

Gross-Motor Skills

What are they?

- ❖ Gross-motor skills consist of whole body movements that involve the use of large muscles in order to perform various functions including hand-eye coordination (i.e., throwing, kicking, etc.), sitting upright, standing, walking, and running (Kid Sense, 2020).
- ❖ Gross-motor skills are considered the foundational skills that enable children to function as independently and fully as possible within their environments (Pangrazi, 2007, as cited in Westendorp et al., 2014). Research shows that adequate development of these skills are what enhance children's participation in physical activities and aid in the development of cognitive abilities (Westendorp et al., 2014).
- ❖ While physical therapists may focus directly on improving gross-motor skills for performing large movement functions such as walking or running, occupational therapists focus more on a child's performance and participation in daily occupations while taking into account all aspects of the child, task, and environment including the gross-motor skills required.
 - For example, a PT may work directly on improving a child's balance and hand-eye coordination for the purposes of restoring these skills, while an OT may use different strategies and/or adaptations to target these skills to facilitate participation and independence in playground or gym activities at school.
- ❖ For more information on gross-motor deficits, you can visit the following websites:
 - Kid Sense - <https://childdevelopment.com.au/areas-of-concern/gross-motor-skills/>
 - The OT Practice - <https://www.theotpractice.co.uk/how-we-help/problems/gross-motor-skills>
 - Pathways.org - <https://pathways.org/topics-of-development/motor-skills/>

What are the signs of gross-motor deficits?

- ❖ Signs that children may be experiencing challenges with gross-motor skills include, but are not limited to, poor balance and coordination, and/or poor posture, awkward or clumsy movements, sitting with legs in "W" position, lateness in achieving developmental milestones (i.e., sitting, crawling, walking, and/or running), avoidance or lack of interest in physical activities, and/or quickly becoming tired after short periods of physical activity (The OT Practice, 2021).

How can gross-motor deficits impact occupational performance?

- ❖ Gross-motor deficits can potentially impact any or all aspects of occupational participation and performance ranging from ADLs (i.e., dressing, toileting, etc.) and/or IADLs (i.e., meal preparation, cleaning, etc.) to school, play, leisure, and/or social participation.

How can OTs help?

- ❖ Depending on the child's needs, an OT may work to promote independence and participation in occupations by:
 - Adapting the environment and/or task to encourage exploration and self-initiation (Ko et al., 2020)
 - Using functional tasks to encourage active problem solving (Ketelaar et al., 2001, as cited in Ko et al., 2020)
 - Using play-based activities to promote use of strategies and practice gross-motor skills
 - Using the CO-OP approach for motor-based goals (Lackman et al., 2016, as cited in Anderson et al., 2018)
 - Providing multi-sensory input through selected activities
 - Providing parent and caregiver education

**Information above is not comprehensive and all treatment plans are specific to and depend on the needs of the child and are in no way limited to the examples provided above*

References

- Anderson, L., Wilson, J., & Carmichael, K. (2018). Implementing the Cognitive Orientation to daily Occupational performance (CO-OP) approach in a group format with children living with motor coordination difficulties. *Australian Occupational Therapy Journal*, 65(4), 295-305. [10.1111/1440-1630.12479](https://doi.org/10.1111/1440-1630.12479)
- Kid Sense. (2020). Gross motor activities. <https://childdevelopment.com.au/areas-of-concern/gross-motor-skills/gross-motor-activities/>
- Ko, E. J., Sung, I. Y., Maen, H. J., Yuk, J. S., Kim, H., & Lee, N. H. (2020). Effect of group-task-oriented training on gross and fine motor function, and activities of daily living in children with spastic cerebral palsy. *Physical & Occupational Therapy in Pediatrics*, 40(1), 18-30. <https://doi.org/10.1080/01942638.2019.1642287>
- The OT Practice. (2021). Gross motor skills. <https://www.theotpractice.co.uk/how-we-help/problems/gross-motor-skills>
- Westendorp, M., Hartman, E., Houwen, S., Huljen, B. C. H., Smith, J., & Visscher, C. (2014). A longitudinal study on gross motor development in children with learning disorders. *Research in Developmental Disabilities*, 35(2), 357-363. <http://dx.doi.org/10.1016/j.ridd.2013.11.018>