Biomecánica del cartílago articular y sus respuestas ante la aplicación de las fuerzas [

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text (article)

Analítica

Background: cartilage is a specialized connective tissue widely studied for its mechanical components and its contribution to joint functioning. The understanding of cartilage role necessarily requires an approach of biomechanical behavior. Objective: to performa literature review about the biomechanics of the articular cartilage and its responses to applied forces. Materials and Methods: a bibliographic search was conducted in Pubmed, Scielo, Science Direct and Google academic databases, of articles published between 1998 and 2017, with the terms: "Cartilage Biomechanic", "Cartilage Physiology", and "Cartilage Histology". 55 articles were found, 44 in English and 11 in Spanish, which contained relevant information about the biomechanics of articular cartilage. Results: this article summarizes a set of concepts derived from experimental studies and other reviews of the topic, addressing updates regarding histology, physiology and different mechanical responses to different stimuli such as anisotropy, viscoelasticity, hysteresis and fluency. Conclusions: the articular cartilage is a three-phase connective tissue that allows the support and transmission of loads thanks to the mechanotransduction. The approach and understanding of the biomechanics of the tissues is necessary for the prescription of exercise in apparently normal and pathological conditions. MÉD.UIS. 2018;31(3):47-56
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