

THE EFFECT OF DAMAGE ON THE BIOMECHANICAL BEHAVIOR OF THE PELVIC FLOOR

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The development of constitutive models for soft tissues such as female pelvic floor tissues has been an area of extensive research [1,2]. These models are extremely important in order to obtain accurate results from simulations of disorders affecting the structures under consideration. Numerical simulations can contribute to enhance therapeutic techniques, as recognized by the medical community [3]. Biological soft tissues present a highly non-linear behavior, with an anisotropic stress-strain response and a large variability, as such the study of the mechanical behavior of pelvic floor muscles are a huge challenge [4].

In this work, numerical simulations of the pelvic floor deformation will be presented using a transversely anisotropic, hyperelastic constitutive model, which also includes the effect of damage.

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