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Q1: Write a paragraph on short term and long term effects of exercise on cardiovascular system .

Answer:

Many People know that regular exercise can help aid in weight loss, Boost Energy improve mood. But it Has Both short and Long Term Effects On The Cardiovascular system.

Short Term Effects :

- Faster Heart Contraction. Which leads To increase heart Rate and Increased circulation which takes The Blood to muscles quickly
- More forcefully heart contraction with each heart beat which leads to greater amount of blood pumped through The body.
- Increase in Stroke volume (SE)
- Increase In Cardiac Output (Q)
- Increase In Blood Pressure (BP)

Long Term Effects:-

- The heart and Lungs become more efficiently as cardiovascular training increase.
- Decrease heart rate Which means heart doesn't have to Beat as often to circulate blood.
- Improve ability to draw in deeper and longer breaths and take Fewer breathe.
- Reduce risk of Heart Disease's

The cardiovascular system uses a combination of Central Nervous System and local mechanism to Respond to Exercise. Exercise increase the Sympathetic activity and reduces parasympathetic activity leading to increased contraction and Increased stroke volume.

Q2: During exercise which hormones are involved and how they response to exercise?

Answer:

Hormones Involved During Exercise:-

- Insulin
- Glucagon
- Cortisol
- Epinephrine and Norepinephrine
- Human growth hormone
- Testosterone
- Insulin Growth Factor
- Brain derived Neurotrophic Factor

Response Factor Of Hormones:

Insulin:

A peptide hormone produced by pancreas. It regulates carbohydrates and fat metabolism. It is important to know that insulin can cause fat to be stored in adipose Tissue instead of being used as fuel to muscle activity. When exercise starts the Sympathetic nervous system suppresses the Release Of insulin, consequently , it is important to avoid Foods with high sugar before exercise because it can elevate insulin level and promote glycogen storage Instead of Allowing It to used as Fuel For physical activities.

Glucagon:

Glucagon released in response To low levels of blood sugar, glucagon is produced by the pancreas to stimulate the release of free fatty acids from adipose tissue and increase blood glucose levels both of which are important for fueling exercise activity. As glycogen levels are depleted during exercise glucagon released additional glycogen stored in liver.

Cortisol:

Cortisol is catabolic steroid Hormone produced by adrenal gland in response to stress low blood pressure and exercise. It supports energy metabolism during long terms of exercise by facilitating the breakdown of triglyceride and protein to create the glucose necessarily help fuel exercise. Exercising For too long can elevate levels of Cortisol and catabolize muscle protein for fuel instead of conserving it to be used to repair damage tissues.

Epinephrine and Norepinephrine:

These amine hormones play an important role in helping the sympathetic nervous system produce energy and regulating the body's function during cardiorespiratory exercises.

Testosterone:

Testosterone is responsible for muscle protein synthesis and repair of muscle protein damage by exercise and paly a significant role in helping grow skeletal muscle. It works with specific receptor sights and is produced in response to exercise that damages muscles protein

Human growth hormones:

The body produces HGH during REM cycle of sleep and it stimulated by high intensity exercises such as heavy strength training , explosive power training or cardiorespiratory at or the onset of blood locate .

Insulin Growth Factor:

IGF is peptide hormone produced in the liver and supports the function of high HGH to repair the protein damage during exercise ,which make it an important hormone for promoting muscle growth.

Brain derived neurotrophic factor :

The production of BDNF is closely related to the production of HGH and IGF , the same exercise that elevate levels of those hormones also increased amount of BDNF . High intensity exercise can stimulate anabolic hormones for muscle growth while elevating level of BDNF which can help improve cognitive faction.