

The role of different physical exercises as an anti-aging factor in different stem cells - PubMed

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ABSTRACT

Abstract The senescence process is connected to the characteristics of cellular aging. Understanding their causal network helps develop a framework for creating new treatments to slow down the senescence process. A growing body of research indicates that aging may adversely affect stem cells (SCs). SCs change their capability to differentiate into different cell types and decrease their potential for renewal as they age. Research has indicated that consistent physical exercise offers several health advantages, including a reduced risk of age-associated ailments like tumors, heart disease, diabetes, and neurological disorders. Exercise is a potent physiological stressor linked to higher red blood cell counts and an enhanced immune system, promoting disease resistance. Sports impact mesenchymal SCs (MSCs), hematopoietic SCs (HSCs), neuronal SCs (NuSCs), and muscular SCs (MuSCs), among other aged SCs types. These changes to the niche will probably affect the amount and capability of adult SCs after exercise. In this work, we looked into how different types of SCs age. The impact of physical activity on the aging process has been studied. Additionally, there has been discussion and study on the impact of different sports and physical activities on SCs as an anti-aging component. Keywords: Aging; Hematopoietic stem cells; Hormesis; Mesenchymal stem cells; Muscular stem cells; Physical exercises; Stem cell.

CONFLICT OF INTEREST

Conflict of interest statement Declarations. Conflict of interests: The authors declare no competing interests. Ethical approval: Not applicable. Consent to participate: Not applicable. Consent for publication: All author consent to publication.

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