
F7: Immerse Yourself – The Science of Skin Protection

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Learning objectives:

1. Describe the difference between flexible and fixed seated postural deviations and explain the intervention for accommodation or correction as indicated.
2. Describe the concepts of immersion, envelopment and off-loading in context of seat cushion design and the applications of each.
3. List 2 or more intrinsic factors and 2 or more extrinsic variables which can compromise skin integrity for seated individuals.

Session description:

Appropriate technology application can greatly enhance the functional outcomes for clients who utilize seating and wheeled mobility systems. Once the mat assessment is completed, it is necessary to interpret that data and convert it to equipment selection & configuration. Common seated postures will be presented and the principles of accommodation or reduction of orthopedic changes will be presented. Considerations for the selection of seat cushions and back supports with a goal of maximizing consumer function will be reviewed using a clinical approach. This course follows the guidelines published in the "RESNA Wheelchair Service Provision Guide."

Content references:

1. Cook, Albert M., and Janice Miller Polgar. Assistive technologies: Principles and practice. Elsevier Health Sciences, 2014.
2. Arledge, Stan, William Armstrong, Mike Babinec, Brad E. Dicianno, Carmen Digiovine, Trevor Dyson-Hudson, Jessica Pederson et al. "RESNA Wheelchair Service Provision Guide." RESNA (NJ1) (2011).
3. Sprigle, S., Maurer, C., & Holowka, M. (2007). Development of valid and reliable measures of postural stability. *The journal of spinal cord medicine*, 30(1), 40.

4. McGrath, D. (2014). Guidelines for planning appropriate wheelchair and seating provision in progressive neurological disorders.
5. Hetzel, T. (2007, March). Destructive postural tendencies: Identification and treatment. In 2007 International Seating Symposium Proceedings (pp. 89-91).
6. Pedersen, J. P., Harmon, D., & Kirschner, K. L. (2014). Is an appropriate wheelchair becoming out of reach?. *PM&R*, 6(7), 643-649.
7. Shields, R. K., & Cook, T. M. (1988). Effect of seat angle and lumbar support on seated buttock pressure. *Physical Therapy*, 68(11), 1682-1686.