

ABSTRACT: Skin Microvascular and Metabolic Response to Sitting and Pressure Relief Maneuvers in People with Spinal Cord Injury.

Pressure ulcers continue to be exceedingly prevalent despite technologic advances in equipment development and repeated attempts at improving education and preventive efforts. Of these, diligence and timeliness of adequate pressure relief is felt to be the cornerstone to pressure ulcer prevention. The evidence supporting clinical recommendations for pressure relief is lacking, however, leading to inconsistencies in clinical guidelines that may or may not represent best clinical practices for pressure relief. The purpose of this study is to contribute to the evidence base on pressure ulcer pathophysiology and prevention in people with spinal cord injury by delineating the microvascular mechanisms which occur during sitting and pressure relief maneuvers, including perfusion, oxygenation and interface pressure. By understanding these key physiologic responses, this information will enable health care professionals and consumers with spinal cord injury to more effectively prevent the onset of pressure ulcers. The overriding goal of this project is to develop an algorithm that will assist clinicians in providing individualized recommendations to consumers with spinal cord injury by specifying optimal pressure relief technique, duration, and frequency to reduce pressure ulcer incidence in this population.