

## Why Multiple Power Over Single Power?

If a consumer medically requires power tilt, he or she can often medically benefit from and require power recline as well. The following is an outline of the benefits of power tilt & recline (multiple power).

### Having both power tilt AND power recline:

- ❖ **Provides optimal pressure relief**
  - Combining 25-45 degrees of tilt with 110-150 degrees of recline maximizes pressure relief (up to a 40% load reduction).<sup>1,2</sup>
- ❖ **Protects joints** by allowing range of motion.
  - Recline allows the vital movement of joints through ROM, reducing the development of contractures throughout the person's lifetime.<sup>1,2</sup>
- ❖ **Reduces shearing and pelvic sliding** during recline.
  - 25 degrees of tilt helps hold the pelvis in place when reclining.<sup>1,2</sup>
- ❖ **Provides ease for repositioning** by the ability to use gravity in one's favor.
  - If the pelvis migrates forward on the seat cushion, tilting back past 45 degrees and opening up the back angle with recline can allow the person to reposition independently.<sup>1</sup>
- ❖ **Improves lower limb hemodynamic states (edema)** with 30 degrees of tilt and full recline.
  - When tilt alone is used with elevating leg rests or an AFP, as the knees extend, the hamstrings may be pulled and shift the pelvic position posteriorly. However, the hips remain flexed, limiting circulatory return and lymph drainage.<sup>1,2</sup>
  - Full tilt and recline allows slack on the hamstring, the knees to be extended with the AFP or elevating leg rests, and feet to be fully elevated.<sup>1,2</sup>
- ❖ **Allows a dynamic seated position** which permits a variety of postures throughout the day.
  - Combined tilt and recline allows the consumer the widest range of postural changes throughout the day for optimal ADLs.<sup>1,2</sup>
- ❖ **Permits better transfers**
  - Tilt and recline can stabilize the trunk for proper transfer positioning.<sup>1</sup>
  - Recline may be used in combination with elevating leg rests to enhance sliding transfers with a person in supine position.<sup>1</sup>
  - The adjustability of the system can reduce the number of transfers during the day.<sup>1</sup>
  - Can reduce injury to consumer and caregiver.<sup>1</sup>
- ❖ **Provides safer negotiation of obstacles and inclines** through optimal trunk control.<sup>1</sup>
- ❖ **Optimizes positioning for respiration, eating and swallowing, and vision.**
  - It is the professional opinion of Quantum Rehab that positioning can optimize expansion of the chest and allow greater ease of breathing.
  - Improvement of respiratory status can increase alertness and arousal.<sup>1</sup>
  - Improved respiration can also improve vocal communication.<sup>1</sup>
  - Decreased risk of aspiration.<sup>1</sup>
  - Improvement of visual orientation.<sup>1</sup>
- ❖ **Helps manage orthostatic hypotension** for those who have periodic blood pressure changes.<sup>1</sup>
- ❖ **Improves ability through recline to catheterize or allow a care attendant to manage bowel care.**<sup>1</sup>

1. Dicianno, B. E., et. al., (2009). RESNA Position on the Application of Tilt, Recline, and Elevating Legrests for Wheelchairs. *Assistive Technology*, 21(1), 13-22

2. Dicianno, B. E., et. al., (2015). RESNA Position on the Application of Tilt, Recline, and Elevating Legrests for Wheelchairs Literature Update. *Assistive Technology*, 27(3), 193-198

1. <http://www.resna.org/sites/default/files/legacy/resources/position-papers/RESNAPositionontheApplicationofTilt%2CRecline%2CandElevatingLegrestsforWheelchairs.pdf>

2. [http://www.resna.org/sites/default/files/legacy/resources/position-papers/RESNA%20PP%20on%20Tilt%20Recline\\_2015.pdf](http://www.resna.org/sites/default/files/legacy/resources/position-papers/RESNA%20PP%20on%20Tilt%20Recline_2015.pdf)