
E4: Centre of Gravity: What does it really mean?

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Learning objectives:

1. Participants will identify the optimal COG as it relates to current research.
2. Participants will be able to list three configuration changes that may impact COG.
3. Participants will be able to give at least 2 strategies for maintaining safety with a more forward COG.
4. Participants will understand the education required for clients and caregivers related to wheelchair skills and COG.

Session description:

In the field of wheelchair prescription and wheelchair skills training, you often hear clinicians and users referring to centre of gravity (COG). But, what does it really refer to and how does it impact the function of a manual mobility device? In this program, we will review evidence related to COG selection and optimal manual wheelchair performance, and discuss what it really means from a functional and clinical perspective.

We will help to define COG as it relates to the wheelchair configuration and to the person in the chair. We will examine the impact of changes in COG and discuss clinical rationale and treatment approaches to maximize function, safety and maintain upper extremity health for manual wheelchair users. We will show practical examples of how different configurations and activities may impact COG and how changes can be addressed in the clinic and the community.

As time allows, we will give participants the opportunity to experience changes in COG for themselves and discuss how to make adjustments on available equipment.

Content references:

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8. Fausto Orsi Medola, Valeria Meirelles Carril Elui, Carla da Silva Santana, Carlos Alberto Fortulan. Aspects of Manual Wheelchair Configuration Affecting Mobility: A Review. *Journal of Physical Therapy Science.* 26:313-318. 2014