



-this is a diagram off the chambers and arteries in the heart.

Valves prevent backflow of blood. The bicuspid valve allows blood to flow in one direction only, from the left atrium to the right ventricle. The tricuspid valve allows blood to flow from the right atrium to the right ventricle. The pulmonary valve prevents backflow from the pulmonary artery. The aortic valve prevents backflow from the aorta into the left ventricle. To measure cardiovascular endurance these tests will be approved, 12 minute run, VO2 max testing, the Bruce treadmill test protocol, Rockport fitness walking test.

Acute responses to exercise (short term effect) would be increased heart rate, shortness of breath, increased stroke volume, increase in lactate production (energy) and increase in temperature in muscles / muscle fatigue. These can be improved by long term effects, lower resting heart rate (meaning the heart would need to pump less / slower which decreases diseases e.g heart attacks), longer muscle endurance, muscle and heart hypertrophy and more energy being produced.

Muscle fibre types

High-level perseverance competitors regularly have the next extent of slow-twitch (Sort I) muscle strands. These slow-twitch strands are more productive at utilizing oxygen (and oxygen consuming digestion system) to produce more fuel (ATP) for constant period of time, expanded muscle compressions over a long time. They fire more gradually than fast-twitch strands and can go for a long time some time recently they weakness. In this manner, slow-twitch filaments are awesome at making a difference competitor run marathons and bike for hours. Be that as it may quick muscle fibre sorts (sort 2) since fast-twitch fibres utilize anaerobic digestion system to make fuel, they contract fast and don't have a high fatigue as sort/type 1 they are superior at producing brief bursts of quality or speed than moderate muscles. In any case, they weakness more rapidly. Fast-twitch filaments for the most part deliver the same sum of drive per compression as moderate muscles, but they get their title since they are able to fire more quickly. Quick muscle fibre sort 2A These fast-twitch muscle filaments are too known as middle fast-twitch filaments. They can utilize oxygen consuming. With endurance training, the body becomes better able to produce ATP through aerobic metabolism. The cardiorespiratory system and aerobic energy systems become more efficient at delivering oxygen to the working muscles and converting carbohydrates and fat to energy. There are many ways to train for improved aerobic endurance. The duration, frequency, and intensity of each type of training vary. Focusing on slightly different energy systems and skills will result in a well-rounded program that promotes a variety of physical adaptations. Running or cycling, for example, increase heart and lung capacity, while resistance exercises build physical strength. Combining different types of workouts in your training program can help you to maximize your endurance. Some of the most well-known endurance training programs include Long, slow distance training is the most common type of endurance training and foundation for marathon runners, long-distance cyclists, and other athletes that need long, sustained steady energy outputs. It is also the easier form of endurance training for new or novice exercisers. Pace/tempo training consists of training at a steady, but high

intensity; just slightly higher than "race pace" for a shorter duration (usually 20 to 30 minutes at a steady pace) Interval training consists of short, repeated, but intense physical efforts (usually 3 to 5 minutes followed by short rest periods). Interval training is a great opportunity to mix in resistance activities, such as calisthenics, along with short bursts of cardio. Circuit training consists of a series of specific exercises performed for a short duration and rotated through in quick succession with little or no rest in between. Traditional circuit training routines include both strength training and endurance exercise and can be customised to meet any athlete's training goals.

Long term effects - To increase the proportion of fast-twitch tissue in your muscles, you'll need to train specifically. In the weight room, this consists of a short set of up to eight repetitions using a heavy weight. Using light weights and performing many repetitions trains the slow-twitch fibers. If you are a runner, performing frequent sprint workouts does not appear to change your muscular proportions. Performing sprint workouts in combination with heavy strength exercises for your legs may show an improvement

The nervous system:

The nervous system that conducts stimuli from sensory receptors to the brain and spinal cord and conducts impulses back to other parts of the body so we can protect / live day to day life, we need the nervous system in everyday life and it's so important because it controls balance , taste , pain , smell , touch, sight and movement . For example, the nervous system helps us feel / locate pain and gives us reflexes this will be needed in sport for making a save in football or am dodging a punch in boxing.

The human body is divided into two different nervous systems. The two systems are the Autonomic Nervous System and the Somatic Nervous System. The somatic nervous system is the system involved with voluntary actions, like walking and talking. The autonomic nervous system is involved with involuntary actions such as breathing, your heart beating, and salivating.

preview from Notesale.co.uk
page 5 of 15