



Byline and electric exercise

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► **Electrical therapy and exercise is nothing new**

Electrical exercises were used by Russian weightlifters during the 1972 Munich Olympics.

Electrical exercises are also used in military submarines to keep the crew muscles in shape.

NASA has used electrical exercises for its astronauts to prevent muscle wasting during weightlessness. Ancient physicians used electric fish to treat electric shocks to the head to treat headaches and other ailments. Patients with paralysis and other nerve damage are a good choice for chronic pain and epileptic seizures.

► **Electrical exercise in spinal cord patients** ◀

Electric bike training is used for spinal cord injuries all over the world and in many ways is better than muscle exercise for those who are not injured. It also provides better insulin and mineral status in the lower extremities.

► **Physiological effects of electric exercise** ◀

These exercises are often done for 15-30 minutes each time or once or several times a week. After a few minutes of electrical exercise, the heart rate increases by 30-50%. The blood volume of the heart doubles - from 4 to 8 liters per minute - and the blood flow in the legs increases accordingly.



The amount of oxygen received after 5-10 minutes increases from the normal resting level of 0.2 liters per minute to 1-1.5 liters per minute. Patients report that electric exercise, like a healthy person, feels good after exercise.

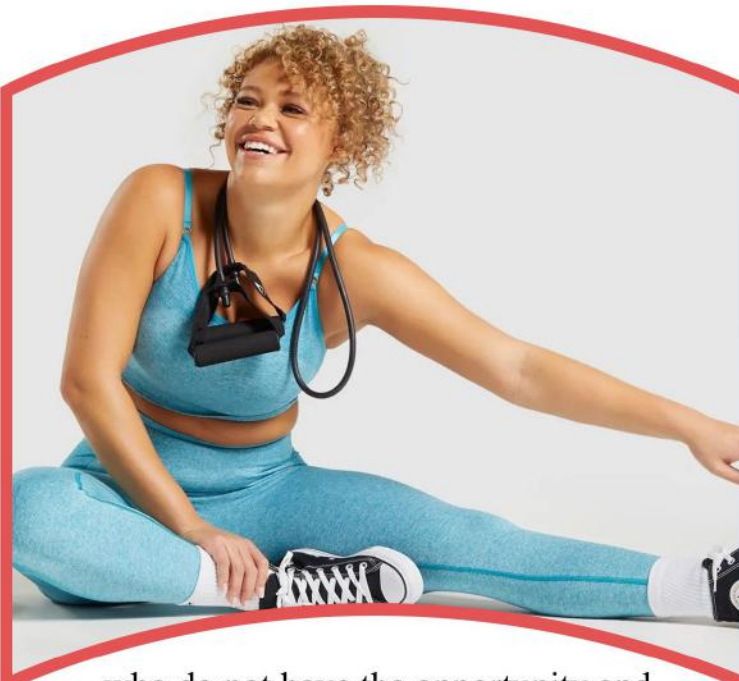
During exercise, an increase in insulin-stimulated glucose and an increase in glucose transporter protein (GLUT4) has been observed in muscle cells, thus preventing type 2 diabetes.

Conclusions and prospects of electric exercise
A sedentary lifestyle can cause serious changes in spinal cord injuries over the years, but many are reversible with exercise. However, this exercise requires time and help, and the positive effects will be achieved only if done regularly and for life.



Byline is a system designed for women who want to lose weight or reduce their size. This includes using an individual training and shaping program, along with a personalized nutrition program. Along with these programs, a computer-controlled training simulator built specifically for the line is used. Using electrical exercise, both before and after weight loss, muscle mass is built and maintained so that if Muscle mass increases, body size decreases, and a person looks slimmer. This is because one pound of fat takes up four times as much as one pound of muscle. Electrical exercise increases muscle mass in injured patients.

Even healthy people can benefit from the effect of electronic muscle training and gain stronger muscles. Byline, it can act as an effective incentive for women who do not have time to exercise. We consider Byline as a good option for people



► **How electric exercise works** ◀
 The purpose of electrical stimulation of nerves and muscles in humans is to mimic the natural process. When a device delivers electronic impulses that correspond to those normally passed through a nerve cell membrane in a nerve pulse, we obtain the same muscle contraction. There is essentially no difference between normal electrical activity. There is no electrical stimulation in the nerves and muscles created by an electronic simulator.

who do not have the opportunity and desire to spend time going to a gym or running.