Europe. http://www.euro.who.int/__data/assets/pdf_file/0007/381139/situation-child-adolescent-health-eng.pdf?ua=1

19 WHO Europe (2018). Physical Activity factsheets for the 28 European Member States of the WHO Europe region. http://www.euro.who.int/__data/assets/pdf_file/0005/382334/28fs-physical-activity-euro-rep-eng.pdf?ua=1

20 Cardon, G, Van Cauwenberghe, E, De Bbourdeaudhuij, I. (2011) Physical Activity in Infants and Toddlers in http://www.child-encyclopedia.com/sites/default/files/dossiers-complets/en/physical-activity.pdf

21 Vanderloo, LM & Tucker, P. (2015). An objective assessment of toddlers' physical activity and sedentary levels: A cross-sectional study. BMC Public Health, 15, article number 965.

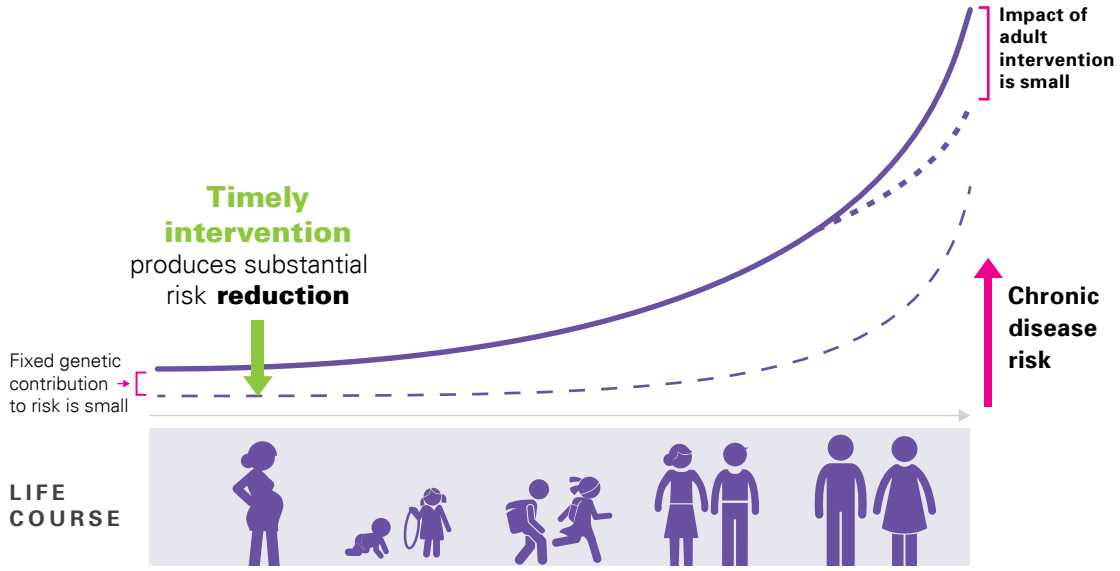
22 Carson, V & Predy, M. (May 2019). Active Outdoor Play. Encyclopedia on Early Childhood Development. http://www.child-encyclopedia.com/sites/default/files/textes-experts/en/5223/active-outdoor-play.pdf

23 Carson, V. & Predy, M. (2019). Active Outdoor Play. Encyclopedia on Early Childhood Development. http://www.child-encyclopedia.com/sites/default/files/textes-experts/en/5223/active-outdoor-play.pdf

The reduction in active outdoor playtime may also be due to the fact that adults caring for children have become more sedentary. This is unfortunate, because research indicates that active outdoor play is associated with better physical health (including adequate levels of vitamin D), mental health and executive function (attention, self-regulation) and better spatial memory in young children .

As with many other early interventions, increasing activity levels and reducing over-nutrition at the earliest stage of life are the most cost-effective and will have the greatest life-long benefit for health, wellbeing and achievement (see Figure 6. The importance of early interventions for the prevention of overweight).

Figure 6. The importance of early life interventions for the prevention of overweight



Source: Hanson M and Gluckman P. Developmental origins of noncommunicable disease: population and public health implications. Am J Cl Nut, 2011; 94 (suppl): 1754S–8S.
Note: In the authors' words: 'The maximum effect will be gained from timely interventions in early life when plasticity permits a sustained reduction in the trajectory of risk to be attained.

Reflection and discussion

What are your thoughts about parental awareness of overweight, sedentary time, screen time and sleep of their infants and young children? Are these topics a priority in the families you visit?

In your discussion and reflection, consider some common statements we have heard from parents of infants and young children. What would you tell these parents? Choose several statements to discuss with your colleagues or reflect on these statements on your own, based on your experience. How would you respond? When you have completed this module, return to these statements and see whether you would respond differently.

What parents say	How would you respond to your parents?
1. My child is so active, s/he cannot be overweight.	
2. He/she is just big for his/her age.	
3. Chubby babies are just so cute and healthy looking. The baby fat will go away as they grow up.	
4. We are all like this in the family. It is genetics.	
5. Watching a bit of cartoons on TV, computer or phone makes my baby calm and happy. It can't hurt him/her.	
6. Wherever I go and whatever I do, my baby is with me. I put her/him in a stroller, high seat or carry her/him on my back for hours and he/she is so happy.	
7. As a family, we don't have a set schedule of when we go to bed. Our baby just falls asleep when he/she is tired and we put him/her to bed.	
8. Cell phones, tablets and computers are so important in our lives today. Our baby loves to use them, and he/she learns a lot.	

What you might discuss with your families:

1. Can you tell me how much your child plays actively inside and outside? What kinds of vigorous activities are you engaged in with your child? Researchers have found that many parents think their children are more active than they actually are. Young children who spend more time in moderate and vigorous physical activity tend to be healthier, do better in school and have better control over their behaviors (executive function).
2. A child that is big for his/her age can be overweight and even obese. This can have health and other consequences throughout life. You may want to learn more about this and also discuss this with your family doctor or pediatrician.
3. From research we have learned that "baby fat" does not give your baby the healthy start you want to provide him/her with. It rather may set him/her on an early path to overweight and even obesity. You may want to learn more about this and also discuss it with your child's doctor.
4. Our family lifestyle, that is the way we eat and how much time we spend in physical activity contributes to how we look and how fit we are. If you are interested to learn more about it, we could explore the changes you could make as a family so that you all feel better and fit, while having fun with your child/ren.
5. How much time does your baby/child spends watching TV or using your phone/tablet/computer? Based on a review of experts, the World Health Organization recently recommended that children under age of two should not spend any time with digital devices. Also, we know from research that infants do not learn well from two-dimensional images. What other activities make your baby calm and happy? Music, stories, toys…? Can you try to sing to your baby, make noises, use paper or other objects hanging from the ceiling to entertain and engage with your child?
6. What is most likely to make your child happy? I think he/she likes to be near you, to listen to you, look at you, and to feel seen and heard. However, the newest research tells us that babies and young children need to move their muscles. Children under age 4 should not sit more than 1 hour restrained in a stroller, a chair or on your back. After one hour, they need to change a position, to be on their tummy, or crawling. You can put them on the floor for tummy time, let the crawl or roll, bounce them in the air etc.
7. Infants and young children need more sleep than adults. Also, a consistent bedtime routine, like reading a book together or telling your child a story, or singing a song together, help your child learn, relax, and get ready to sleep.
8. We know from research that babies and toddlers learn new things best while interacting with their caregivers. Responsive caregivers that encourage young children and expand on their children's responses are the best teachers.

2. THE IMPORTANCE OF PHYSICAL ACTIVITY FOR BABIES – WHAT DO PARENTS THINK AND KNOW?

Reflection and discussion

What are your thoughts about the importance of physical activity for infants and young children? When do you think babies can engage in physical activities and active play? What do parents/caregivers in your community know about the importance of physical activity for infants and young children? What activities would you suggest for your families to try?

There are several important issues to consider:

- **Are parents in our communities aware of the importance of healthy nutrition and physical activity during pregnancy?**

According to the *Building Healthy Habits Starts Early* (WHO Euro, 2016, Objective 2.1)[24], it is of great importance to provide information and advice to future parents (including during antenatal classes) about the benefits of being physically active and of maintaining a healthy body weight prior to pregnancy and during pregnancy. It is important to intervene and support behaviour change already during pregnancy. In many cultures, pregnant women and breastfeeding mothers are expected to "eat for two" and gain some weight, so it is important to influence the community and change attitudes and expectations.

- **Are parents aware of the physical activity needs of infants and young children?**

Overall, when informing parents, health workers tend to give more importance to nutrition and much less to physical activity. Physical activity is often not considered a top priority topic for infants and toddlers[25]. Furthermore, many cultures have preferences for chubbier babies and may perpetuate the assumption, that the baby will lose the "baby fat" when growing up. Parents also may not recognize that their child is overweight or consider it a concern. The family plays a critical role on how much time the child spends restrained (car seat, swing, carrier, etc.), how much physical activity and gross motor/muscle development is encouraged, and to what extent the parent/caregiver participates.

- **Do parents make accurate judgements about the activity levels of infants and young children?**

Though information for infants and very young children is lacking, research has shown that parents of 5-8 year olds tend to overestimate children's physical activity levels on days when they were physically inactive and this may decrease the likelihood that they will encourage their children to be more active[26].

- **Do parents know how to help their infants and young children to be active?**

Developing good habits depends on role modeling. As pointed out earlier, many older children and adults in Europe and Central Asia are not active themselves, making it less likely that they will role model and engage in vigorous activities with their young children. Additionally, parents may not know what to do with young babies beyond the basic caregiving functions.

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[24] WHO (2016). Physical activity strategy for the WHO Europe Region 2016-2025. http://www.euro.who.int/__data/assets/pdf_file/0014/311360/Physical-activity-strategy-2016-2025.pdf?ua=1

[25] Prioreschi, A., Brage, S., Westgate, K., & Micklesfield, LK. (2018). Describing the diurnal relationships between objectively measured mother and infant physical activity. Int J Behav Nutr Phys Act. 15: 50. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6020239/

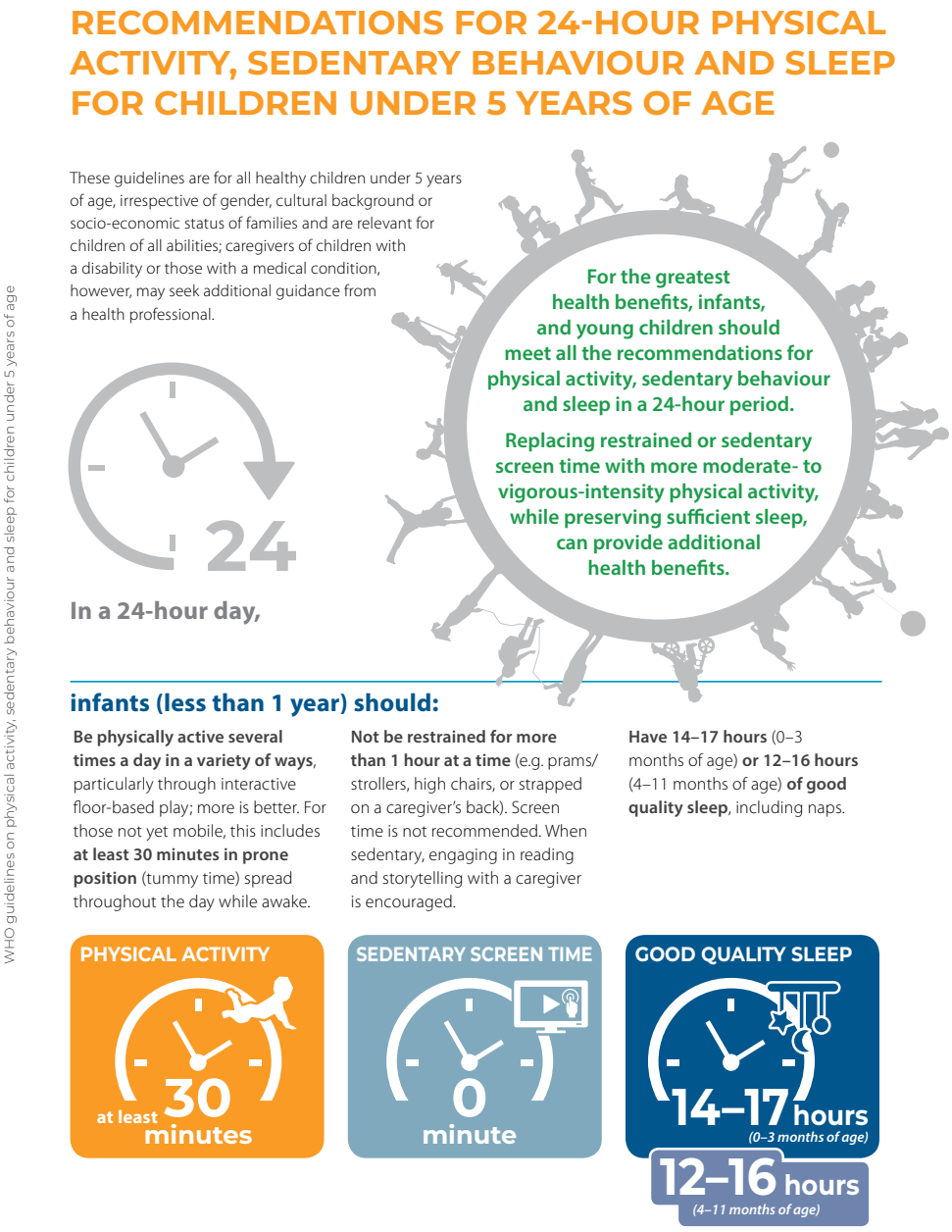
[26] Corder, K, Crespo, NC, van Sluijs, EMF, Lopez, NV, & Elder, JP (2012). Parent Awareness of Young Children's physical Activity. Prev Med. 2012 Sep; 55(3): 201–205. doi: 10.1016/j.ypmed.2012.06.021

3. CHILDREN'S NEED FOR PHYSICAL ACTIVITY DURING THE FIRST THREE YEARS OF LIFE (WHO GUIDANCE)

Lessons learnt from the countries with the most active children overall shows that…physical activity is driven by pervasive cultural norms. Being active is not just a choice, but a way of life[27].

As recommended by WHO (2019), it is important to look at the distribution of the infant or young child's physical activity, sedentary behavior and sleep over a 24-hour period and to help parents increase the amount of "moderate to vigorous intensity" physical activity.

The 2019 WHO guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age recommend[28]:



[27] https://www.activehealthykids.org

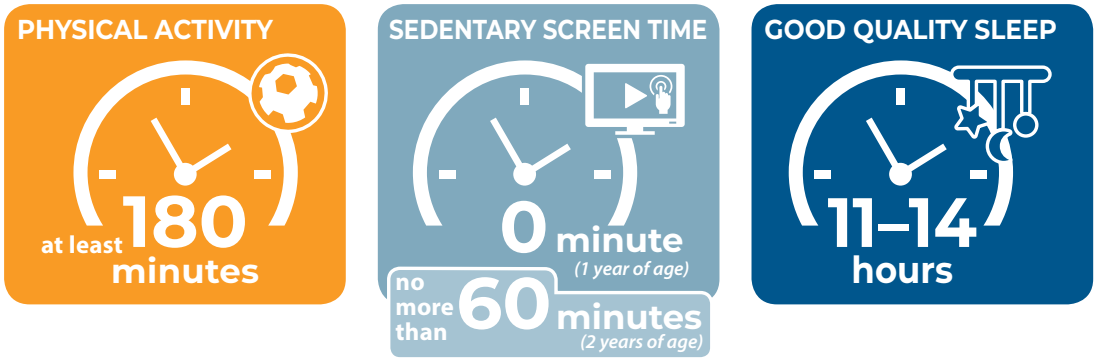
[28] World Health Organization. (2019). Guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age. World Health Organization. https://apps.who.int/iris/handle/10665/311664.

children 1–2 years of age should:

Spend at least 180 minutes in a variety of types of physical activities at any intensity, including 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/strollers, high chairs, or strapped on a caregiver's back) or sit for extended periods of time. **For 1-year-olds, sedentary screen time (such as watching TV or videos, playing computer games) is not recommended**. **For those aged 2 years, 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 11–14 hours of good quality sleep, including naps, with regular sleep and wake-up times.

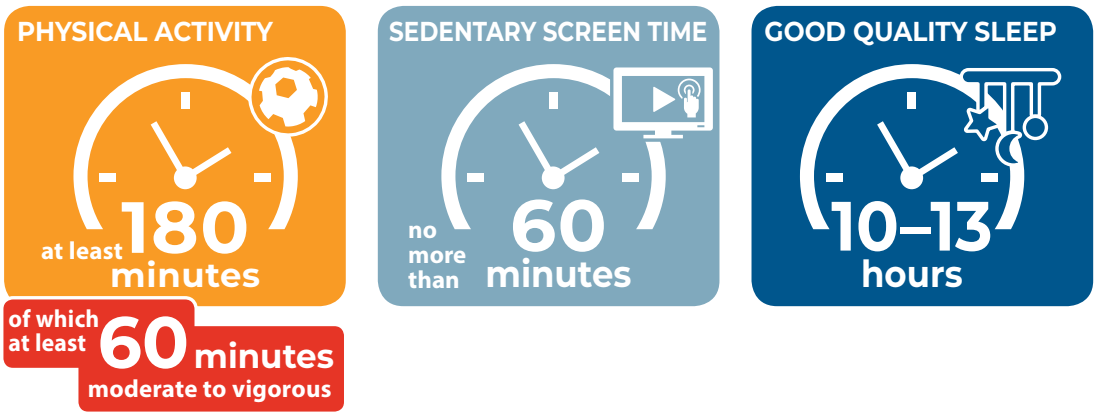


children 3–4 years of age should:

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/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.

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



4. THE ROLE OF PHYSICAL ACTIVITY AND CHILD DEVELOPMENT AND WELLBEING

IMPORTANT

In the age group from birth to 5 years, active play is the most common physical activity. It is not usually an organized physical activity or sport. "Replacing restrained or sedentary screen time with more moderate to vigorous intensity physical activity, while preserving sufficient sleep, can provide additional health benefit to the young child and increase capacity for learning and development[29]".

Physical activity contributes to all aspects of child development, from infancy on. However, new parents may not be sure how they can support physical activity and overall development beyond feeding and cleaning the baby, holding and cuddling the baby, and putting the baby to bed. Fortunately, babies love to be active and interactive. With information about the importance of physical activity for health and development and practical tips for simple and engaging physical activities and active play to stimulate the baby's growing brain, you can support parents and caregivers to do what is best for their child.

Physical activity has the following positive effects for babies:

- Improves baby's overall health, now and for later on in life and reduces the likelihood of overweight and obesity.
- Increases baby's strength, muscle tone, and growth motor development (e.g. head control, balance) and improves bodily functions (circulation, breathing, digestion, sleep)
- Increases body awareness through touch, stroking and massage and helps the child learn to coordinate body movements;
- Contributes to learning about rhythm, patterns, and sequences of movements or activities, which also contributes to language development.
- Increases baby's self-esteem and confidence as s/he masters movements and is actively shaping the direction of activities.
- Helps baby learn about the caregivers and surroundings.
- Provides a shared fun time with the caregiver and others.
- Starts a healthy habit from the beginning.

Physical activity during the first months. Motion and movement are important ways for newborns, infants and young children to learn about their own bodies and environment. Having experienced gentle movements throughout pregnancy, it is not surprising that motion remains an important modality, in addition to touch, stroking, and massage that help babies experience their bodies and thus stimulate motor development and understanding of self. Motion has can have a soothing (gentle rocking) and arousal function (changing position quickly, moving baby up into the air).

Activities that can be done with babies from birth to 6 months (see also Information Card 1):

- Rocking the baby.
- Dancing with the baby to music, moving his arms.

[29] World Health Organization. (2019). Guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age. World Health Organization. https://apps.who.int/iris/handle/10665/311664.

- Massaging the baby to improve muscle tone and body sensation.
- Gently moving arms and legs while diapering, and pulling up gently the baby towards a seating position are strengthening neck muscles.
- Changing the baby's position (placing baby on tummy on the caregiver's tummy, over the legs or arm, or on a blanket) and interacting with baby for tummy time (see Information Card 2)

Information Cards to help you advise parents in active play for babies and young children can be found in the Annex.

5. HELPING FAMILIES TO BE ACTIVE

"Ensure physical activity is a positive experience (especially for children) and easy to do: By ensuring physical activity is a positive experience and one that can be integrated into your daily life we make it a desirable activity rather than a burden. By focusing on children, we can make sure they are set up for life with positive behaviour that will help them in later life."[30].

Reflection and discussion

- What were some of the energetic physical activities you remember from your childhood? What do you remember about them? Do you feel that you are sufficiently physically active now? If not, what are your own barriers to being more active?
- What do your families know about the importance of physical activity? Are there differences in how caregivers look at physical activity for baby girls and boys? Little boys and little girls? Do mothers and fathers engage differently in physical activities with their children?
- What are some of the barriers in your communities that make it more difficult for families to be more active with their infants and young children, indoors and/or outdoors? Could you think of what could be done by health professionals, parents and the community to address these barriers to the health and wellbeing of their children?

IMPORTANT

Families have to be committed to being or becoming more active. One important incentive is the link between active play/vigorous activity and other aspects of child development. You can use the motivation of parents to do what is best for their young child to encourage families to become more active. Suggestions you can make include:

- Set time aside for being active in the family's daily routine.
- Tips on how to make fun physical activities and strengthen family relationships.
- Explain how physical activity can be integrated into daily chores.
- Help parents and caregivers to let the child take the lead in exploring and discovering and support joint active play.

[30] Center for Economics and Business Research (June 2015). The economic cost of physical inactivity in Europe. An ISCA Cebr report.
https://inactivity-time-bomb.nowwemove.com/download-report/The%20Economic%20Costs%20of%20Physical%20Inactivity%20in%20Europe%20(June%202015).pdf

6. OVERCOMING GENDER BIASES

Reflection and discussion

Reflecting on the families you know, what could be the role of gender in active in- and outdoor play? How might this influence activity levels for girls and boys over the life span? How can you use your knowledge in equalizing opportunities for active play, irrespective of gender?

If you have reviewed Module 18: Gender socialisation and gender dynamics in families, you know that gender is an important factor that also influences physical activity levels and opportunities for active play. When looking at WHO Europe Country Profiles[31] (where for the youngest age group are provided), a much smaller percentage of girls (sometimes close to half) is engaged in regular physical activity. From gender research we also know that

- Girls and boys are treated differently from birth on. Baby girls are more likely to be treated gently, focusing on their language and fine motor development, while little boys are quickly drawn into the world of rough and tumble play.
- Mothers are more likely to soothe and calm their baby, while fathers tend to stimulate and arouse their infants and young children. In their role of "physical activity" leaders, fathers may be more likely to co-participate with children in leisure-time physical activity or encourage higher activity levels.[32] It is not surprising, that a longitudinal study in Australia[33] noted that children with an obese father were 14 times more likely to become obese teenagers, even if the mother had a healthy weight. In contrast, children with an obese mother but a healthy weight father were not at significantly increased risk of becoming obese.
- Involving fathers (or significant male family members) in active play with their young children has important positive benfits for father-child bonding[34] and promotes all domains of child's development, including the child's self-control (executive function), while also contributing to the father's activity level and wellbeing.
- Men in high income countries can lose up to 5 hours of vigorous physical activity per week when they become parents. During pregnancy and the months after birth, fathers are also at greater risk of depression and anxiety, conditions that can be improved by being physically active[35].
- A recent review noted that girls engage less in physical activity, but social support and encouragement of their parents is positively associated with girls' outdoor play[36].

This is another important reason to conduct home visits when both caregivers are present. You may also consider organizing special contacts with young fathers and mothers to inform them about the benefits of vigorous physical activity for their own physical and mental health, their child's development, and family relationships and provide them with tips on developmentally appropriate activities. Differences in maternal and paternal activity levels is a gender difference that would clearly benefit from some revision.

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[31] WHO Europe (2018). Physical Activity factsheets for the 28 European Member States of the WHO Europe region.

[32] Zahra J, Sebire SJ, Jago R. (2015). He's probably more Mr. sport than me"--a qualitative exploration of mothers' perceptions of fathers' role in their children's physical activity. *BMC Pediatr.* 2015 Aug 26; 15():101. In Paternal Physical Activity: An Important Target to Improve the Health of Fathers and their Children.
https://bmcpediatr.biomedcentral.com/articles/10.1186/s12887-015-0421-9

[33] Wake M, Nicholson JM, Hardy P, Smith K (2007). Preschooler obesity and parenting styles of mothers and fathers: Australian national population study. *Pediatrics. 120(6):e1520-7*

[34] Young, MD & Morgan, PG (2017). Paternal physical activity: An important target to improve the health of fathers and their children. Am J Lifestyle Med. 2017 May-Jun; 11(3): 212–215. Published online 2017 Jan 31.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6125078/ - bibr17-1559827616689544

[35] Young, MD & Morgan, PG (2017). Paternal physical activity: An important target to improve the health of fathers and their children. Am J Lifestyle Med. 2017 May-Jun; 11(3): 212–215. Published online 2017 Jan 31. doi: 10.1177/1559827616689544

[36] Boxberger, K. & Reimers, AK. (2019). Parental Correlates of Outdoor Play in Boys and Girls Aged 0 to 12 – A systematic review. Int. J. Environ. Res. Public Health 2019, 16, 190; doi:10.3390/ijerph16020190.

Video clip

Raising Children Network, Australia. Rough and tumble play - https://www.youtube.com/watch?v=mR71m72gO_Y

WSJ. Decoding the Father Factor - https://www.youtube.com/watch?v=a9g5pPdQRN4

IMPORTANT

Vigorous physical activity and play need not be gender defined. Mothers and female family members can get involved in this type of activity in the same way and the benefits for girls and boys are the same.

7. SAFE ENVIRONMENTS FOR PHYSICAL ACTIVITY

Of critical importance for moderate to vigorous physical activity, including active play, is the safety of the environment. This includes a clean blanket or sheet for tummy time, clean and safe toys that encourage active play and reasonably hazard-free indoor and outdoor settings.

Some tips to advise caregivers are available in ***Module 9. Home environment and safety***. Outdoor safety is often less under the control of caregivers, but parents should be advised on the safety and cleanliness (trash, sharp items, tools, animal feces, proximity to road) of outdoor play spaces and the equipment used by young children (slides, swings, tricycles). Children under three years should, of course, be under close supervision by an adult during playtime and spend some of this time being active with their caregiver who can judge which activities are reasonably challenging and which may endanger the young child.

IV SEDENTARY TIME AND SCREEN TIME

Reflection and discussion

- In your mind, what kind of sedentary behaviors support the development of young children? What aspects of development do they contribute to?
- In your home visits, what have you observed in your families with respect to their use of television, computers, tablets and digital phones with children under age two years? Between two and three years?
- How has the use of digital devices changed in your families over the past 2-3 years? What do parents think about the educational role of such devices? What are your own thoughts about the use of screen time by young children?

- **The link between sedentary time, screen time and physical activity**

Sedentary time needs not to be detrimental to child development and wellbeing. Sedentary time can be quality time that supports child development if it fosters a child's fine motor, cognitive, language and social-emotional development through play, structured activities, or through the child's participation in daily family routines, if it is limited (according to WHO no longer than 1 hour till the age of 4), and followed by physical activity. Some of the most engaging and enriching sedentary activities include shared book-reading, storytelling, engaging in songs and nursery rhymes, puzzles, games, drawing and coloring, and many other activities. These engage infants and young children and help them learn.

When sedentary time, including screen time, is used to keep children quiet and "out of the way", or if young children are left alone in front of TVs or digital screens for a substantial time, this can impede their cognitive and social-emotional development. **Module 6: The Art of Parenting - Love, Talk, Play, Read** provides you with many recommendations on sedentary activities for parents and caregivers that encourage the child's cognitive, fine motor, and social–emotional development.

- **The use of screen time during the early years**

The use of screens, particularly, mobile devices has been changing our world dramatically over the past few years. Rates of mobile media use among 2-4-year-olds increased from 39% to 80% between 2011 and 2013 in the USA[37]. Findings also noted

- a high use of screen time: children 0-23 months: 42 minutes per day; 2-4 years: 159 minutes per day, mostly on TV;
- use of screen time before bedtime: children 0-23 months: 24%, 2-4 years: 49%
- use of mobile devices: children 0-23 months: 7 minutes; 2-4 years: 62 minutes/day.

Online responses of parents to the UK TABLET research project which is studying the use of touchscreens[38] indicated that on the average about half (51%) of the 6-11 month-old infants used touchscreens for about 9 minutes and 26-36 month-olds - for about 44 minutes per day. About 10% of the young children under three even had their own device.

However, it is evident that parents are concerned about screen time. Many of them live in a world dominated by computers, mobile phones and tables. They are bombarded by the marketing of the newest digital devices, even for babies and with Apps that promise to make their infant "fit and ready for the digital world". Health professionals, including the child's doctor and you, the trusted home visitor, may be asked for advice whether screen time affects child health and development, positively or negatively; how much

37 https://www.cps.ca/en/documents/position/screen-time-and-young-children

38 https://blogs.lse.ac.uk/parenting4digitalfuture/2016/12/28/what-are-the-effects-of-touchscreens-on-toddler-development/

screen time is too much for different age groups; what content might help children learn and understand their world; and how to set limits on the duration of use of screen time. During home visits, you will also note that some parents think that letting infants or toddlers play with their tablet or other digital device is cute or gets them ready for the "digital age." To respond to these rapid changes, several major pediatric associations have issued guidance on the use of screen time for young children, and this topic has also become a new and active area of research.

Using an expert review panel to develop global guidance and consistency based on best available evidence, the World Health Organisation included screen time in its 2019 guidance document[39] and concluded that "the benefits of less screen-based sedentary behavior (TV watching, watching videos, playing computer games) include reduced adiposity, improved motor and cognitive development and psychosocial health." The Guidelines recommend that over the course of a day

IMPORTANT

- Infants under two should have no sedentary screen time, and
- Young children two to five should have no more than one hour of screen time.

This is based on the expert consensus that:

- The use of screen time by caregiver and/or the child may reduce/replace opportunities for joint engagement and interaction;
- Screen time during the early months and years may not provide special benefits for development and learning in the youngest age group; and
- The use of screen time may delay sleep onset and reduce the amount of sleep.

Researchers have been concerned that in many families, television may be turned on and running in the background most of the day. Because the content on TV is mostly not age-appropriate, it has been found to be distractive to children's learning and cognitive processing.

Research findings have also shown that infants and young children under two years learn best in face-to-face interactions where they are engaged with their caregivers in exploring the world of people and objects. Caregivers can sensitively respond to and expand or scaffold on the young child's actions and encourage the child's efforts. This is rather different from viewing videos or other digital content in 2-D (two-dimensional space). The limited ability to learn from 2-D video content and transfer it into the real world in 3-D has been called "transfer deficit[40]."

Caregivers are often highly distracted by their mobile digital devices. One researcher[41] has noted that caregivers, when on their digital devices, become non-responsive to their children's demands for attention unlike when watching TV together. This lack of response results in the infant or child becoming increasingly upset, as his/her "serve" is not receiving a "return." This digital device-related non-response was compared by a U.S. researcher, Sharon Turkle with the "still face experiment" where the caregiver completely ignores the child, causing serious distress in the young child.

The focus on digital devices replaces times that can be spent in **joint engagement**, like the sharing of books, discussing interesting sights, telling stories or talking about topics of common interest with the child while in public transport, waiting to see a doctor, etc. Caregivers check their mobile phones for e-mails and messages or hand-over their mobile device to the young child for entertainment. More and more frequently, cellphones find their way to the table during family meals. These are all occasions that could be used for talking, sharing, building relationships, and supporting learning.

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[40] Screen time and young children: Promoting health and development in a digital world
Posted: Nov 27 2017 - https://www.cps.ca/en/documents/position/screen-time-and-young-children

[41] Turkle, S. Reclaiming conversation. The power of talk in a digital age.

Video clip

Toddlers' brains resist learning from screens, even video chat (2019)[42] - 24 and 30 months old children need face-to-face live and positive interactions with a caregiver to learn new words, and that pre-recorded video materials were not effective for his age group.

https://youtu.be/-NmkwTameDw

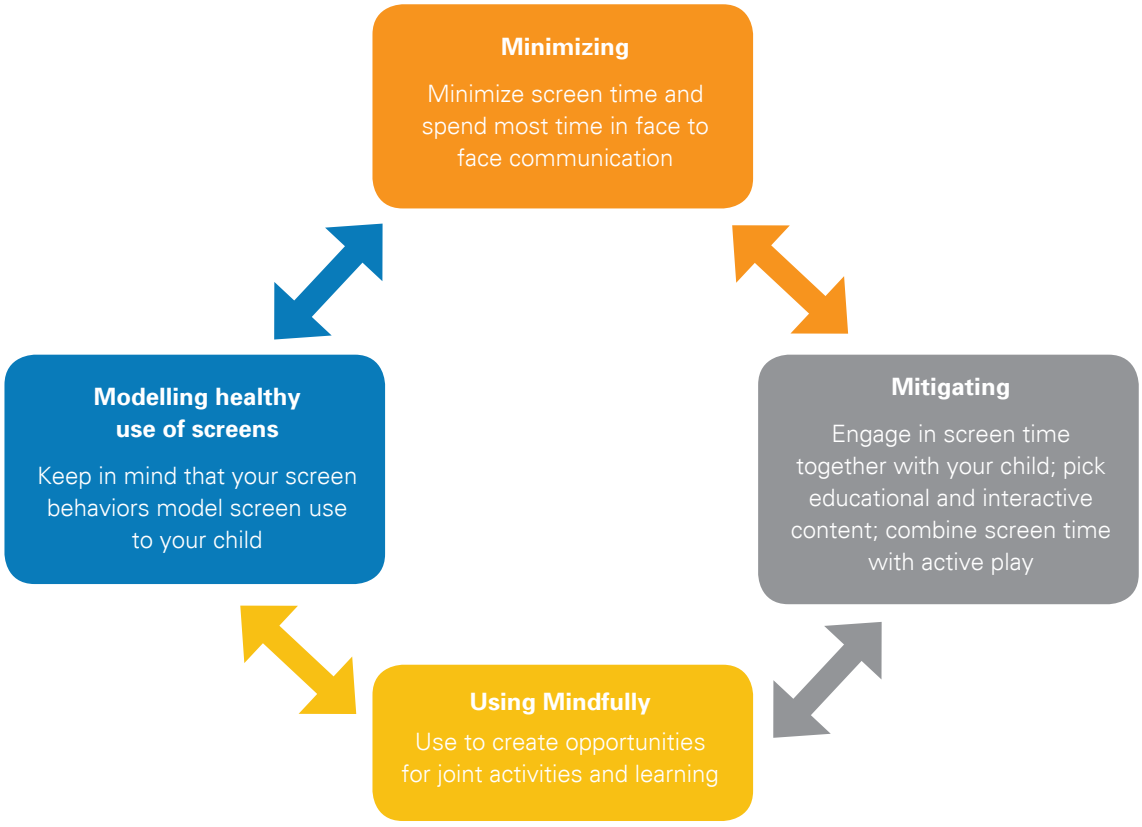
- **Maximizing the benefits of screen time**

Given the existing, still limited evidence, how can you advise families on the use of screen time in the context of peer and commercial pressures to be-up-to-date and go with the times when new digital devices, materials and Apps for young children are marketed extensively and aggressively.

When advising your caregivers on the use of digital devices, try to keep in mind the four 4 M[43]:

1. Minimize the time spent,
2. Mitigate the effect by interacting with the child,
3. Use the time spent Mindfully, and
4. Model a healthy use of screens in your daily life.

Figure 7. Healthy use of screen time (adapted from....)



[42] Troseth GL, Strouse GA, Verdine BN and Saylor MM (2018). Let's Chat: On-Screen Social Responsiveness Is Not Sufficient to Support Toddlers' Word Learning From Video. Front. Psychol. 9:2195. doi: 10.3389/fpsyg.2018.02195. https://news.vanderbilt.edu/2019/07/31/toddler-brains-resist-learning-from-screens-even-video-chat/

[43] Screen time and young children: Promoting health and development in a digital world
Posted: Nov 27 2017 - https://www.cps.ca/en/documents/position/screen-time-and-young-children

IMPORTANT

In some cases, screen time can be key to children's development. Young children with neurodevelopmental and language disorders may be taught to use tablets for communication purposes. However, learning to use augmentative communication devices is usually embedded in an intense teaching process with adults.

Also, most guidelines exclude situations where caregivers or family members want to be able to connect with infants and young children via skype, facetime or other similar communication mechanism where the emphasis is on maintaining visual and auditory communication.

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V SLEEP

1. THE ROLE OF ADEQUATE SLEEP FOR CHILD HEALTH, DEVELOPMENT AND WELLBEING

Studies have shown that if children do not get enough sleep, they are more likely to suffer from overweight and obesity and other difficulties. According to Viva study[44] children who do not get enough sleep are more likely to have behavioral and learning problems, including problems with attention, working memory, reasoning, and problem-solving. These can persist for years and affect a child's life forever.

Sleeping is the primary activity of the brain during early years of the child. The rhythms of sleeping and wake time begin to develop at about six weeks, and by three to six months most infants have a regular sleep-wake cycle. By the age of two, most children have spent more time asleep than awake and overall, a child will spend 40 percent of his or her childhood asleep. Sleep is especially important for children as it directly impacts mental and physical development.[45]

2. INFANT AND YOUNG CHILD SLEEP

Ensuring that babies and young children get sufficient sleep is one of the major concerns of parents and comes up frequently during consultations with doctors or on parenting helplines. The parents' own wellbeing also often depends a lot on the number of hours their baby sleeps. You can find more detail on this topic in ***Module 8 – Common Parenting Concerns***. The Information Cards from that module provide helpful tips to advise families on how to introduce sleep routines and provide the infant or young child with the opportunity to sleep and have naps. Additionally, as discussed in Module ?, babies must be placed on their backs for sleeping to reduce Sudden Infant Death Syndrome (SIDS).

Sleep is also affected by screen time. Research from New Zealand[46] has shown that children who spend time watching television, playing video games or using the computer right before bedtime are likely to need more time to fall asleep than those who watch less or none. They also suggest that engaging in such screen time, can cause arousal which makes sleep difficult and that the blue light from screens can affect circadian rhythms and adversely affect falling asleep. At least the hour before bedtime should be quiet time, ending with the caregiver telling a story, singing a song, or sharing a book with the young child. The same recommendations are coming from Harvard when it comes to switching off the screens and charging phones outside of the room where children sleep,[47]

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[44] McGreevy, S. (March 10, 2017). Study flags later risks for sleep-deprived children. https://news.harvard.edu/gazette/story/2017/03/study-flags-later-risks-for-sleep-deprived-kids/

[45] National Sleep Foundation. Children and Sleep. https://www.sleepfoundation.org/articles/children-and-sleep

[46] https://consumer.healthday.com/health-technology-information-18/misc-computer-health-news-150/screen-time-near-bedtime-means-less-sleep-for-kids-672364.html

[47] https://www.health.harvard.edu/blog/four-ways-to-help-your-child-get-enough-sleep-2017092612472

3. YOUNG CHILDREN'S NEEDS FOR SLEEP (WHO GUIDANCE)

The 2019 WHO Guidelines[48] recommend

AGE	HOURS OF SLEEP
0 - 3 months	14 -17
4 - 12 months	12 - 16
12 – 24 months	11 - 14
24 – 36 months	10-13

It is important to remember that this is recommendation, and an average range is provided. Every child is different, some need more sleep, some less, and as long as the child is content and energetic and the caregiver manages to get adequate time to sleep after the early months, we should not talk about sleep problems.

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[48] 2019 WHO document, "WHO guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age"

VI SUMMARY OF KEY POINTS AND POST-TEST

Over the past decades, we have seen tremendous changes affecting our environment and lifestyle with impact on body weights and activity levels at all ages. More and more people have moved to urban centers, where food is no longer produced through daily physical labor, but is available in nutrient-dense and processed form. Soda and fruit juices, loaded with sugars, may be more available and less contaminated than drinking water -- in some cases even more affordable, especially to poorer population groups. Options for mass and individual transport reduce the need for walking, and digital devices provide entertainment with little need to move.

These pervasive changes in lifestyle and surroundings are changing the disease profile from primarily infectious diseases to non-communicable diseases, with overweight and obesity having significant impact on all aspects of our current lives, i.e. physical health, achievement, and wellbeing, even into the next generation.

Evidence has shown that young children, that start off with healthy weights, sufficient physical activity, and adequate periods of sleep will be healthier, better able to learn and achieve, and have a more positive self-image. We also know that behaviors related to health and wellbeing (especially those related to a healthy diet and physical activity) are resistant to change. However, in your position of trust with your families and equipped with solid evidence and tools for behavior change is exactly one of your major functions, i.e. , to create health and be salutogenic. You are supported by an important motivational force -- that most families want to do what is best for their children.

In this part of your work, it is critical to help caregivers and families find enjoyment in nutritious foods and being active together. By moving and having fun together while engaging in vigorous activities and play, the bonds between caregivers and children will be strengthened. Also, when bringing new mothers together to go on walks, you can enhance peer support and wellbeing, while reducing mild postpartum depression or anxiety. These additional social incentives will help in sustaining these behaviors to the benefit of young children.

Posttest for whole module

Possible questions

21. Overweight and obesity: Mmark all responses that apply.
a. Is rarely a problem during infancy
b. Is a problem that infants born with low birth weight will not experience
c. Is often found in poor and marginalized populations
d. Is primarily driven by the person's genes
e. Is associated with an overall decrease in physical activity at all ages

Answers c. and e. are correct. Access to high quality and nutritious food is often low and not affordable for the poorer and more marginalized populations (c.) and a significant decrease in physical activity at all ages is contributing to weight gain (e.). The other responses are not correct. Overweight can already become a problem during infancy (a.); infants born with low birth weight are at increased risk for overweight (b.); and overweight is a result of the interaction of an individual's gene's with the environment and personal behavior (d.)

22. During the first 1-2 months of life, babies should be held and rocked soothingly, but not engaged in any physical activity with their caregivers. (T/F)
Answer: False. Infants can and should be able to move (e.g. move arms and legs, tummy time, be held while caregivers dance with them, etc.). Under no circumstance should babies be shaken, as this can result in hemorrhage of the brain.

23. Sedentary behavior becomes a problem during the preschool years and is best addressed by the preschool teacher (T/F)

Answer: False. Sedentary behavior can already be a problem during the early years. Tummy time, rolling and crawling on the floor, kicking, throwing, walking, hoping, running, dancing, and other forms of active play contribute to all aspects of child health and development as the infant and young child develops these capabilities.

24. Physical activity, i.e. taking babies on walks and interacting with other mothers/ caregivers has been used as an intervention to counteract maternal post-partum depression (T/F)

Answer: True. Physical activity increases the hormones that improve mood and can reduce depression and anxiety. A program in the UK "Ready, steady mums" was built around this concept and can easily be transferred to some other contexts.

25. Active play focuses primarily on the development of fine motor and cognitive skills (T/F)

Answer: False. Active play contributes to gross motor development, but also to all developmental domains, as well as to executive function, i.e. the child's ability to gain control over his/her behavior (e.g. take turns, inhibit a response…).

26. Childhood obesity is considered one of the major public health concerns of the 21st century. (T/F)

Answer: True. The World Obesity Federation expects that 250 million of children 5-19 years will be obese by 2030.

27. WHO and many pediatric associations recommend that infants should not have more than 30 minutes of screen time (T/F)

Answer: False. Infants and young children under two years should have NO screen time.

28. Children by nature have so much energy, and they know how to be active. They should learn to be calm and sit down. (T/F)

Answer: False. While infants and young children have energy, they are more often encouraged and praised for quiet and calm behavior (= good) than for boisterous energetic play (don't be so loud! Stop running around!....).

29. WHO and many pediatric associations recommend that infants have less than 30 minutes of screen time (T/F)

Answer: False. It is recommended that children under two have NO sedentary/passive screen time.

30. Infants can learn new things from digital devices (T/F).

Answer: False. Research has found that infants learn best through real life interaction and scaffolding by their caregiver (see Module 6: Love, Talk, Play Read for additional information on how infants learn.

31. Which of the following factors contribute to overweight and obesity in young children? Mmark all that apply

a. Unsafe urban environments that make parents afraid to take young kids to parks or for walks.
b. Processed sweet and fat foods and drinks that are advertised on TV and the media and are more affordable and accessible.
c. The fact that infants don't yet participate in organized sports.
d. The difficulties families might have to make changes in their daily routines.

e. The cost of organized physical activities for young children.

Answer: c. and e. are not correct. While infants can of course participate in swim classes, tummy time or play groups, organized sports and costly activities are not necessary. There are many activities families can engage in to be active with their infants and toddlers (see Information Cards in the Annex of this module).

32. Overweight and obesity rates have increased globally, but with increased health promotion, the rates have fallen in Europe and Central Asia. (T/F)

Answer: False. Europe and Central Asia is the region where rates have accelerated most quickly over the past few years.

33. Which of the following factors might contribute to overweight or obesity later on in life? Mark all that apply.

a. Maternal under-nutrition during pregnancy.
b. Limited access to healthy and nutritious foods.
c. Breastfeeding for more than a year.
d. Being born small-for-gestational age.
e. Societies that find chubby babies most appealing.

Answer: all answers correct, except for c. Breastfeeding for more than one year, combined with adequate complementary feeding does not lead to overweight and obesity. Maternal undernutrition can lead to low birth weight, a group of children at risk for overweight later on in life.

34. Infants and young children differ a lot in how much sleep they require, so it is impossible to make recommendations to parents. (T/F)

Answer: False. There are differences in how much infants sleep, therefore a range of time was provided in the WHO guidelines.

35. Young children can sleep even when the TV and other kind of screen are on. When they fall asleep nothing can disturb them. (T/F)

False.

36. What are some of the reasons why infants should not have screen time and screen time for toddlers should be limited? Mark all that apply.

a. Infants and toddlers get too frustrated when they play with phones and tablets, and they could also break them.
b. Infants and young children learn through interaction with engaged caregivers who scaffold their activities and can respond to their cues.
c. Screen time is mostly time spent sitting and inactive and can take away from the time young children should spend on moderate to vigorous activity.
d. Screen time is always 2-dimensional and does not attract young children.

Answer: b. and c. are correct.

37. Engaging fathers has some of the following benefits for increasing active play in children. Mark all that apply.

a. It can reduce paternal depression and increase the father's sense of wellbeing.
b. Fathers are stronger and have more energy to engage in rough and tumble play.
c. It can strengthen the father's bonding with his child.
d. Positive benefits have been reported for child development when fathers engage in active play.

Answer: a., c., and d. are correct

38. Infants should not be restrained for more than one hour at a time and need to spend at least 30 min per day engaged in physical activities (T/F)
Answer: True.

39. Children older than 1 year can be restrained in a high chair or in a stroller more than 3 hours at a time especially if they are enjoying the walk with their parents or caregivers. (T/F)
Answer: False

40. Tummy time is: Mark everything that applies.

a. Time an infant spends on the floor on the stomach, alone.
b. Time an infant spends on a parent's lap while they are establishing eye contact, talk with the child and cuddle him/her.
c. A physical activity that can be applied from birth and at the beginning should not last more than a minute or two.
d. Is necessary for children to learn to be on his/her own and can last as long as the child is not crying.
e. Time an infant spends lying on their front (in prone position) while awake with unrestricted movement of limbs interacting with a caregiver.

Answer: b., c., e. are correct. Infants should not be left alone in the prone position.

VII ANNEX

1. INFORMATION CARDS

INFORMATION CARD 1: INTERVENTIONS THAT CAN ADDRESS OVERWEIGHT AND OBESITY

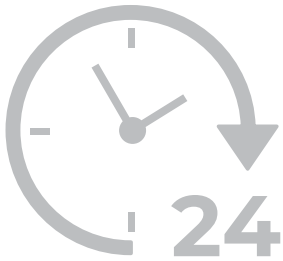
- Healthy weight gain during pregnancy
- Prevention of low birth weight (LBW)
- Exclusive breastfeeding during the first six months of life
- Responsive feeding
- Appropriate feeding of infants born with LBW
- Nutritious foods (low sugar)
- Adequate amounts of moderate to vigorous activity and reduction of sedentary behaviors
- Adequate sleep

From UNICEF (2019). *UNICEF programming guidance: Prevention of overweight and obesity in children and adolescents.*

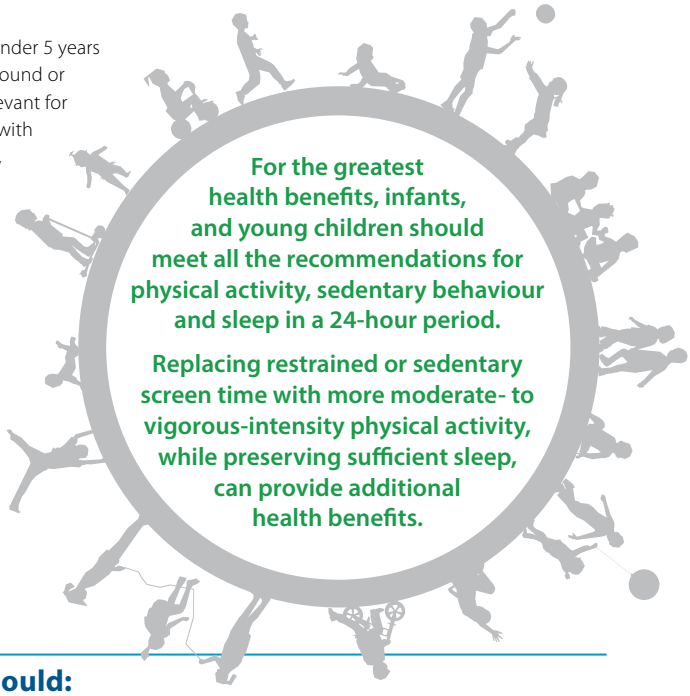
INFORMATION CARD 2: WHO GUIDELINES FOR PHYSICAL ACTIVITY, SLEEP AND SEDENTARY BEHAVIOR

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.



In a 24-hour day,



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.

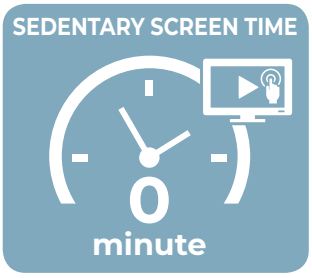
Replacing restrained or sedentary screen time with more moderate- to vigorous-intensity physical activity, while preserving sufficient sleep, can provide additional health benefits.

infants (less than 1 year) should:

Be physically active several times a day in a variety of ways, particularly through interactive floor-based play; more is better. For those not yet mobile, this includes **at least 30 minutes in prone position** (tummy time) spread throughout the day while awake.

Not be restrained for more than 1 hour at a time (e.g. prams/strollers, high chairs, or strapped on a caregiver's back). Screen time is not recommended. When sedentary, engaging in reading and storytelling with a caregiver is encouraged.

Have 14–17 hours (0–3 months of age) **or 12–16 hours** (4–11 months of age) **of good quality sleep**, including naps.

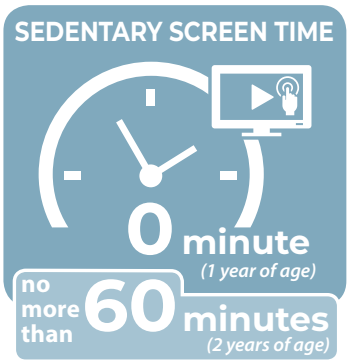


children 1–2 years of age should:

Spend at least 180 minutes in a variety of types of physical activities at any intensity, including 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/strollers, high chairs, or strapped on a caregiver's back) or sit for extended periods of time. **For 1-year-olds, sedentary screen time (such as watching TV or videos, playing computer games) is not recommended**. **For those aged 2 years, 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 11–14 hours of good quality sleep, including naps, with regular sleep and wake-up times.

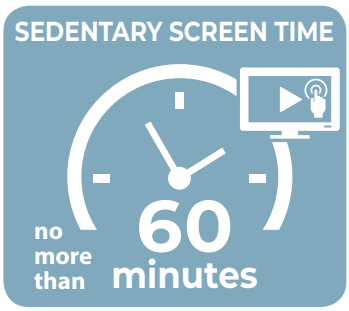


children 3–4 years of age should:

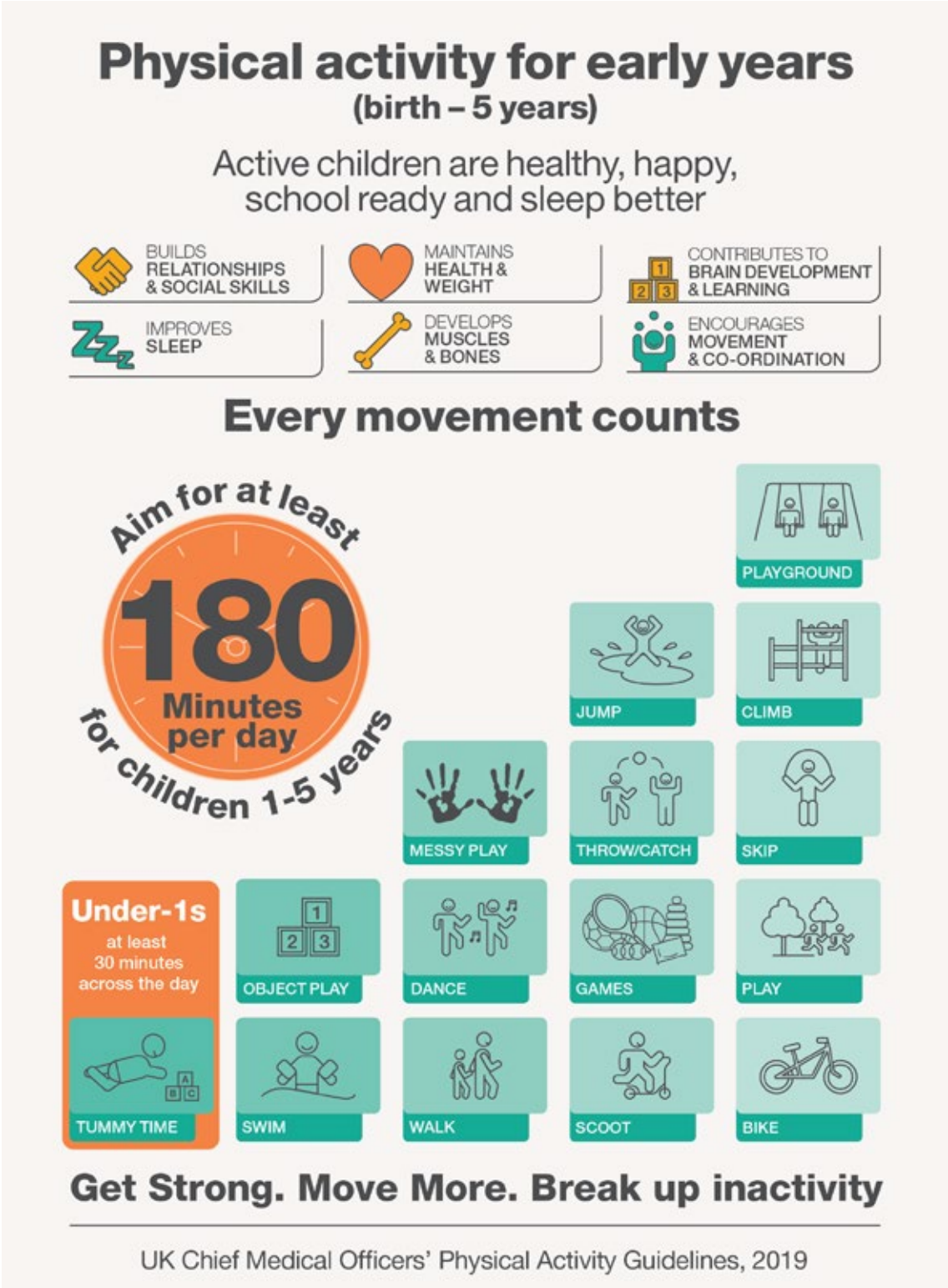
Spend at least 180 minutes in a variety of types of physical activities at any intensity, of which at least 60 minutes is moderate- to vigorous-intensity physical activity, spread throughout the day; more is better.

Not be restrained for more than 1 hour at a time (e.g. prams/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.

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



INFORMATION CARD 3 - PHYSICAL ACTIVTY GUIDELINES – UK



https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/829882/1-physical-activity-for-early-years-birth-to-5.pdf

INFORMATION CARD 4. IN- AND OUTDOOR ACTIVITIES (0-6 MONTHS)

Weather permitting, many activities at this age group can be conducted in- and out-of-doors. A clean blanket out-doors can support baby massage, tummy time, and other playful body coordination activities. These activities increase the baby's understanding of self vs. others, his/her body awareness, and strengthen neck, arm hand, and leg muscles. Keep in mind that ages are broad and overlapping, particularly during the first year when the infant moves from limited prone activity to his/her first steps.

ACTIVITY	DESCRIPTION	SUPPLIES NEEDED
Baby massage	Gentle, rhythmic stroking of the baby's body	Caregiver, baby oil or cream, clean blanket
Tummy time*	Can be started at birth, stomach to stomach, moving later on to a clean and safe blanket	Caregiver, later on, toys for baby to reach for
More than changing nappies	Use nappy changing time for supporting baby's movements to grasp, push, pull, kick and balance. Give baby your fingers to grasp, gently pull baby upwards, place baby in standing position to feel feet, let baby reach out for and hold objects, make bicycle movement with baby's legs, bring feet towards baby's chin, count the little toes.	Caregiver, blanket, diapering table
Free movement	If the temperature is permitting, give the baby opportunity to move and kick with as few clothes as possible, and unrestrained.	Caregiver
Let's move with baby	Move with baby in your arms, dancing, and singing; use nursery rhymes, making sounds, tickling and patting baby; move baby's arms, hands, and legs; clap baby's hands together. Always watch for baby's responses, slowing down or moving faster, depending on your baby's reactions	Caregiver
Make music/noise	Encourage baby to hold, shake or bang on an age appropriate toy that makes sound; sing and have baby make sound to the music	Rattle or safe item, or box that makes sound
Change baby's position	Lift baby above your head and down and change positions to help baby develop the sense of movement and balance	Caregiver

ACTIVITY	DESCRIPTION	SUPPLIES NEEDED
Following the mobile or a rattle	Hang a colorful mobile above baby's crib or move a rattle while shaking it to motivate your baby to follow these items with his/her eyes and head, and reach for these items with his/her arms	Mobile, rattle just out of reaching distance
Active bath time	Encourage splashing and kicking during bath time	Bathing container with a very low level of water, soft wash cloth, plastic toy…
Patterned games (nursery rhymes)	Games that have consistent patterns, e.g. peek-a-boo, Itsy bitsy spider, etc. where baby learns to anticipate what comes next	Caregiver

INFORMATION CARD 5. TUMMY TIME

Age. Can be started at birth (AAP, https://www.healthychildren.org/English/ages-stages/baby/sleep/Pages/The-Importance-of-Tummy-Time.aspx), with the newborn/infant lying on the chest or across the lap of the mother, father or other caregiver or on a clean blanket. Start with just 2-3 minutes twice per day. Tummy time can be used to encourage eye contact with the newborn with cooing, talking, and making faces.

Variations in the subsequent days and months. Place the infant gently on the tummy across the legs lengthwise or on your tummy and stroke the baby. Place the baby on blanket and join the baby on the floor face-to-face, singing a song, making funny noises, showing the baby interesting things to look at and reach for. Have the baby reach for and roll/push a ball or reach for other interesting objects.

Distracting the baby with interesting objects or activities (funny faces, singing, etc.) during tummy time exposes her/him to new things and makes tummy time fun and pass more quickly.

Benefits. Encourages eye contact, and gazing and cooing between caregiver and newborn/infant, supporting bonding. Strengthens neck and stomach muscles. Provides infants with a different view of the world. The tummy, arms and legs are in contact with the surface the baby is lying on, providing feedback on how and where his/her body is located in space.

Needed. Clean blanket or surface, some toys, the caregiver

Caution. The baby should not be left alone and unsupervised, and tummy time should be just a minute or two when starting.

raisingchildren.net.au
the australian parenting website

Tummy time

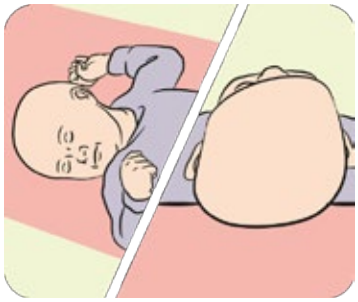
PARENTING IN PICTURES

Suitable for 0-6 months

Why tummy time is important

Tummy time happens when your baby lies on his tummy with weight on his forearms. Tummy time builds head, neck and upper body strength for when baby is older. Your baby should do it a lot each day.

Start tummy time soon after birth, as part of baby's daily play. In the first few weeks, try tummy time for 1-2 minutes, 2-3 times a day. Your baby can build up to 10-15 minutes, several times a day.

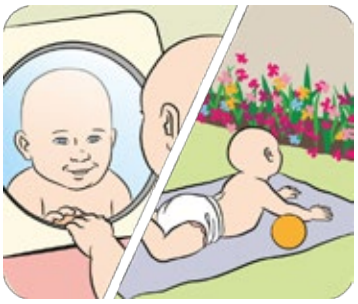


Back to sleep, tummy to play. While asleep, baby spends a lot of time on his back with his head in one position. This can cause flat spots on the back of his head. Tummy time helps prevent this.

How to do tummy time

Place safe objects and toys close to your baby. Move them from side to side in front of her face. This encourages her to move, lift and turn her head.

Get down on the floor next to your baby. Turn pages in picture books or magazines. This develops baby's eye strength and keeps her interested.



Put a non-breakable mirror next to your baby so she can see her reflection. Try tummy time in different places, like outdoors on a blanket.

Keeping tummy time interesting and fun

Let your baby know you're there by talking and singing, stroking his back or tickling his hands.

If your **baby doesn't like tummy time on the floor**, try tummy time on a rolled-up towel, your lap or large ball.

Supervise baby during tummy time. As he gets stronger and starts moving more, clear away dangerous things.

INFORMATION CARD 6. PHYSICAL ACTIVITIES (6-12 MONTHS)

Note

- The more parents and caregivers participate in active play, when they laugh, tickle, and engage, the more the baby or toddler will enjoy being active.
- Tell parents to avoid using equipment that is supposed to teach the infant to walk early, as this can result in accidents.
- Infants and toddlers should not be restrained for more than an hour.

ACTIVITY	DESCRIPTION	SUPPLIES NEEDED
INDOOR ACTIVITIES		
Out of reach	Move cherished items just a bit out of reach so that your child has to roll, crawl, or walk to get to them	Favorite toy
Over, under, in, and out games/obstacle course	Encourage baby to roll, crawl, or toddle over, under, and through various objects in your home and on different surfaces, add easy barriers pillows/bunched up blankets) to move over	Blanket, small pillows, open cardboard box to crawl through
Peck-a-boo	Hide face under hands or cloth, and pull it away quickly, saying or shouting "peck-a-boo".	Cloth
Active bath time	Encourage splashing and kicking during bath time, have baby help dunk and wash toys	Simple bath toys, little plastic containers
Sing out every day routines and make them fun	Energize daily routines with made-up songs and exaggerated movements	Caregiver
Drop and retrieve things from boxes	Let baby drop and retrieve items from different boxes; as baby becomes more mobile, move boxes a small distance and let baby crawl behind	Cardboard or other boxes
Make noise, music	Use baby rattles, small bottles or plastic containers with stones or rice (glued securely), sauce pans and spoons to make noise or rhythm to music	Rattles, containers, sauce pans, boxes, big wooden or plastic spoons
OUTDOOR ACTIVITIES		
Talk about moving	Point out how people and animals run, jump, hop, swim, walk, bounce, fly	People and animals in daily life
Swing	Take baby on a swing, rocking chair, or put baby briefly in a baby swing with safety belt	Swing, rocking chair
Blanket play	Let baby play with toys outside, climb on you, crawl over you	Blanket, toys and caregiver

INFORMATION CARD 7. ACTIVITIES 1-3 YEARS (AND OLDER)

Tip. Encourage caregivers to let the child take the lead in choosing a game (for example have the caregiver offer two choices) and as often as possible during the game.

Throw balls/beanbags

Skills.

What is needed. Soft balls, bean bags

Instructions:

- Beanbag/ball toss. Drop/throw beanbags/balls into a big box or basket

Catch the ball

Skills. Eye-hand coordination, tracking of moving objects, taking turns

What is needed. Child and caregiver, soft ball (smaller or larger balls can be used as the toddler/young child gains skills and confidence)

Instructions:

- *Roll the ball.* While sitting down with open legs and facing the child, roll the ball between the child's legs and have her/him roll it back to you. At the beginning, one adult can sit behind the child with the toddler between the legs to coach receiving and sending the ball.
- *Catch the ball.* Have the toddler start with making a basket with her/his hands and arms in front of the tummy. Throw the ball into this "basket" from a short distance. Increase the distance as the child's skills develop.

Other games with balls

Skills. Eye-hand coordination

What is needed. Ball, stick, pins/plastic water bottles fill with a bit of sand, sturdy piece of card board

Instructions:

- *Roll the ball up and down a cardboard ramp.* Make a ramp with a pillow and a piece of sturdy cardboard and show the child how to roll balls up the ramp and how to let them roll down, running to retrieve the balls at either end.
- *Hit/strike the ball.* With a stick or racket, try to hit the ball to move forward.
- *Bowling.* Roll the ball to strike down pins/plastic bottles.

Jumping, Climbing, Balancing

Tip. Make sure that there are no hard and sharp corners and edges. Be ready to provide encouragement, pick up the child when s/he expresses fear, or may get hurt.

Skills. Physical coordination, balance, agility

What is needed. Items to climb on (couch, large cushions, steps, short staircase, small hills, low walls, rocks, benches, playground equipment, tape…)

Instructions:

- *Challenge the toddler/young child to climb,* roll down, where safe (pillow, small hill…), (providing a helping hand as needed) or jump down (into your arms).
- *Balance on an imaginary rope or tape.* Use masking tape indoors to make a "rope" to balance on.
- Holding toddler's hand, help her/him to climb up several stairs.

Treasure Hunt Games

Skills. Memory, language

What is needed. Items to be hunted for

Instructions: There are many variations of this game:

- Collect "eggs" to make breakfast. Distribute "cut-out egg shapes" around a room and have child find and collect the eggs for making pretend breakfast.
- Hide single socks around room and have the child find and match them, and help put them away.
- Photo safari. Look for a list of objects/items/animals… indoors or outdoors. Go for a walk to take photos together and talk about the photos later in the day with the child. It will make the walk more interesting and pass more quickly.

Copying animal movements

Skills. Balancing, large muscle coordination, associating animals with their sounds

What is needed. Nothing

Instructions:

- Point out animals that are moving to your child in books, out-of-doors.
- Act out being an animal: run like a dog, trot or canter like a horse, flap your wings like a bird, slide like a snake, stretch like a cat, walk like a monkey, hop like a rabbit or frog and make the animal sounds.

Water Fun

(Note that a young child can drown in very shallow water and needs to be fully supervised at all times)

Skills. Kicking, splashing

What is needed. Bathtub, puddles, fountain, pool

Instructions:

- Have toddler kick and splash during bath time, at a fountain, in a pool or lake, well secured and supervised by the caregiver.

Blowing and catching bubbles

Skills. Tracking, catching, blowing gently

What is needed. Bubble wand and liquid

Instructions:

- Take turns in blowing and catching the bubbles.

Indoor and outdoor races

Skills. Coordination, speed

What is needed. Participants, items for relay races, hallway or other area with limited distance

Instructions:

- *Simple race.* Time the child from a start point to an endpoint by loudly counting and encouraging the child to beat her/his time.
- Ask child to do the same by hopping or crawling and comparing the time.

Catch and chase

Skills. Coordination, speed, taking turns

What is needed. At least, child and caregiver

Instructions:

- Tell your toddler "I'm gonna get you, and then I am going to tickle you/throw you up into the air/ swing you around… "Now you try to catch me…."

Obstacle courses

Skills. Coordination, following instruct, agility, coordination

What is needed. Pillows, furniture, big cardboard boxes, table

Instructions:

- *Over, under, in, and out games.* Have child traverse a simple obstacle course with cardboard boxes tables, pillows and comment on the prepositions.
- Make the obstacle course together and decide how to race.

Making daily chores energetic and fun

Skills. Fine and gross motor movements, coordination, following instructions

What is needed. (everyday items, small bag/basket, rag, dishes, broom, shovel,…)

Instructions:

- Helping actively in everyday routines/ "fetching and carrying:" have the child carry a small shopping bag home; help take shopped items into the house and put them away; put clean pieces of clothing into drawer, help wipe table, place dishes on the table, sweep the floor.

INFORMATION CARD 8 - CHILD SLEEP

Getting tired

1. Just 10 to 20 minutes of gentle play will tire out very little babies; they will probably be overtired if they've been awake for more than 11/2 hours.
2. At three to six months, your baby is likely to be overtired after 11/2 to 21/2 hours awake.
3. At six to 12 months, babies get tired after 2 to 3 hours of being awake.
4. At 12 – 18 months, babies who miss their morning or afternoon sleep will be overtired.

Baby cues and tired signs

Be aware of your baby's 'cues' and body language. When your baby starts to yawn, grizzle or cry, this is usually a good indication they are ready for a sleep or a change of activity. Other cues to watch for include:

Babies	Jerking arms or legs; closing fists; fluttering eyelids; frowning; arching back; staring; stiffness; sucking on fingers; difficulty focusing (even appearing cross-eyed); rubbing their eyes (for babies over four months); grasping at their own body or clothes.
Older children	Clumsiness; demands for constant attention; clinginess; boredom with toys; fussiness with food.

Looking after yourself

When a new baby arrives, your health and wellbeing can take a back seat. However, it is important to make sure you look after not just your baby's health, but your own. A healthy parent is more able to get the most out of parenting.

Tips for parents:

- Catch up on rest whenever you get a chance. Try to get some sleep when your baby sleeps. Even a lie-down can help to recharge your batteries.
- Go to bed early in the evening (when your baby first goes to sleep at night is when they have their longest sleep).
- Limit caffeine, drink plenty of fluids, try to eat balanced meals.
- Keep active – even small amounts of gentle exercise will have a positive effect on your health and state of mind.
- Remember it's okay to ask for help.

From: The Royal Children's Hospital Melbourne, Sleep for babies and young children - Knowing when your child is tired https://www.rch.org.au/uploadedFiles/Main/Content/ccch/CPR_Vol_19_No_2_Parent_Fact_Sheet_final_web.pdf)

Sleep Tips for Newborns

- Observe baby's sleep patterns and identify signs of sleepiness.
- Put baby in the crib when drowsy, not asleep.
- Place baby to sleep on his/her back with face and head clear of blankets and other soft items.
- Encourage nighttime sleep.

Sleep Tips for Infants (4 -11 months)

- Develop regular daytime and bedtime schedules.
- Create a consistent and enjoyable bedtime routine.
- Establish a regular "sleep friendly" environment.
- Encourage baby to fall asleep independently.

Sleep Tips for Toddlers

- Maintain a daily sleep schedule and consistent bedtime routine.
- Make the bedroom environment the same every night and throughout the night.
- Set limits that are consistent, communicated and enforced. Encourage use of a security object such as a blanket or stuffed animal.

The sleep tips are From the National Sleep Foundation.
https://www.sleepfoundation.org/articles/children-and-sleep

INFORMATION CARD 9. TEN QUESTIONS TO ASK FAMILIES WITH YOUNG CHILDREN ABOUT SCREEN TIME

- What kind of screens are in your home (e.g., TV, tablet, computer, smartphone)? Which does your child use?
- Is watching TV or programs/movies on other devices a shared family activity and a common way to relax? How often is a screen on in the background although no one is really watching?
- Does anyone in the family use screens during mealtimes?
- What do you watch with your child? What does your child watch alone?
- Do you encourage or discourage conversation with your child while you are using screens?
- Do you ever watch adult/commercial programming with your child?
- Does your child use screens while you do chores around the home? Often? Sometimes?
- Are there any screen-based activities in your child's day care program? Do you know how much these are used?
- Does your child use any kind of screen before bedtime? How long before bedtime? Is there a TV or computer in your child's bedroom? Does your child take mobile devices into the bedroom?
- Does your family have rules or guidelines for screen use that everyone understands and shares?

From: https://www.cps.ca/en/documents/position/screen-time-and-young-children

MORE Information for parents is available at www.caringforkids.cps.ca

INFORMATION CARD 10. USING DIGITAL DEVICES TO INCREASE PHYSICAL ACTIVITY

What you do and say guides your child's behaviour and attitudes in most things, including screen use. Your child is strongly influenced by the way you use screens and will copy what you do.

For example, if your child sees you sitting using a screen for long periods, she'll think screens are mostly for sitting still. But if **your child sees you using screens to get moving**, she's more likely to use screens for physical activity too.

Here are some ways you can **be a role model for combining screen time with physical activity**:

1. Show your child how you track your physical activity. You can talk about how good it feels to see how far you walked, cycled, swam or ran last week.
2. Show your child how you look up instructional videos before you do things that are physically active. For example, watch a video on how to pot a plant and then go outside, find one and plant it.
3. Share your favorite physical activity apps with your child – for example, apps that guide you through dance or yoga. You could also try different yoga poses or dance routines together.
4. Use your phone as a timer to time a distance the child is running, how long it takes to climb up and slide down a slide, to find 5 different wild flowers or small stones.

Later on screen time can be used to initiate and inspire physical activities[49]:

- Chats with distant family members.
- Choose videos or apps that encourage your child to dance and sing along, or games that involve moving, like dancing games or virtual sports simulators.
- Take photos of interesting things you see on a walk. You can look at them later and talk about what you saw, or you could draw a map and add the photos to it.
- Video your child learning a new skill like hopping, riding a bike… You can replay the footage so your child can see himself learning.
- Watch videos set in places you'd like to visit together. For example, you could watch a video of a park, then go to the local beach.
- Plan a walk with your child using a digital map.
- Bring your child's screen time interests into off-screen play. For example, your child could dress up as a favorite TV character or use dolls and figurines to act out scenes from screen.
- Make use of natural breaks like advertisements or the end of game levels. For example, you could see how many star jumps you and your child can fit in before the ads finish.

[49] https://raisingchildren.net.au/pre-teens/healthy-lifestyle/physical-activity/screen-time-physical-activity

2. REFERENCES

(Footnotes are used in the draft for ease of review. They will become standard references in the final document)

3. WEBSITES WITH ACTIVITIES FOR YOUNG CHILDREN AND THEIR FAMILIES

1. Raising Children Australia. The Australian Parenting Website. Physical activity for young children. https://raisingchildren.net.au/babies/play-learning/active-play/physical-activity-for-young-children
2. Active for Life. Raising Physically Literate Kids.
3. Activities for kids of all ages. https://activeforlife.com/activities/
4. Active Babies, Smart Kids. Commercial website. Videos on different activities with babies. http://activebabiessmartkids.com.au
5. Very Well Family. Website by publishing company. Indoor activities for toddlers. https://www.verywellfamily.com/toddler-activities-4013770
6. www.activehealthykids.org