**DPT 4th Semester**

**Course Title: Exercise Physiology Instructor: Dr. Ahmed Hayat**

 **MID Term Assignment Marks: 30**

***NOTE: Mention your name and roll number on the assignments.***

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

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

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

ANS: Exercise: is given energy for the muscles to use for the activity.

* Cardiovascular Exercise : is the production of new cells.durring exercise the people cardiovascular, respiration ,energy and supply of the blood and energy to use the different activities of the muscles and waste substances remove that the body.
* Short-term effects instantly when person takes exercise and short-term exercise effects on the physical working.
* Long-term effects i.e.1week performs exercise take a time after the outcome of the after 4 weeks exercise and regularly continue exercise.
* It’s have many short term and long term effects on the cardiovascular system:

EFFECTS ON THE CARDIOVASCULAR SYSTEM:

* Increase in heart rate.
* Increase stroke volume and cardiac output.
* Increase in blood pressure.

BLOOD PRESSURE:

* When person start to aerobic exercise(i.e. cycling),that person blood pressure arise the increase and its circulatory system activity to reached more oxygen and glucose in activity of the muscles. A long-term adopted the exercise is increase your systolic and diastolic blood pressure during rest and exercise.
* Aerobic exercise is control and less high blood pressure its effect on the reducing your blood pressure.
* Short-term effects of exercise: when you perform exercise your blood pressure is increase.

CARDIAC OUTPUT:

* The whole amount of the blood in your heart pumped in 1 minute. It regulation of the blood amount in your heart pump out in 1 contract or stroke volume , your heart times of number and 1 minute heart rate and heartbeat.
* Cardiac output as a short and long term in greater and its effects of regulation of the aerobic exercise.
* Cycling, walking, swimming it is aerobic exercise it is improve cardiac output increase due to increase in your stroke volume and the increase heartbeat.

HEART:

* Short-term exercise: when person starting the running for half hour that person cardiac muscle is not increase and not large and not thickness of the heart wall.
* Long-term aerobic exercise: will greater the size and thickness of the cardiac.

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

ANS: You can perform exercise, that time your body secretes hormones and chemicals is called the endorphins.

* During exercise following hormones are involved:
1. Epinephrine.
2. Nor epinephrine.
3. Growth Hormone.
4. Testosterone.
5. Estrogen.
6. Cortisol.
7. Insulin
* Which hormones during exercise perform they what response of the exercise:

INSULIN:

* Its peptide hormone produced the pancreas.
* Insulin regulation of the fats and carbohydrates metabolism.
* You start the exercise, your sympathetic nervous system suppress and insulin, releasing.
* Insulin helps the glycogen store.
* It’s used to fuel physical activity.

CORTISOL:

* Cortisol is steroid hormone secrete by the adrenal gland this is to response of the tension/stress. Its maintain energy metabolism with due to long time of the exercise and its response providing the cut down of triglyceride and protein to creating the glucose it is the need to fuel exercise.
* Cortisol protrudes the metabolism and catalyst muscle protein fuel it is used for the activity of the muscles.

EPINEPHRINE:

* Its amine hormones.
* Its help for the sympathetic nervous system produce energy and cardio respiratory exercise regulating the body of the function of the system.
* Increase blood sugar, help of the cut down of the glycogen for the energy and the support of the fats metabolism.

TESTOSTERONE:

 This is Steroid hormones. Its activity for the specific receptors in the body and sites of the receptor and it is secreted in the responding to the exercise that damage of the muscles protein so it’s not use of the activity of the muscles.

GROWTH HORMONES:

* It is the peptide hormone. Produce anterior pituitary gland that protrudes the muscles growth. Growth hormone in increase during exercise time.
* Its support the function of the HGH (HumanGrowthhormone) and during exercise it’s maintain damage of the protein.

ESTROGEN:

* It is the controlling of menstrual phase.
* During the exercise it is increasing and depends on menstrual cycle.