

Mathematical Modelling of Different Types of Body Support Surface for Pressure Ulcer Prevention

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Abstract : Pressure ulcer is a common problem for today's healthcare industry. It occurs due to external load applied to the skin. Also when the subject is immobile for a longer period of time and there is continuous load applied to a particular area of human body, blood flow gets reduced and as a result pressure ulcer develops. Body support surface has a significant role in preventing ulceration so it is important to know the characteristics of support surface under loading conditions. In this paper we have presented mathematical models of different types of viscoelastic materials and also we have shown the validation of our simulation results with experiments.

Keywords : pressure ulcer, viscoelastic material, mathematical model, experimental validation

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