

EXERCISE AND IMMUNITY

HOW EXERCISE INFLUENCES THE IMMUNE SYSTEM

Introduccion

The immune system is our body's natural defense against external conditions such as viruses, infections, and bacteria. Through its action, the body attacks and destroys the infectious organisms that invade it. These foreign bodies are called antigens.

There are many factors that can affect our defenses:

➔ Internal factors, such as diseases, seasonal changes or extreme ages of life, that we cannot control or modify.

➔ External factors, such as hours of sleep, stress, diet, smoking and sedentary life

Health benefits of physical exercise or sport

Some of the theories that explain this effect are:

- **Physical activity can help remove bacteria from your lungs and airways, thereby reducing your chances of catching a cold, flu, or other respiratory illness.**
- **Exercise causes changes in antibodies and white blood cells. Leukocytes are the cells of the immune system that fight disease through antibodies, proteins that neutralize bacteria and external agents. These antibodies and leukocytes circulate faster with regular exercise, so they can detect and fight disease more quickly and effectively.**
- **A brief rise in body temperature during and immediately after exercise can prevent bacterial growth. This rise in temperature can help the body better fight an infection, similar to what happens when you have a fever.**
- **Exercise decreases the secretion of stress hormones such as cortisol. Some stress increases the chances of an infection developing. Lowering stress hormones can protect against illness**

Physical Activity and Tumors

Today it is fully accepted that a strengthening of the immune system as a result of exercising prevents the appearance of cancers, It also contributes by supporting immunological therapies (immunotherapies) against cancer or even acts by palliating the collateral effects of chemotherapy and radiotherapy that as we know they produce undesirable effects in a collateral way.

How does exercise benefit the immune system?

Exercise has a beneficial effect on health and consequently on the immune system of the people who practice it. This is manifested by the activation of fat metabolism, antioxidant action and neutralization of stress that damages the immune system so much.

In addition, moderate physical activity exerts a direct action on the immune system, benefiting its defensive capacity by inducing an increase in both the production of immunocompetent cells and their mobility through the bloodstream, also favoring their activation, producing more antibodies and predominantly cytokines. anti-inflammatory type.