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Effects of Physical Exercise on Human Being

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Abstract

The regular physical exercise is reflected in a slight elevated basal metabolic rate Bio mechanical effects increase in the size and number of mitochondria, myoglobin and hemoglobin content and thereby increased oxidative capacity. The increased oxidative capacity of the trained muscle has greater ability to use non-carbohydrates for energy. Increased metabolic rate causes burning of fat and content of muscle protein increases. Regular practice of Exercise, increase in the size of fibers and connective tissue. Vital capacity, breathing capacity and total lung capacity increases due to exercise. The amount of air ventilated at the maximum efforts, increasing with training the heart size increase, increase in the thickness of ventricle walls thereby increasing the efficiency of heart, increase cardiac output and stroke volume. In other effects includes Decreased body fat, decreased blood levels of cholesterol and trygleyrides. Increased heat acclimatization and increased breaking strength of bone, Ligaments and Tendon.

Introduction

Exercise present the material essential for understanding relevant effects in various mechanism of body physiological change describe the immediate and Long term effect of modern exercise and specific training on the function of muscle, organs, systems of the body and the relationship of activity and fitness to health (sinku,2012). Physiological effects due to modern exercise and specific training is three stages are as Biochemical effects, Systematic effects and other effects. In other effects includes Decreased body fat, decreased blood levels of cholesterol and trygleyrides. Increased heat acclimatization and increased breaking strength of bone, Ligaments and Tendon.

Increase ATP and PC Storage capacity

ATP and PC are immediate source of energy and break down of ATP release energy for muscular contraction and can be used by the muscle cell to perform its work. But there is limiting quantity of ATP in a muscle cell and the ATP can give 5.7 to 6.9 kilo calories of energy only. Regeneration of ATP is required for energy. Regular aerobic training may improve muscular effect of ATP and PC. The regular physical exercise as in athletes is reflected in a slightly elevated basal metabolic rate(sinku,2012). Increased metabolic rate causes burning of fat and content of muscle protein increases

Effects of Muscular system :

Regular practice of exercise increase in the size and number of mitochondria, myoglobin and hemoglobin content and thereby increase oxidative capacity (sinku,2012). The increased oxidative capacity of the trained muscle has greater ability to use non-carbohydrates of energy.

Chronic effects of exercise also increased the oxidation of fat and carbohydrates. Fat is the form of triglycerides are broken down into 2 carbon compound (A) group of by a series of reactions called beta oxidation (B) before entering into creb cycle.

Endocrine effects:

Endocrine glands improve in its size and level of hormonal secretions. Which primarily maintain the chemical balances of the body, these effects are attributed to good health through exercises. Due to specific training the higher level of secretions of androgens takes place and improve the athletic performance by increasing maximal muscular strength.

Effectson muscle fiber

Though the number and types of fiber is genetically determined, the aerobic training may change their proportion by increasing inter medially type of red muscle fiber. Many fibers are not able to contract and they are known as dormant/inactive fibers. Modern exercise improves transmission of nerve impulses and thereby cause dormant fiber to become active. The individual muscle fibers increase in thickness as a result of strength training. If the slow twitch fiber type are experientially stimulated at the steady low frequency over extended period as in long distance running, the fiber becomes predominately slow twitch type. On the countering, as might be expected quick bursts of muscle activity promote development of fast twitch type.

Growth of Muscle

Growth of total muscle is due to mainly to the increase in fibre size as muscle fibers are not created through exercise but they are enlarged. Modern exercise improved cardiovascular functioning cause the more and more blood being supplied with specific training and the muscle fiber becomes more active and efficient.

Respiratory effects:

Regular practice of exercise increase Vital capacity, breathing capacity and total lung capacity. The amount of air ventilated at the maximum efforts, increase with training. Normally, the maximum minute ventilation is about 70-100 liters per minute. In case of a trained athlete minute ventilation increases to 120 liters per minute in highly trained endurance athletes, the volumes have been found even upto 180 liters/minute. Increase in pulmonary ventilation with training is caused partially by increase in the maximal oxygen uptake, which leads to an increased production of carbon dioxide and due to a higher level of locate. Tidal volume with modern exercise, breathing frequency is reduced with training this leads to extraction of more oxygen from the inspired air diffusion of oxygen through the alveoli membrane is increased; the mainly due to increase in the number of pulmonary capillaries and increased area of alveoli.

Circulatory effects:

Heart size increases due to exercise and the strength training causes increase in the thickness of ventricle walls thereby increasing the efficiency of heart. Stroke volume increases progressively from rest to moderate work and than it levels off at about 30 to 40% of the maximum aerobic power. As result exercise, the size of the heart change Regular practice of exercise increased cardiac output by 40-60% of maximal capacity during rest it is around liters/min. whereas while exercising, it increases upto 40 liters/minute..

Blood pressure

Blood pressure control due to exercise as the requirement of blood by the muscles is increased. The pressure exerted on the walls of the blood vessels increases as the heart pumps more and more blood to meet the requirement of muscles. Pulse become normal in the shorter duration after the cessation of activity in case of trained athletes. Exercise resulting as new capillaries are formed within the muscle fibers. The additional capillaries increase the supply of oxygen to tissues and the latent capillary become active and start. The quantity of R.B.C.'s increases with regular training.

Cardio- Respiratory Effects:

Heart rate shows a gradual adaptation to an increased work load by increasing proportionally to the modern exercise and will plateau at a given level for about 2 to 3 minutes. The resting heart rate decreases with modern exercise. The rate of oxygen consumption can be estimated by taking the heart rate. The amount of blood flowing to the various organs increases due to exercise.

Hematological effects

Exercise increases the total blood volume, with a corresponding increase in the amount of hemoglobin. As the result of specific training some effects occur in lung volumes and capacities. The volume of air that can be inspired in signal maximal ventilation is increased. Pulmonary resistance to an flow is also decreased.

Effects on tissue

Exercise causes additional stress on connective tissue of muscles and makes then thicker and tougher as exercise multiplies tendons and ligaments modern exercise and specific training tones up muscles improve the body shape by increasing the physical, physiological and biochemical potential of muscle (sinku,2012,sinku&2014). Trained muscles are less many to injury during strenuous and vigorous exercises like stretching, jumping punching etc.

Other Effects:

Other effects also resulting, decreased body fat, decreased blood levels of cholesterol ,decreased blood during resound exercise increased heat acclimatization and increased breaking strength of bone, ligament and tendons.

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