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The Sport I Love

Physiology is the scientific study of normal functions of the living organism and their parts. Sports physiology is the study of how physical activity affects the body and what impacts of the exercises have function and structure of the body. Physical activity is very important for the body because it helps control weight by burning calories, lowering hypertension, improving blood circulation, reducing the risk of several diseases and health problems. It is primarily the study of how the body adapts physiologically to the acute or short-term stress of exercise, and the chronic or long-term stress of physical training. A couple sports that have a really big impact on physiology of the body are walking-running, swimming, and strength training.

Research on athletes has been active for more than one hundred years. These athletes have served as subjects for the study of the upper limits of human endurance. One of the first physiological studies on athletes, Austin Flint, occurred in 1871, which was one of the most celebrated athletes in this era. According to Physiology of Sport and Exercise by W. Larry Kenney, Flint was a "walker-runner that would walk 644 km (400 mi) in five days" (Kenney p.405). There were a few questions about this muscle metabolism exercise which demonstrated the loss of protein from the body due to this heavy exercise. For this type of exercise, you need to start slowly especially if you're not used to running or walking fast paced. According to Physiology of Sport and Exercise by W. Larry Kenney, if you start by excessively running everyday there is a possibility that your heart rate will go up and "long

side oxygen uptake during exercise in order to reach steady-state heart rate during constant workload, sub-maximal exercise" (Kenney p.408). Oxygen consumption rises exponentially during the first few minutes of exercise, and after three or four minutes it starts to reach a steady rate. According to the article Physiology in Sport by Physiopedia, "the energy required by the working muscles and ATP production in aerobic metabolism are balanced, without lactate accumulation in the blood" (Physiopedia). Cardiac output during exercises increases because of an increase in stroke volume because during the sport you are performing the more you push your body the more it becomes dependent on the heart. During walking-running, heat is produced in your body which causes sweat. The sweat glands are stimulated by heated blood which is an increase in sweat production. Evaporation of sweat leads to fluid and electrolyte loss; This can result in dehydration. It is always important to train your body before you start pushing it and over working it.

Swimming is a good sport and activity that can help improve your health in many ways. Swimming every day or once a day helps keep your heart rate up, takes off the impact of stress on your body, decreases the risk of chronic illness such as diabetes and heart disease, and helps prevent healthy lungs. According to Physiology in Sport by Physiopedia, swimming helps "build endurance, muscle strength, and cardiovascular fitness" (Physiopedia). Swimming in cold water can cause your body temperature to drop. When you swim the body shuts down circulation in your skin but then adds pooling warm blood in your core which helps to protect the vital organs by reducing blood flow to the skin and limbs. According to Physiology in Sports by Physiopedia, "The heat produced by the increase in metabolism during exercise must be dissipated in order to prevent a dangerous increase in core temperature. This is best accomplished by vasodilation of the blood vessels

in the skin. This allows for the heated blood to pass close to the body surface and lose heat through radiation and conduction" (Physiopedia). Swimming may seem as a boring sport or activity that may not look as helpful as it seems, but did you know that swimming helps a person with arthritis, or a joint injury may find this sport/activity very suitable as the water reduces stress on weight bearing joints.

Strength training is one of the sports that many people love to do. According to Strength Training by Physiopedia, "Strength training stimulates a variety of positive neuromuscular adaptations that enhance both physical and mental health". Lifting can be very beneficial in many ways, many people do it to compete with others and others do it for fun and to be healthy. A few benefits that come with lifting is building muscle, heart health, decreasing blood pressure, and enhancing metabolic health. According to the article Strength Training by Physiopedia, "It is important to overload the musculoskeletal system over time to create and sustain physiological adaptations from strength training and to overcome accommodation of muscles" and be able to lift carefully (Physiopedia). While progressing with strength training you must make sure that over time you are adding weight. The perfect weight for strength training is body weight, weight machines, suspension equipment, and free weight. Strength training can help with chronic diseases like diabetes. According to the article Strength Training by Physiopedia, "strength training provides a practical way for combating obesity and for eliciting physiological and psychological improvements that positively impact quality of life" (Physiopedia). It can also improve cardiovascular disease (CDV). According to the article Strength Training by Physiopedia, "the magnitude of resistance exercise-induced reductions in SBP (5-6 mmHg) and DBP (3-4

mmHg) are associated with an 18% reduction of major cardiovascular events (Blood Pressure Lowering Treatment Trialists Collaboration, 2014) (Physiopedia).

All in all, Sports physiology is the study of how physical activity affects the body and what impacts of the exercises have function and structure of the body. Physical activity is very important for the body because it helps control weight by burning calories, lowering hypertension, improving blood circulation, reducing the risk of several diseases and health problems. A couple sports that have a really big impact on physiology of the body are walking-running, swimming, and strength training. These sports have a big impact on our body and health. It is important to always stay active and moving even if it's for a couple of minutes a day to keep the blood circulation throughout the whole body, especially through the heart and brain.

Citations

"Physiology in Sport." *Physiopedia*, 2023, www.physio-pedia.com/Physiology_In_Sport.

Kenney, W. Larry, et al. *Fisiología Del Deporte y El Ejercicio*. eighth ed., Editorial Médica Panamericana, S.A., 2014.

"Strength Training." *Physiopedia*, 2023, www.physio-pedia.com/Strength_Training.