

ARTÍCULO Nº 20

The effects of physical exercise on cancer

One of the hardest concepts to convince a cancer patient of is that exercise may help them to overcome the feeling of fatigue. Most patients would quickly disagree because they are too tired to do even normal daily activities. Exercise has been shown in many previous studies to play a more preventative role in the development of certain types of cancer. This concept is already known, but what about the benefits of exercise for a current cancer patient?

Numerous studies have suggested that exercise, including light to moderate intensities, has many benefits for people with cancer. Some of the benefits of exercise include: increases in cardiovascular, pulmonary, and muscular functioning produced by regular exercise result in improved oxygen consumption, stroke volume, cardiac output, vascularization of muscles, lymphatic circulations, metabolic rate, muscle tone, strength, coordination, and balance.

Exercise appears to influence host defense against both viral infection and cancer. Exercise also causes the release of several cytokines involved in resistance to tumors, which may also influence the activity of cytotoxic cells.

Exercise has been suggested by many researchers as a rehabilitative solution for energy loss in cancer patients. Defined as rhythmic contraction and relaxation of large muscle groups over an extended period of time, aerobic exercises have been shown to improve physical capabilities in cancer patients.

Some initial clinical concerns about exercise in cancer patients include: a) the potential immunosuppressive effects of vigorous exercise, b) the increased likelihood of pathological bone fractures arising from compromised bone integrity, c) possible worsening of cardiotoxicity from chemotherapy and/or radiation, d) severe pain, nausea, and fatigue that may be intensified by physical exercise, and e) the inability and/or unwillingness of cancer patients to tolerate exercise given their weakened physical and emotional condition. Despite all of these concerns, there is a growing body of evidence that shows how exercise can benefit cancer patients.

Can exercise help reverse the effects of cancer treatment?

Cardiovascular benefits of exercise for cancer patients were shown to be evident in patients that had no signs of impaired cardiac function before cancer treatment. In this study, no patients in the training group developed clinical signs of cardiotoxicity during the 2 months after chemotherapy. For women with breast cancer, a fitness program that included aerobic exercise would decrease the risk of developing cardiovascular disease and osteoporosis.

The side effects of cancer treatment on the musculoskeletal system have demonstrated physiological improvements from exercise interventions. Exercise may stimulate various benefits to the musculoskeletal system. Such benefits include the development of new healthy cells that will replace the healthy cells that died from the cancer treatment. This process has been shown to give patients the strength gains needed to perform daily activities, more motivation and energy, and improvement in the patient's overall quality of life.

¿QUÉ TENGO QUE HACER CON ESTO?

Debes hacer una redacción personal, ESCRITA A MANO, en la que aparezcan al menos los siguientes apartados:

- * Un resumen del artículo
- * Un comentario personal sobre el mismo (estás de acuerdo o en desacuerdo, te parece útil la información, es discutible con otros datos consultados, es difícil de llevarlo a cabo, etc.)
- * Una comparación con tus hábitos individuales (extenderse en éste apartado, con referencias a tus hábitos de vida, o los de tu familia o grupo de amigos).
- * Propón un juego, actividad o ejercicio donde se pueda mejorar o trabajar el contenido del artículo.

Debes hacer la redacción de 1 carilla (1º, 2º y 3º de ESO) o 1-2 carillas (4º ESO y 1º Bachillerato) y se tendrá en cuenta en su valoración lo siguiente:

- * 40% el contenido (si lo que dices tiene lógica, si has captado bien la información...)
- * 30% la expresión (si has logrado escribir bien lo que querías decir).
- * 30% las faltas de ortografía y caligrafía.

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