

HORIZONTAL TILT

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Client Background

On December 27th, 1990, at the age of 27, while shoveling her driveway with her husband, Andrea accidentally stepped into a small pothole left by a telephone company. What was described by Andrea as a “jarring pain” in her back was thought to be a minor soft tissue injury. Unfortunately, this would lead to 3 years of chronic pain and discomfort. In May of 1993, Andrea underwent a sacroiliac joint fusion that failed due to excruciating pain and poor circulation post-surgery. This led to Andrea’s diagnosis in May, 1994 of RSD. Reflex sympathetic dystrophy syndrome (RSD), or complex regional pain syndrome (CRPS) Type I, is a chronic condition characterized by burning pain and abnormalities in the sensory, motor, and autonomic nervous systems affecting muscles, bones, skin and joints ¹.

Current Issues

Several issues are presented when finding a suitable mobility device solution for Andrea. She cannot sit upright, prone or supine as these positions cause muscle spasms over her entire left side, including her shoulder, back, hip, and lower extremity. As well, Andrea cannot weight bear on her left leg. Severe discolouration and edema are also observed and measured in her lower extremities.

Goals for Prescription

The main objective for the prescription was to provide Andrea with the ability to reposition in an effort to reduce and relieve muscle spasm(s), edema and discomfort, while improving independence in relation to positioning and mobility. Due to Andrea’s unique side-lying positioning requirements, a focus on system maneuverability was also essential. Andrea would also find benefit of a firm foot support/platform to provide improved postural driving stability.

Equipment/Solution

Power Positioning System: Motion Concepts Ultralow Horizontal Tilt System with 7” Elevating Seat. Several custom modifications to this system were required including 2-5 function electronics through joystick, a right side 2 post height adjustable armrest, 50 degree actuator range from horizontal at both the head and foot sections, manual angle adjustability for head support and foot platform, and a 1” offset towards left side to compensate for width of overhanging driving arm and joystick.

Power Base: Invacare TDX 5 w/ MK5 Electronics, MPJ Joystick

Seating: ROHO Custom Recliner for trunk and pelvic sections, ROHO Custom Single Valve Cushion for lower leg section, Custom side wedge/bolster to support Andrea’s lower back, and right side extended length gel armpad.

Outcomes

Using a combination of tilt and recline, Andrea can independently reposition herself to relieve and reduce the incidence of muscle spasms. As a result, an improved sitting tolerance is observed. Edema and discolouration are managed with use of varying degrees of tilt and lower leg elevation. Maneuverability of system is maximized using a combination of power elevating seat (7”) and 45 degree centre portion anterior tilt, allowing Andrea to drive in an ‘anterior tilt’ standing position. Seating offers pressure reduction and positioning throughout entire body length.

References

¹ Baron, R., Fields, H., Janig, W., Kitt, C., Levine, D. (2002) National Institute of Health Workshop: Reflex Sympathetic Dystrophy/Complex Regional Pain Syndromes- State-of-the-Science. *Anesth Analg*, 2002:1812-6

Speaker Bio

Amanda is a graduate from the University of Waterloo, receiving a Bachelor of Science in Honours Kinesiology. Currently employed by Shoppers Home Health Care as a Seating and Mobility Consultant, Amanda works primarily with complex needs clients, as well as geriatric and pediatric populations.