

College of Paediatrics & Child Health of Academy of Medicine Singapore

**SINGAPOREAN INTEGRATED 24-HOUR ACTIVITY GUIDELINES FOR EARLY CHILDHOOD**

**CONSENSUS STATEMENTS FOR INFANTS (0 – < 1 YEAR)**

***Physical Activity:*** Be physically active several times a day, where more is better, in a variety of forms and within a safe and supervised environment. Activities should include non-screen-based interactive floor-based play and tummy time. For those not yet mobile, tummy time should start soon after birth, building up towards at least 30 minutes spread throughout the day. Planning a daily routine of physical activities may be helpful.

- Regular physical activity in infants can improve their health and development.
- Include 30 minutes of tummy time for infants who are non-mobile.
- A safe and supervised environment should be provided in the presence of a responsible caregiver.

***Sedentary Behaviour:*** Avoid restraining and leaving infants unattended for more than 1 hour at a time. Any form of screen time, including background screen time, is not recommended. When the infant is seated, reclined or lying down, caregivers are encouraged to engage the infant in singing, reading, storytelling and imaginative play. Having a daily routine for activities, sleep and meals may be useful in reducing the amount of sedentary behaviour.

- When sedentary, it is encouraged to engage infants in interactive activities such as singing and reading.
- Screen time in infants may adversely affect their health, including psychosocial health and cognitive development.
- Any form of screen time is not recommended.

***Sleep:*** Have a total amount of 14 - 17 hours (for 0 - 3 months of age) and 12 - 15 hours (for 4 - 11 months of age) of daily sleep, including naps, to promote optimal health. It is recommended for infants to sleep on their back in their own cot, in the same room as their caregivers to maintain sleep safety. Develop a regular sleep time routine to help infants fall asleep easier

- Good quality sleep improves family well-being and child sleep is an important predictor of maternal health.
- Setting bedtime routines and providing a conducive sleep location can improve sleep duration.
- Good sleep safety practices include supine sleeping in their own cot and in the same room of the caregivers.

***Diet and Eating Habit:*** Breastfeeding is recommended for infants when possible. From 4 to 6 months of age, introduce a variety of development- and culture-appropriate solid foods of various textures and flavours, that is prepared with no added salt and sugar. Provide a daily routine of having meals spaced 2-3 hours apart in the daytime to avoid overfeeding.

- It is recommended that fully and partially breast-fed infants be supplemented with 400IU of vitamin D soon after birth.
- Complementary foods should be started for infants when they are between 4 to 6 months of age, depending on developmental readiness.
- There is no evidence that delaying the introduction of allergenic foods prevents food allergies.
- It is recommended that guidance on responsive feeding practices is provided to caregivers.

## CONSENSUS STATEMENTS FOR TODDLERS (1 - < 3 YEARS)

***Physical Activity:*** Accumulate at least 180 minutes in a variety of physical activities, where more is better, at any intensity spread throughout the day within a safe environment. Daily outdoor play for toddlers is highly encouraged. Caregivers should actively participate in all forms of physical play with toddlers.

- Participate in physical activities comprising of both light activities and moderate to vigorous physical activities.
- Caregivers should encourage and/or participate actively with the child during play.
- Both structured indoor and outdoor activities are equally important.

***Sedentary Behaviour:*** Avoid restraining toddlers on a seat for more than 1 hour at a time. Screen time, regardless of the type of device, is not recommended for toddlers younger than 18 months of age, and should be limited to less than 1 hour per day for toddlers 18 months and above. When sitting or lying down, it would be most beneficial to engage the toddler in singing, reading, storytelling or imaginative play.

- When sedentary, it is encouraged to engage toddlers in interactive and non-screen-based activities as these promote cognitive and social development.
- Prolonged periods being seated or spent on any screen device should be avoided as it is harmful for a child's physical, psycho-emotional and social health.

***Sleep:*** Have a total amount of 11-14 hours of daily sleep with regular sleep and wake-up times. Develop a bedtime routine and keep to a consistent bedtime. Provide a conducive sleep environment and avoid screen time before bed.

- Regular bedtime and bedtime routine help toddlers sleep longer and better, and may be important for obesity prevention.
- Develop a bedtime routine such as reading bedtime stories or listening to lullaby.
- Provide a conducive sleep environment that is dark, quiet and of comfortable temperature.
- Avoid screen time 30 minutes before bed.

***Diet and Eating Habit:* Continue to increase the variety of foods offered to your child and wean off milk as the main source of nutrition. Introduce healthy family meals and offer whole milk and water, while establishing a structured routine for meal and snack times. Using food to soothe your child or as a reward is discouraged.**

- Caregivers decide what, when and how food is consumed at home.
- With increasing focus on a variety of minimally-processed foods across all major food groups, toddler should be weaned off milk as their main source of nutrition.
- Sugar-sweetened beverages and caffeinated beverages should not be given before two years of age and avoided as much as possible thereafter.
- Caregivers are encouraged to recognize and respond to hunger and fullness cues of the toddler, and should not pressure the toddler to eat new foods nor use food as reward.

### CONSENSUS STATEMENTS FOR PRE-SCHOOLERS (3 - < 7 YEARS)

***Physical Activity:* Accumulate at least 180 minutes of physical activity at any intensity spread throughout the day and within a safe environment. At least 60 minutes should be of moderate– to vigorous-intensity, where more is better, and the physical activities can be accumulative and take different forms. Older preschoolers (5 – 6 years of age) should be exposed to a variety of age-appropriate vigorous-intensity play and engage in muscle- and bone-strengthening activities several times a week. Daily outdoor active play among preschoolers is highly encouraged. Caregivers should participate actively with preschoolers during all forms of active play.**

- Regular physical activity, especially that which is moderate- to vigorous-intensity, is associated with multiple health benefits in pre-schoolers.
- Include at least 60 minutes of moderate-to-vigorous-intensity, preferably engaged outdoors.
- A strong foundation in movement competence in childhood is associated with lifelong participation in physical activity.

***Sedentary Behaviour:* Limit the total daily amount of sedentary behaviour, such as sitting or lying down, and interrupt extended periods of time spent being sedentary. Recreational screen time, regardless of the type of screen device, should be limited to less than 1 hour.**

- Sedentary behaviour and in particular recreational screen time among children aged 3 - 6 years bore diverse detrimental effects on health and development.
- When sedentary behaviour cannot be avoided, regular movement breaks can minimize adverse health effects.
- Recreational screen time should be limited and age-appropriate content should be preferred.

***Sleep:* Have a total of 10 - 13 hours (for 3 - 5 years of age) or 9 - 11 hours (for 6 years of age) daily sleep. Older preschoolers may not need to nap if sufficient sleep has been obtained at night. Develop a bedtime routine and keep to a consistent bed and wake-up time. Provide a conducive sleep environment and avoid screen time before bed.**

- Achieving the recommended hours of sleep is associated with multiple health benefits and may be important in prevention of obesity.
- Develop a bedtime routine that involves a wind-down period and avoid screen time 1 hour before sleep.
- Maintain a consistent bedtime across weekdays and weekends.
- Provide a conducive sleep environment that is dark, quiet and of comfortable temperature.

***Diet and Eating Habit:* Encourage healthy eating habits as a family, with caregivers as role models. Limit the amount and frequency of sugar-sweetened beverage consumption. Provide a structured routine for meal and snack times in appropriate portions that support growth and development. Teach your preschooler to recognise hunger and satiety cues.**

- A regular household eating routine provides opportunities for coordinated family meals and regulation of the child's appetite.
- Limiting consumption of added sugars, food products with natural sugars (e.g. honey) and sugar-sweetened beverages can curb the risk of overweight and dental caries in children.
- Consuming a nutritious breakfast as part of daily routine is strongly encouraged as it has been associated with better diet quality and healthy body weight.
- Caregivers can help children regulate their intake by serving appropriate portions, disallowing screen time during family meals and exerting some caregiver control to moderate their intake.

## CONSENSUS STATEMENTS FOR ALL GROUPS (0 - < 7 YEARS)

***Integration:* Aim to achieve most or all recommendations on physical activity, sedentary behaviour, sleep and diet for the best results.**

- These recommendations may seem daunting. However once one can make this a way of life over each 24-hour day, it will become easier, more natural, and you will reap bountiful benefits, both physically and psycho-emotionally.
- Start with one or any combination of the recommended behaviours as you can achieve similar health benefits through the same number of recommendations in various combinations.
- Do this together as a family or with friends and encourage each other to achieve all the recommendations for the best health benefits.