

Cardiovascular Diseases: How to Prevent Them with Targeted Physical Activity

Cardiovascular diseases remain today the leading cause of **death worldwide**. In Europe, the United States, Central America, and Latin America, they are responsible for about **50% of deaths**. Excluding infant mortality and violent deaths, the percentage can reach up to **70%**.

For this reason, **physical activity** must first and foremost be **effective** in the **prevention and treatment of cardiovascular diseases**.

The True Origin of the Problem: Blood Vessels

Except for rare congenital **heart defects** or heart damage caused by incorrect training, most deaths have a **vascular origin**.

When, with **age**, **blood pressure** increases, it means that the **blood vessels** are damaged. It is precisely the compromised vessels that are the main cause of **heart attacks** and **strokes**.

For this reason, lowering **blood pressure** with medication without treating the **vessels** is a mistake.

Diseased vessels are fragile and internally coated with accumulations of waste. Under **physical or psychological stress**, the pressure can dislodge large plaques that, traveling through the blood, can block narrower arteries, causing **ischemia**, **tissue necrosis**, and death.

The Role of Hormones in Vascular Rejuvenation

In my essay ***The Core: Active Rejuvenation***, available in PDF on this site, I explore this topic in depth.

Here, I want to focus on a concrete strategy: stimulating the **natural production of regenerative hormones** through **training**.

Stress can kill, but it can also heal — it depends on how we use it.

Subjecting the body to **controlled physical stress** induces the production of **somatotropin (GH)** and **testosterone**, two fundamental hormones for the

regeneration of blood vessels.

The mechanism is explained in detail in my book *Athletic Preparation in Martial Arts and Beyond*, also downloadable for free.

Therapeutic Bodybuilding for Beginners

For those suffering from **hypertension**, the safest and most effective activity is **targeted bodybuilding**, avoiding exercises like **squats** and **deadlifts**.

Better to opt for **single-joint exercises**, such as:

- Seated **leg extension**
- Lying **leg curl**

These exercises should be performed in a **state-dynamic mode**, with loads below **50% of your one-repetition maximum (1RM)**.

Example: in the leg extension, you lift the weight, lower it by 10–15 cm, and raise it again, never fully relaxing the muscle.

This maintains **constant muscle tension**, temporarily blocking circulation and accumulating **H⁺ ions**, essential to activate **protein synthesis**.

Structure of an Effective Superset

- 30 seconds of continuous work (**pumping**)
- 30 seconds of rest
- Repeat for 3–5 sets

The load should be such that, by the third set, the muscle burns intensely.

After a well-executed superset, the **quadriceps** must rest at least 8–10 minutes.

During the rest, you can:

- Pedal lightly on a **stationary bike** for 2–3 minutes
 - Train **antagonist muscles** (e.g., leg curl after leg extension)
 - Avoid total inactivity (e.g., sitting on the phone)
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Systemic Rejuvenation Through Training

Weight training induces the **central nervous system** to release **tropic hormones** via the **hypothalamus** and **pituitary gland**.

These hormones stimulate **protein synthesis** not only in muscles but in all **target organs**.

Aging is **catabolism**. **Rejuvenation** is **anabolism**.

Gonadotropic hormones, for example, remove **cholesterol** from the arteries to produce **testosterone**, **estradiol**, and other hormones.

In practice, they clean the **blood vessels** from the inside.

Conclusion: The Gym Is Your Medicine

There is no need to wait for science to invent a **magic pill**.

There are many promises, but few results.

Gyms are everywhere. What matters is knowing **how to use them**.
