

Nutrition and fitness (answer the questions)



Nutrition and Fitness Question Dynamic exercise causes the contractions of concentric and eccentric muscles and the exercises may include swigging the leg, arm circles, jogging, and stretches among others. Isometric exercises cause the contraction of a muscle for a given duration of time and they include wall squat hold, holding a plank for 15 seconds among others (Simic, Sarabon and Markovic 136). The differences in the response to dynamic and isometric exercise including the causes of Physiological responses are as discussed below.

Isometric exercise has neither contractions nor joint movement. Unlike in dynamic exercise, which is performed under a range of motions, isometric exercise is done in static positions. Isometric exercise is more suitable to people who are immobilized and can be performed unsupervised while on the other hand dynamic exercises are more vigorous and one may require supervision as they pose a greater risk.

A lot of energy is consumed because of the many motions involved in dynamic exercises. As the rate of breathing is gradually increased, more oxygen is consumed. Blood pressure varies significantly during the day as the body is exposed to different exercise. An isometric exercise leads to increased heart rate, systolic and diastolic, therefore, not advised to persons suffering from hypertension. A physical unit of work is estimated differently in both dynamic and isometric exercises. The duration of time under which a muscle is exposed to tension is used to measure the intensity of isometric exercise, in dynamic exercises the distance the mass is moved plays a significant role. Dynamic exercises also involve strength training which has great impacts in muscle building viability of connective tissues and the general wellbeing of the body. Isometric exercise on the other had does very

little in muscle training but helps maintain the muscles.

Physiologically a person who undertakes dynamic exercises regularly has the lowest risk to heart attack as the body burns large amounts of cholesterol during the exercise. During the dynamic exercises for instance jogging, the body's rate of metabolism increases above normal and this leads to sweating and panting due to increased heart rates. The constriction of the blood vessels and arteries is the main reason of increased blood pressure during both the isometric and dynamic exercises.

Question 2

The cardiovascular system responds in a complicated manner to dynamic exercises. It adjusts appropriately to keep the brain and the rest of the body parts supplied with blood. The ways in which the testing protocols can be improved to elicit higher cardiovascular response are discussed as follows. Exercise testing should only be conducted by qualified medical practitioners who understand exercise physiology. In the move to improve this testing protocols the right equipments, medication and trained practitioners well conversant with cardiopulmonary resuscitation should be in place. The physicians should be keen to observe any contradictions that may arise in the process of exercise testing.

Patients should be well informed of what is require of them, for instance those who smoke should refrain to do so 4 hours prior to testing. They should also be informed of any risk and contradictions that may be experienced.

The individuals undertaking the test should be highly motivated since the exercises are vigorous and energy consuming. Skeletal muscle characteristics of different individuals should be put into consideration.

Different body structures have different levels of tolerance to muscle

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tensions. Other protocols for exercise testing include starting the exercise with light warming activities before moving to a more intense activity.

Works Cited

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