

Cellular transduction mechanisms associated with mineral water temperature

Mecanismos de transducción celulares asociados con la temperatura del agua mineral

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Resumen

In balneotherapy there is a correlation between bath temperature and clinical results. This cause-effect relation finds its explanation in the domains of the modern knowledge of cellular and molecular Biology. We may say that the therapy of lower limb venous insufficiency lays on cold temperatures and in TRPM8 channels activation. Cardiac failure should be treated with neutral temperatures and through ANP-GMPc-PKG signalization cascade. Fibromyalgia requests temperatures around 36° and TRPV1 channel inhibition. Musculoskeletal conditions demands higher temperatures and depending of its degree of pro inflammatory IL-1, IL-6 e TNF- α cytokines and of the increase of TNF- β anti inflammatory cytokine. Cancer treatment is associated with very high temperatures and with proteins syntheses involved in p53, Bax e Bcl-2 programmed cellular death through the MAPK pathway.

Key words: Cellular transduction mechanism, Mineral waters, balneotherapy

Palabras clave: Mecanismo de transducción celular, aguas minerales, balneoterapia