

Canadian 24-Hour Movement Guidelines for Children and Youth: *An Integration of Physical Activity, Sedentary Behaviour, and Sleep*

Glossary of Terms



The Guideline Glossary of Terms has been prepared by members of the 24-Hour Movement Guidelines Leadership Group, a working group consisting of representatives from each of the guidelines supporting partners.

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Guidelines: Glossary of Terms

Terminology	Definition	Examples	References
24-Hour Movement Guidelines	The <i>Canadian 24-Hour Movement Guidelines</i> describe the recommended amount of time spent in all intensities of physical activity (light, moderate, vigorous), sedentary behaviour and sleep to optimize health benefits.	<i>Canadian 24-Hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep</i> (www.csep.ca/guidelines/)	<p>ParticipACTION. 2015. The Biggest Risk is Keeping Kids Indoors. The 2015 ParticipACTION Report Card on Physical Activity for Children and Youth. ParticipACTION, Toronto, Canada.</p> <p>Tremblay, M.S., et al. 2016. Canadian 24-hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep. <i>Appl. Physiol. Nutr. Metab.</i> 41(Suppl. 3).</p>
Aerobic Physical Activities	Dynamic activities that involve large muscle groups and result in substantial increases in heart rate and energy expenditure; also called endurance activities. Regular participation results in improvements in cardiorespiratory and musculoskeletal fitness, leading to an increase in endurance performance, and better health.	<ul style="list-style-type: none"> • Brisk walking • Running • Swimming • Bicycling • Rowing • Team sport (e.g., soccer, football, hockey or basketball) • Dancing 	Howley, E.T. 2001. Type of activity: resistance, aerobic and leisure versus occupational physical activity. <i>Med. Sci. Sports Exerc.</i> 33(Suppl.): S364-S369.
Ages	Infant: <1 year Toddler: 1-2 years Preschooler: 3-4 years Child: 5-11 years Youth: 12-17 years		

Adult: 18-64 years
Older adult: ≥65 years

Apparently Healthy

In addition to the following-age specific criteria, refers to the absence of disease (based on clinical signs, symptoms and function), normally assessed by routine laboratory methods and physical evaluation. Children and adults that have overweight/obesity but no other diagnosed condition are considered apparently healthy.

Early Years

Those that are developing according to prescribed age specific milestones.

Older Adults

Community-dwelling older adults, not in a nursing home or long-term care environment, and not classified as frail,

To determine whether an individual may have a health condition, conduct pre-participation screening using evidence-informed tools i.e., PAR-Q, PAR-Q+, that will support recommendations for individual client-tailored physical activity and exercise programs.

Balance Enhancement / Balance Training

Static and dynamic exercises that are designed to improve the ability to withstand challenges from postural sway or destabilizing stimuli caused by self-motion, the environment or other objects.

- Walking on uneven ground (e.g., unpaved areas or forest trails)
- Tai Chi
- Yoga
- Slack-line
- Stand-up paddle-boarding

Being Restrained

The time infants, toddlers and preschoolers are put in strollers, car seats or other

- Car seats
- Strollers

	situations when unable to move freely.	<ul style="list-style-type: none"> • High chair 	
Bone-Strengthening Activity	<p>Physical activity that increases the strength of specific sites in bones that comprise the skeletal system.</p> <p>Bone-strengthening activities produce an impact or tension force on the bones that promote bone growth and strength.</p> <p>Weight-bearing activities and high impact exercises are most effective for the improvement of bone mineral content. A combination of these types of exercises is optimal for most to preserve or improve bone mineral density.</p>	<p>In addition to the following age-specific examples, includes:</p> <ul style="list-style-type: none"> • Running • Jumping rope • Lifting weights • Sports that involve repeated foot impact (e.g., gymnastics, basketball, volleyball or tennis) <p>Children and Youth</p> <ul style="list-style-type: none"> • Games (e.g., hopscotch) • Hopping, skipping or jumping <p>Adults and Older Adults</p> <ul style="list-style-type: none"> • Skipping, jumping, lifting, carrying or stair-climbing • Heavy gardening • Activities in which the muscle forces act to stress the bone (e.g., rowing will “stress” or “load” the spine) 	<p>Behringer, M. et al. 2014. Effects of weight bearing activities on bone mineral content and density in children and adolescents: a meta-analysis. <i>J Bone Miner Res</i>, 29(2): 467-478.</p> <p>Golden, N.H., et al. 2014. Optimizing bone health in children and adolescents. <i>Pediatrics</i>, 134(4): e1229-e1243.</p> <p>Xu, J., et al. 2016. Effects of exercise on bone status in female subjects, from young girls to postmenopausal women: an overview of systematic reviews and meta-analyses. <i>Sports Med.</i> (epub ahead of print).</p>
Bout	<p>A period of continuous physical activity.</p> <p>A period of continuous movement behaviour.</p>	<ul style="list-style-type: none"> • 10 minutes of continuous physical activity as recommended in the Canadian Physical Activity Guidelines for Adults • 2 hours of continuous sedentary behaviour • 7 hours of continuous sleep • 45 minutes of continuous 	

		gardening	
Duration	The length of time a movement behaviour is performed.	<ul style="list-style-type: none"> • 30 minutes of exercise • 2 hours of TV watching • 1 hour nap • 20 minutes of gardening 	
Energetic Play	Similar to moderate- to vigorous-intensity physical activity (MVPA). It is more appropriately contextualized for the early years and refers to activities for young children that get them working hard, breathing heavily and feeling warm.	<ul style="list-style-type: none"> • Ball games • Activities in the park (e.g., riding a tricycle or bike) • Water activities • Tag 	
Exercise	Physical activity that is planned, structured, repetitive and purposive in the sense that improvement or maintenance of one or more components of physical fitness is an objective.	See structured physical activity examples under tab 'S'.	Caspersen, C.J., et al. 1985. Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. Public Health Rep, 100(2): 126.
Extended Periods	A prolonged period of time spent continuously in one behaviour.	In the <i>Canadian Sedentary Behaviour Guidelines for the Early Years</i> and in the new <i>Canadian 24-Hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep</i> it is recommended that children and youth limit extended time spent being sedentary. An <i>extended period</i> of sedentary time in this context corresponds to a	Tremblay M.S., et al. 2016. Canadian 24-hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep. Appl. Physiol. Nutr. Metab. 41(Suppl. 3).

		prolonged period spent sitting or reclining, without taking a break (an interruption in sedentary time) during waking hours.	
Frequency	The number of times a movement behaviour is performed per unit time. Frequency is generally expressed in sessions, episodes or bouts per day or week.	Exercise 3 times per week Computer games daily Walking the dog 5 times per week Flight of stairs 4 times daily	
Health Indicators:			
<i>Academic Achievement</i>	The extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college and university.	Grade point average Scores on standardized tests Grades in specific courses and self-reported questionnaires Measures of I.Q., concentration, memory or classroom behaviours	<p>Ardern, C.I., et al. 2004. Development of health-related waist circumference thresholds within BMI categories. <i>Obes. Res.</i> 12(7): 1094-1103.</p> <p>Francisco B.O., et al. 2016. Body Mass Index, the most widely used but also widely criticized Index: Would a Criterion standard measure of total body fat be a better predictor of cardiovascular disease mortality? <i>Mayo Clinic Proceedings</i>; 91(4): 443-455.</p> <p>Steinmayr, R., et al. 2014. Academic Achievement. <i>Oxford Bibliographies in Education</i>. doi: 10.1093/obo/9780199756810-0108.</p> <p>Strong, W.B., et al. 2005. Evidence based physical activity for school-age youth. <i>J Pediatr.</i> 146(6): 732-737.</p>

			Tremblay, M.S., et al. 2011. Systematic review of sedentary behaviour and health indicators in school-aged children and youth. <i>Int. J. Behav. Nutr. Phy.</i> 8(1): 98.
Body Composition	The proportion of fat and fat-free mass in the body. The measurement of body composition plays an important role in qualifying health and nutritional status, the impact of disease and change due to nutritional, therapeutic or behavioral intervention.	<ul style="list-style-type: none"> • Body Mass Index (BMI) • Waist circumference • Percentage body fat • While BMI and waist circumference do not measure body composition per se, in most circumstances they are good indicators of health risk associated with excess adiposity. 	Toomey, C.M., et al. 2015. A review of body composition measurement in the assessment of health. <i>Topics in Clinical Nutrition</i> , 30(1): 16-32.
Cardio-respiratory Fitness	The ability of the circulatory and respiratory systems to supply oxygen to working muscles during sustained physical activity. Cardio-respiratory fitness is an independent predictor of cardiovascular disease and all-cause mortality.	<ul style="list-style-type: none"> • Maximal oxygen consumption • Aerobic power • 20 metre shuttle run performance 	Stubbs, B., et al. 2016. Exercise improves cardiorespiratory fitness in people with depression: A meta-analysis of randomized control trials. <i>J. Affect. Disorders.</i> 190: 249-253.
Cardiovascular and Metabolic Health	Functional status of the cardiovascular and metabolic systems, as assessed by biomarkers and functional indicators.	<ul style="list-style-type: none"> • Metabolic syndrome components (e.g.,: abdominal obesity, high triglycerides, low HDL, high systolic blood pressure, high diastolic blood pressure and glucose intolerance or diagnosed 	

		<ul style="list-style-type: none"> diabetes) • Body mass and body composition • Maximal aerobic power 	
Cognition	The process of knowing, attending, remembering and reasoning; also the content of the processes, such as concepts and memories.	<ul style="list-style-type: none"> • Mini Mental State Exam (MMSE) • Memory tests • Perceptual skills tests • Tests of developmental level • Academic achievement • Math and verbal tests 	<p>Gerrig, R.J., and Zimbardo, P.G. 2002. Glossary of psychological terms. Psychology and life (16th ed.). Boston: Allyn and Bacon.</p> <p>Sibley, B.A., and Etnier, J.L. 2003. The relationship between physical activity and cognition in children: a meta-analysis. <i>Pediatr. Exer. Sci.</i>, 15(3): 243-256.</p>
Emotional Regulation or Psychosocial Health	The extrinsic and intrinsic processes responsible for monitoring, evaluating and modifying emotional reactions, especially their intensive and temporal features. Emotion regulation can operate through cognitive, expressive, behavioral, and physiological processes.	<ul style="list-style-type: none"> • Controlling your temper • Stress • Anxiety • Depression symptoms • Mental health 	<p>Lopes, P.N., et al. 2005. Emotion regulation abilities and the quality of social interaction. <i>Emotion</i>. 5(1): 113.</p> <p>Thompson, R.A. 1991. Emotional regulation and emotional development. <i>Educ. Psychol. Rev.</i>, 3(4): 269-307.</p>
Musculo-skeletal Fitness	A group of fitness components including muscular strength, endurance and power. Muscular strength is the ability to generate force with a muscle or group of muscles; local muscular endurance is the ability to perform repeated contractions with a muscle or group of muscles under sub-maximal load; and muscular power refers to the rate at which muscles perform work.	<ul style="list-style-type: none"> • Muscular strength: maximal bench press, maximal squat, grip strength • Muscular endurance: push-ups, chin-ups, plank • Muscular power: vertical jump, standing long jump 	<p>Smith, J.J., et al. 2014. The health benefits of muscular fitness for children and adolescents: a systematic review and meta-analysis. <i>Sports Med.</i> 44(9): 1209-1223.</p>

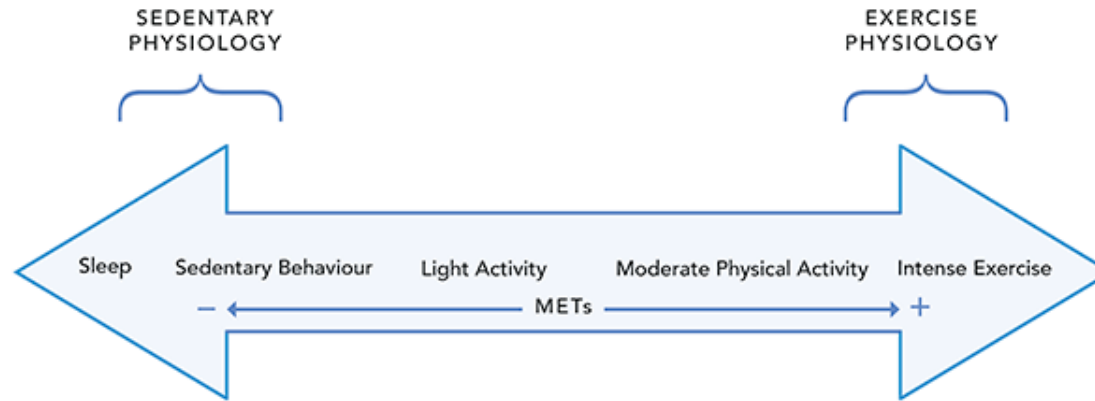
<p>Pro-Social Behaviours</p>	<p>Behaviors that are carried out with the goal of helping other people.</p>	<ul style="list-style-type: none"> • Helping a friend who fell to get up • Picking up something someone lost and giving it back 	<p>Gerrig, R.J., and Zimbardo, P.G. 2002. Glossary of psychological terms. Psychology and life (16th ed.). Boston: Allyn and Bacon.</p>
<p>Quality of Life</p>	<p>An individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.</p>	<p>Health Related Quality of Life (HRQL) is a concept developed by health researchers to describe the combination of several core dimensions including physical functioning, emotional well-being, social functioning and role activities, as well as health perceptions and global assessment of life satisfaction.</p>	<p>WHOQOL Group. 1995. The World Health Organization Quality of Life Assessment (WHOQOL): Position paper from the World Health Organisation. Social Science & Medicine, 41: 1403-1409.</p> <p>Rejeski, W.J., and Mihalko, S.L. 2001. Physical activity and quality of life in older adults. J Gerontol A Biol Sci Med Sci, 56(Suppl 2): 23-35.</p>
<p>Health Professional</p>	<p>Qualified exercise professional or health practitioner.</p>	<ul style="list-style-type: none"> • CSEP Certified Exercise Physiologist® (CSEP-CEP) • Kinesiologist • Medical doctor • Nurse • Physiotherapist • Psychologist • Occupational therapist 	
<p>Incidental Activity</p>	<p>Physical activity that is accumulated by carrying out activities of daily living.</p>	<ul style="list-style-type: none"> • Getting the mail • Personal hygiene • Preparing meals • Light cleaning • Shopping • Banking 	

Light-Intensity Physical Activity	<p>On an absolute scale, light intensity refers to physical activity that is performed at:</p> <ul style="list-style-type: none"> • 1.5-4.0 times the intensity of rest for children and youth (1.5-4.0 METs) • 1.5-3.0 times the intensity of rest for adults and older adults (1.5-3.0 METs) <p>Light physical activities do not result in sweat production or shortness of breath. “Incidental activities” are typically light-intensity physical activities.</p>	Children and Youth	<ul style="list-style-type: none"> • Slow walking • Croquet • Mild stretching • Personal hygiene • Playing with animals • Walking the dog • Billiards 	<p>Ainsworth, B.E., et al. 2000. Compendium of physical activities: an update of activity codes and MET intensities. <i>Med.Sci.Sport. Exer.</i> 32(9; Suppl.1): S498-S504.</p> <p>Harrell, J. S., et al. (2005). Energy costs of physical activities in children and adolescents. <i>Med. Sci. Sport. Exer.</i> 37(2): 329-36.</p>
Movement	<p>An act of changing physical location or position through the action of skeletal muscle.</p> <p>Movement and non-movement behaviours throughout the day directly impact on biological processes and may mediate or moderate physiological responses and adaptations to other movement behaviours (i.e., they interact).</p>	Movement:	<ul style="list-style-type: none"> • Exercise • Walking • Gardening • Cleaning 	<p>Chaput, J.P., et al. 2014. Importance of all movement behaviors in a 24 hour period for overall health. <i>Int. J. Environ. Res. Public. Health.</i> 11: 12575-12581.</p> <p>Tremblay, M.S., et al. 2010. Physiological and health implications of a sedentary lifestyle. <i>Appl. Physiol, Nutr. Metab.</i> 35(6): 725-740.</p>
Movement Continuum	<p>The continuity of behaviours based on their intensity in METs (Metabolic Equivalents) from sleep to intense exercise. This representation illustrates that sleep and sedentary behaviours are distinct from a lack of physical activity.</p>	Non-movement:	<ul style="list-style-type: none"> • Sleeping • Watching TV • Working on the computer • Sitting 	<p>Chaput, J.P., et al. 2014. Importance of all movement behaviors in a 24 hour period for overall health. <i>Int. J. Environ. Res. Public. Health.</i> 11:</p>

Physiological responses and adaptations to sleep and sedentary behaviours are not necessarily the opposite of exercise and may differ within and between physiological systems (e.g., cardiovascular vs. musculoskeletal). Behaviours on the movement continuum interact with respect to health, suggesting that an integration of all movement (and non-movement) behaviours should be considered together when assessing healthy living behaviours.

12575-12581.

Tremblay, M.S., et al. 2010. Physiological and health implications of a sedentary lifestyle. *Appl. Physiol, Nutr. Metab.* 35(6): 725-740.



Muscle Strengthening Activity

Physical activity that increases skeletal muscle strength, power, endurance or mass.

Children and Youth

- Games (e.g., tug of war)
- Push-ups or modified push-ups (with knees on the floor)
- Resistance exercises using body weight, resistance bands, weight machines or hand-held weights
- Rope or tree climbing
- Sit-ups (curl-ups or crunches)
- Swinging on playground equipment/bars
- Chores that require lifting and carrying

Adults and Older Adults

- Lifting weights
- Working with resistance bands
- Exercises that use body weight for resistance (e.g., push-ups or sit-ups)
- Heavy gardening (e.g., digging or shoveling)

MVPA

Moderate- to vigorous-intensity physical activity (see *moderate-intensity physical activity* and *vigorous-intensity physical activity*).

Moderate-Intensity Physical Activity (MPA)

On an absolute scale, moderate intensity refers to physical activity that is performed at:

- 4.0-6.9 times the intensity of rest for children and youth (4.0-6.9 METs)
- 3.0-5.9 times the intensity of rest for adults and older adults (3.0-5.9 METs)

The metabolism and capacity of older adults changes at different rates for different individuals. Accordingly, alternate approaches for classifying MPA are also used, including:

- About 3.3 times the intensity of rest for someone of average fitness after age 65 years
- >60% of VO₂max
- 40-60% of heart rate reserve

Children and Youth

- Active recreation (e.g., hiking, skateboarding, rollerblading or canoeing)
- Active transportation (e.g., cycling or brisk walking)
- Household chores and yard work (e.g., sweeping or pushing a lawn mower)
- Playing games that require catching and throwing (e.g., baseball or football)

Adults and Older Adults

- Walking briskly (3 miles per hour or faster for adults, or 1.5 miles per hour or faster for older adults, but not race-walking)
- Water aerobics
- Cycling slower than 10 miles per hour

Ainsworth, B.E., et al. 2000. Compendium of physical activities: an update of activity codes and MET intensities. *Med. Sci. Sport. Exer.* 32(9; Suppl. 1): S498-S504.

Canadian Society for Exercise Physiology. 2013. CSEP-Physical Activity Training for Health. Canadian Society for Exercise Physiology, Ottawa, ON.

Hall, K.S., et al. 2013. METs and accelerometry of walking in older adults: standard versus measured energy cost. *Med. Sci. Sport. Exer.* 45(3): 574-582.

Nelson, M.E., et al. 2007. Physical activity and public health in older adults: recommendation from the American College of Sports Medicine and the American Heart Association. *Circulation.* 116(9): 1094

	<p>On a scale relative to an individual's personal capacity (e.g., Rating of Perceived Exertion), moderate-intensity physical activity is usually represented by 5 to 6 on a scale from 1 to 10.</p> <p>Generally, MPA is intense enough to elevate the heart rate. A person can talk but not sing during activities of this intensity.</p>	<ul style="list-style-type: none"> • Tennis (doubles) • Ballroom dancing • General gardening • Household chores (e.g., vacuuming, washing the floor or climbing stairs) 	<p>Harrell, J.S., et al. 2005. Energy costs of physical activities in children and adolescents. <i>Med. Sci. Sport. Exer.</i> 37(2): 329-36.</p> <p>Paterson, D.H. and Warburton, D.E. 2010. Physical activity and functional limitations in older adults: a systematic review related to Canada's Physical Activity Guidelines. <i>Int. J. Behav. Nutr. Phys.</i> 11(7): 38.</p>
Physical Activity	Any bodily movement produced by skeletal muscles that results in energy expenditure, and increases heart rate and breathing.	See <i>Low-, Moderate- and Vigorous-Intensity Physical Activity</i> for examples.	Caspersen, C.J., et al. 1985. Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. <i>Public Health Rep.</i> , 100(2): 126.
Physical Activity Guidelines	<i>Canadian Physical Activity Guidelines</i> provide recommendations regarding the <i>frequency, intensity, amount</i> and <i>type</i> of physical activity that can help prevent disease and/or improve health for Canadians.	<ul style="list-style-type: none"> • <i>Canadian Physical Activity Guidelines for the Early Years (aged 0-4 years)</i> (http://www.csep.ca/CMFiles/Guidelines/CSEP_PAGuidelines_early-years_en.pdf) • <i>Canadian Movement Behaviour Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep</i> (www.csep.ca/guidelines/) • <i>Canadian Physical Activity Guidelines for Adults (aged 18-64 years)</i> (http://www.csep.ca/CMFiles/Guidelines/CSEP_PAGuidelines_adults_en.pdf) • <i>Canadian Physical Activity</i> 	<p>Tremblay M.S., et al. 2012. Canadian Physical Activity Guidelines for the Early Years (aged 0-4 years). <i>Appl. Physiol. Nutr. Metab.</i> 37: 345-356.</p> <p>Tremblay M.S., et al. 2011. New Canadian Physical Activity Guidelines. <i>Appl. Physiol. Nutr. Metab.</i> 36(1): 36-46.</p> <p>Tremblay M.S., et al. 2016. Canadian 24-hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep. <i>Appl. Physiol. Nutr. Metab.</i> 41(Suppl. 3)</p>

			<p><i>Guidelines for Older Adults (aged 65+ years)</i> (http://www.csep.ca/CMFiles/Guidelines/CSEP_PAGuidelines_older-adults_en.pdf)</p>
Physical Inactivity	The absence of physical activity; often defined as performing insufficient amounts of MVPA (i.e., not meeting specified physical activity guidelines).		Tremblay, M.S., et al. 2010. Physiological and health implications of a sedentary lifestyle. <i>Appl. Physiol. Nutr. Metab.</i> 35(6): 725-740.
Recreational Screen Time	Time spent in front of one or more screen-based devices during discretionary time (i.e., non-school or work-based use), while sedentary (e.g., TV, video game console, computer, tablet, phone or other screen).		Tremblay, M.S., et al. 2011. Canadian sedentary behaviour guidelines for children and youth. <i>Appl. Physiol. Nutr. Metab.</i> 36(1): 59-64.
Sedentary Behaviour	Any waking behaviour characterized by an energy expenditure less than or equal to 1.5 METs while in a sitting or reclining posture.	<ul style="list-style-type: none"> • Prolonged sitting • Watching TV • Playing passive video or computer games • Time spent on the computer (surfing the internet or working) • Motorized transportation 	Sedentary Behaviour Research Network. 2012. Letter to the editor: standardized use of the terms “sedentary” and “sedentary behaviours”. <i>Appl. Physiol. Nutr. Metab.</i> 37: 540-542.
Sedentary Behaviour Guidelines	<i>Canadian Sedentary Behaviour Guidelines</i> provide recommendations regarding the <i>volume</i> and <i>type</i> of sedentary pursuits that help prevent disease and/or improve health for Canadians.	<ul style="list-style-type: none"> • <i>Canadian Sedentary Behaviour Guidelines for the Early Years (0-4 years)</i> (http://www.csep.ca/CMFiles/Guidelines/CSEP_SBGuidelines_early-years_en.pdf) • <i>Canadian Movement Behaviour</i> 	Tremblay MS, Leblanc AG, Carson V et al. Canadian Sedentary Behaviour Guidelines for the Early Years (aged 0-4 years). <i>Appl Physiol Nutr Metab</i> 2012 April; 37(2):370-91. Tremblay M.S., et al. 2016.

		<p><i>Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep</i> (www.csep.ca/guidelines/)</p>	<p>Canadian 24-hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep. Appl. Physiol. Nutr. Metab. 41(Suppl 3).</p>
<p>Sleep Hygiene</p>	<p>Habits and practices conducive to sleeping well on a regular basis. The promotion of regular sleep is also known as sleep hygiene.</p>	<ul style="list-style-type: none"> • Going to bed at the same time each night, and rising at the same time each morning. • Sleeping in a quiet, dark and relaxing environment, which is not too hot or too cold. • Making your bed comfortable and using it only for sleeping (not for other activities, such as reading, watching TV or listening to music). • Removing all TVs, computers and other "gadgets" from the bedroom. • Avoiding large meals before bedtime. 	<p>Centers for Disease Control and Prevention. 2014. Are you getting enough sleep? [online]. [Available from http://www.cdc.gov/Features/Sleep/ [accessed 9 June 2016].</p> <p>Sleep hygiene. (accessed May 26, 2016). Oxford Dictionaries. Oxford University Press. Retrieved from: http://www.oxforddictionaries.com/us/definition/american_english/sleep-hygiene.</p> <p>Gigli, G.L., and Valente, M. 2013. Should the definition of "sleep hygiene" be antedated of a century? A historical note based on an old book by Paolo Mantegazza, rediscovered. <i>Neurol. Sci.</i>, 34(5): 755-760.</p>
<p>Structured Physical Activities</p>	<p>Activities that occur in a planned, deliberate, repetitive context.</p>	<p>Children and Youth</p> <ul style="list-style-type: none"> • School physical education (PE) class • Organized Lessons (e.g., dance, swimming or karate) • Competitive sport (e.g., Gymnastics, house league soccer or travel hockey) <p>Adults and Older Adults</p>	

		<ul style="list-style-type: none"> • Yoga or Tai Chi class • Fitness class • Running, hiking or Nordic walking as part of a club or group • Exercising in a gym under supervision • Water aerobics 	
Surveillance	<p>The continuous, systematic collection, analysis and interpretation of health-related data needed for the planning, implementation and evaluation of public health practice.</p> <p>Surveillance of population levels of physical activity and sedentary behaviours using a standardized protocol is an important and necessary part of a public health response to current concerns regarding lack of physical activity in many populations. For example, it allows for the monitoring of the proportion of children and youth meeting the <i>24-Hour Movement Guidelines</i>.</p>	<ul style="list-style-type: none"> • Canadian Health Measures Survey (CHMS) • Health Behaviour of School-aged Children Survey (HBSC) 	<p>WHO. (2016). <i>Public Health Surveillance</i>. Retrieved from: http://www.who.int/topics/public_health_surveillance/en/.</p> <p>WHO. (2016). <i>Global Physical Activity Surveillance</i>. Retrieved from: http://www.who.int/chp/steps/GPAQ/en/.</p>
Tummy Time	<p>Unrestrained, supervised movement opportunities with infants placed in the prone position (on their tummies).</p> <p>The Canadian Paediatric Society recommends placing infants on their side or stomach for 10-15 minute intervals at least three times per day.</p>		<p>Canadian Pediatric Society. (2011). Positional plagiocephaly. Retrieved from: http://www.cps.ca/documents/position/positional-plagiocephaly.</p>

When awake, infants should be placed on their stomachs and encouraged to reach and grasp for nearby toys.

Unstructured physical activities

Activities that occur spontaneously, sporadically, are often unplanned or unscheduled and involve self-directed games, play and other activities without external structures (e.g., coaches, time clocks).

Children and Youth

- Playing ball with the dog
- Soccer game with friends
- Swimming at the beach
- Family hike
- Walking, biking or skateboarding to school
- Building a tree fort
- Climbing outside

Adults and Older Adults

- Running alone or with friends in the park
- Swimming at the beach
- Family hike
- Surfing
- Gardening
- Getting groceries
- Walking the dog

Vigorous-Intensity Physical Activity (VPA)

On an absolute scale, vigorous intensity refers to physical activity that is performed at:

- Typically 7.0 or more times the intensity of rest for children and youth (≥ 7.0 METs).
- 6.0 or more times the intensity of rest for adults and older adults (≥ 6.0 METs).

Children and Youth

- Active games involving running and chasing (e.g., tag or flag football)
- Fast bicycle riding
- Jumping rope
- Martial arts (e.g., karate)
- Running
- Sports (e.g., ice or field hockey, basketball, swimming, soccer,

Ainsworth, B. E., et al. (2000). Compendium of physical activities: an update of activity codes and MET intensities. *Med. Sci. Sport. Exer.* 32(9; Suppl. 1): S498-S504.

Harrell, J. S., et al. (2005). Energy costs of physical activities in children and adolescents. *Med. Sci. Sport. Exer.*, 37(2): 329-36.

On a scale relative to an individual's personal capacity (e.g., Rating of Perceived Exertion), vigorous-intensity physical activity is usually 7 to 9 on a scale of 1 to 10.

Generally, during VPA heart rate increases substantially, body temperature increases quickly, and a person cannot say more than a few words without pausing for a breath.

tennis or gymnastics)

- Vigorous dancing
- Cross-country skiing
- Aerobics

Adults and Older Adults

- Race walking, fast walking for exercise, jogging or running
- Swimming laps / fast swimming
- Tennis (singles)
- Aerobic dancing
- Bicycling 16 kilometers per hour (10 mph) or faster
- Jumping rope
- Heavy gardening (continuous digging or hoeing)
- Hiking uphill or with a heavy backpack