MODERATE PHYSICAL EXERCISE UPREGULATION THE RESPIRATORY BURST OF MACROPHAGES OF MICE EXPOSED TO A WHOLE-BODY GAMMA IRRADIATION

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Introduction : The radiation ionizant and physical exercise can increase some functions of macrophages, including the phagocytosis, antitumour activity, reactive oxygen and nitrogen metabolism, chemotaxis and production nitric oxide. These agents aggressive damage may from oxidative stress caused for reactive oxygen species (ROS). This study it intends to analysis the effect of the physical exercise in the functionality of peritoneal macrophages of mice exposed to irradiation by 60-cobalt gamma with taxes of dose of 2 and 4Gy/h. **Results**: C57BL/6 macrophages of mice exposed to irradiation with taxe of dose 4 Gy/h initiate a respiratory burst, producing substantial amounts of ROS, as compared to mice exposed to irradiation with taxe of dose 2 Gy/h. Already after 20 days of physical exercise the respiratory explosion of these cells reaches higher levels of what the reached ones for the group of mice not radiated. **Conclusions:** Moderate physical exercise revealed necessary in the recovery of the function of respiratory burst of macrophages in the taxe of 2Gy/h and that the duration of the exercise is important factor in the upregulation of the function of production of oxygen radicals for these cells.

Key-words: Macrophages, physical exercise, radiation ionizant, reactive oxygen e nitrogen species.