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Title

Influence of electromagnetic waves of terahertz range at the frequencies of molecular spectrum of nitric oxide on the microcirculation of bone tissue in sharp and chronic immobilisation stress

Source

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Abstract

The object of the study was investigation of the influence of electromagnetic radiation of terahertz range at the frequencies of molecular spectrum of nitric oxide (THz-NO) on the microcirculation disorders in the osseous tissue and marrow of the laboratory rats caused by immobilisation stress. Marked changes in the microvessels of bone tissue in rats subjected to sharp and chronic immobilisation stress were estimated. It was shown that simultaneous influence of terahertz waves at the frequencies of molecular spectrum of nitric oxide (THz-NO) and stressor agent prevents and restore the microcirculation disorders in the osseous tissue. The best results with the microcirculation disorders in the osseous tissue prevention were obtained in 3 and 7 groups of experimental animals, where the duration of terahertz waves radiation was 15 minutes. Use of THz-NO therapy can be recommended in complex rehabilitation of traumatic and orthopaedic patients. (8 References).