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Power Tilt, Recline & Elevating Leg Support

Clinical Resources

by Permobil Academy



Power Tilt, Recline & Elevating Leg Supports

Power tilt - Allows a person to change their seat angle orientation in relation to the ground while maintaining a constant seat to back and seat to leg support angle.

Power recline - Allows a person to change their seat to back angle and maintain a constant seat angle with respect to the ground.

Power elevating leg supports - Allows a person to change their leg support angle relative to the seat in order to flex or extend the knee. Some leg supports articulate, that is, lengthen while extending the knee.

These power seat functions can be used independently or used in a number of different combinations to provide increased clinical benefits (Dicianno et al., 2015).

Clinical Benefits

According to Kenderish et al. (2025), use of power tilt, power elevating leg supports, and power recline together can assist with

- Pressure relief – by allowing offloading of the ischial tuberosities while remaining seated in the chair as an alternative to active weight shifts
- Maintaining sitting tolerance – by allowing the user to change their posture while in the chair, potentially preventing the need to transfer out of their chair due to pain or discomfort.
- Management of lower limb oedema – by allowing the user to elevate their legs and recline their trunk for effective movement of fluid
- Maintenance of a functional seated posture – for users with increased tone or asymmetry, use of power seat functions can assist with repositioning in the chair
- Ease of personal cares by enabling access for continence management
- Transfers – for users who have challenging transfer needs, use of power seat functions can assist with positioning and management of the hoist sling

Evidence to support use of power tilt and power recline for pressure redistribution

Significant skin reperfusion can be achieved by the use of tilt, or with use of tilt and recline together. When using tilt independently, a larger amount of tilt is required to achieve clinically significant pressure relief, however a lesser amount of tilt is required when combined with recline.

Use of power recline to assist with pressure relief can be helpful for those who are unable to tolerate a large amount of tilt, or if use of tilt alone prevents completion of functional tasks, for example, they are not able to sit under a desk at work. (Kenderish et al., 2025).





Funding

The functional need for sitting and pressure relief typically relates to sitting tolerance, where maintaining sitting tolerance is important for those who may work, care for children or other family members, or live at home with limited support.

Different users have different degrees of sitting tolerance, however, for some users may need to remain in their chairs all day, either due to functional demands or they live alone with limited support and need assistance to transfer out of their chair.

When requesting multiple power functions to support sitting tolerance, you need establish that power tilt alone does not meet the person's needs, and then provide the rationale for how the additional functions will achieve the desired goal.

Funding examples where the user will require more than tilt alone:

A person with very limited mobility who lives alone, and are at high risk/ history of pressure injury over their ischial tuberosities,

- They are unable to tolerate the amount of tilt required to achieve adequate pressure relief
- There is not support available to transfer them out of their chair, or they are working full time and transferring out of their chair is not appropriate

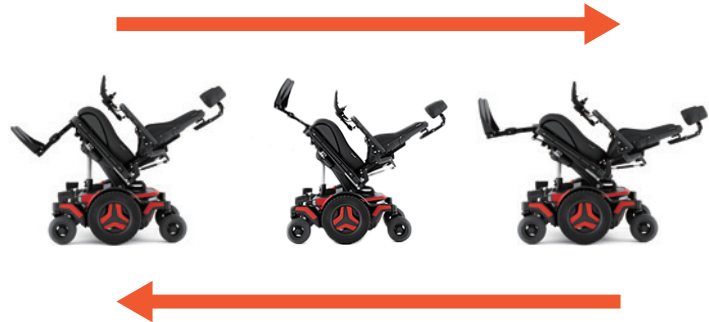
A person whose sitting tolerance is limited by pain,

- The pain is not relieved by the use of tilt alone
- The person has limited support available to assist with transferring out of their chair, or they are working full time and transferring out of their chair is not appropriate
- The person's pain can be relieved by the person extending their hips and knees for a short period, and in turn keeping their sitting tolerance at a practical length of time

Permobil Specific

Permobil IRM, or Independent Repositioning Mode, facilitates the power seat functions moving through the recommended sequence for optimal pressure relief – power tilt, then power elevating leg supports, followed by power recline. The default angle setting for IRM are the RESNA suggested angles for optimal pressure relief, however these angles can be tailored to the end user as required.

Permobil's memory seat function allows a person's preferred position in the seat to be programmed into the chair, allowing the person to move to this position easily using a single button or switch. Memory seating involves the power seat functions moving simultaneously, allowing a person to reach the desired position quickly.



Literature

Dicianno, B.E., Lieberman, J., Schmeler, M.R., Souza, A., Cooper, R., et al (2015) Rehabilitation Engineering and Assistive Technology Society of North America's Position on the Application of Tilt, Recline, and Elevating Legrests for Wheelchairs Literature Update. Assist Technol. 27(3) 19308 doi: 10.1080/10400435.2015.1066657.



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