

Prevention of pressure ulcers among people with spinal cord injury: a systematic review.

Objectives: To evaluate the literature on the effectiveness of bed and wheelchair positioning and repositioning in the **prevention of pressure ulcers (PUs)** in both the **spinal cord injury (SCI)** and non-SCI populations.

Results: We identified 2820 publications, of which 49 met inclusion criteria. Of these publications, the subject population was 2834 (923 persons with SCI, 717 persons without SCI, and 1194 healthy control subjects). **Among** studies examining **pressure** related to position or repositioning in bed or sitting, procedures for measuring skin **pressure** and metabolism were highly variable by anatomic location, measurement technique, outcome measure, study site, participant characteristics, and description of position/turning for bed and seated interventions. Numerous factors can influence tissue interface pressures, and no prospective studies had been performed to determine **a** causal relationship between interface **pressure** and skin breakdown. Several studies suggest that skin response to **pressure** differs between subjects with and without SCI. Conflicting results and insufficient evidence for optimal bed and seated positioning and turning and **pressure** relief maneuvers to prevent PUs in both SCI and non-SCI populations were limiting factors.

Conclusions: Although there is no clear optimal positioning or turning frequency in bed, the evidence suggests avoiding the 90° lateral position because of high pressures and PU risk over the trochanters. During sitting, pressures are linearly redistributed from the sitting area during recline and tilt; however, reclining carries with it an increased risk of shear forces on this skin. The evidence does not support conclusive guidelines on positioning or repositioning techniques for PU **prevention** in bed or during sitting. We conclude that PU risk is highly individualized, with the SCI population at **a** higher risk, which demands flexible PU **prevention** strategies for bed/seated positioning and **pressure** relief maneuvers. Education has and will remain our most powerful ally to thwart this pervasive public health problem