



Tipo	Periódico
Título	The Therapeutic Potential of Physical Exercise in Cancer: The Role of Chemokines
Autores	Buzaglo, G.; Telles, G. D.; Araujo, R. B.; Dias Junior, G.; Ruberti, O.; Ferreira, M. L. V.; Derchain, S.; Vechin, F. C.; Conceição, M. S.
Autor (es) USF	Buzaglo, G ; Araujo, R. B.; Dias Junior, G.; Conceição, Miguel S.
Autores Internacionais	
Programa/Curso (s)	Programa de Pós-Graduação Stricto Sensu em Ciências da Saúde
DOI	10.3390/ijms252413740
Assunto (palavras chaves)	
Idioma	Inglês
Fonte	Título do periódico: Open Journal of Obstetrics and Gynecology ISSN: 0112-1642 Volume/Número/Paginação/Ano: 25(24):13740 2024 Dec 23
Data da publicação	2024 Dec 23
Formato da produção	Digital
Resumo	<p>The global increase in cancer cases and mortality has been associated with inflammatory processes, in which chemokines play crucial roles. These molecules, a subfamily of cytokines, are essential for the migration, adhesion, interaction, and positioning of immune cells throughout the body. Chemokines primarily originate in response to pathogenic stimuli and inflammatory cytokines. They are expressed by lymphocytes in the bloodstream and are divided into four classes (CC, CXC, XC, and CX3C), playing multifaceted roles in the tumor environment (TME). In the TME, chemokines regulate immune behavior by recruiting cells such as tumor-associated macrophages (TAMs) and myeloid-derived suppressor cells (MDSCs), which promote tumor survival. Additionally, they directly influence tumor behavior, promoting pathological angiogenesis, invasion, and metastasis. On the other hand, chemokines can also induce antitumor responses by mobilizing CD8+ T cells and natural killer (NK) cells to the tumor, reducing pro-inflammatory chemokines and enhancing essential antitumor responses. Given the complex interaction between chemokines, the immune system, angiogenic factors, and metastasis, it becomes evident how important it is to target these pathways in therapeutic interventions to counteract cancer progression. In this context, physical exercise emerges as a promising strategy due to its role modulating the expression of anti-inflammatory chemokines and enhancing the antitumor response. Aerobic and resistance exercises have been associated with a beneficial inflammatory profile in cancer, increased infiltration of CD8+ T cells in the TME, and improvement of intratumoral vasculature. This creates an environment less favorable to tumor growth and supports the circulation of antitumor immune cells and chemokines. Therefore, understanding the impact of exercise on the expression of chemokines can provide valuable insights for therapeutic interventions in cancer treatment and prevention.</p>
Fomento	FAPESP: Processo FAPESP NÚMERO: <a href="#">2023/02500-2</a> ; <a href="#">2023/02398-3</a> e 202101424-5