SUMMARY

The Effect of Using Training Loads of Different Intensities on Some Blood Coagulation Factors For Football Youngsters

Research problem :

Blood coagulation play an important role in human health, and is a dual weapon one is positive help in homeostasis and the other is negative may cause health problems as thrombosis is one of the causes of heart attack and its crisis and thrombosis over obstructed coronary artery whether complete or partial by cholesterol deposits account for about 75% of causes of heart attacks.

Thrombosis is the last stage in artery occlusion preventing blood flow to cardiac muscles causing infarction and if pass to pulmonary artery cause pulmonary embolism and may cause sudden death and this explains the great attention to blood anti-coagulants and aspirin and for sports training that was ignored for long period although its importance as a health means to control thrombosis.

The health benefits from sports training becomes more evident but what are the training loads intensities needed to reach these health benefits?

To answer this question, the researcher tried to conduct this research to reach the optimum methods to affect some blood

coagulation factors to increase its effectiveness in coagulation and blood clot and also excluding the intrinsic blood coagulation using different training intensities in soccer youngsters under 15 years.

Research importance :

The research importance is trying to know the changes in some blood coagulation factors using different training intensities and finding the relationship between the different intensities and changes to some blood coagulation factors for soccer youngsters under 15 years.

Research aim :

1- Knowing the levels of some coagulation factors for soccer youngsters during rest.
2- Knowing the changes in some blood coagulation factors under investigation for soccer youngsters under different training loads intensities.
3- Knowing the differences in the changes of some blood coagulation factors under investigation for soccer youngsters under different training loads intensities.

Research hypothesis :

1- There are statistically significant differences between the pre and post measurements for the control group after the moderate and maximum loads in some blood coagulation factors under investigation in favor of the post-measurements.

2- There are statistically significant differences between the pre and post measurements for the experimental group after the moderate and maximum loads in some blood coagulation factors under investigation in favor of the post-measurements.
3- There are statistically significant differences between the experimental and control groups in the post measurements after the moderate and maximum loads in some blood coagulation factors under investigation in favor of the experimental group.

Research procedures :

Research method :

The researcher used the experimental method that fit with the nature of this research.

Research sample :

The sample was chosen randomly and was (20) players from Port-Fouad sports Club in the age group under (15) years divided into two matched groups one experimental and the other control each is (10) players with (5) additional players for pilot studies.

Research variables :

The research variables was determined according to previous studies and was :

- Bleeding time.
- Clotting time.

- Prothrombin time.
- Partial thromboplastin time.
- Platelets count.
- Hematocrit.
- Total calcium.
- Cortisol level.

Pilot study :

The researcher conducted pilot study from 14/6/2000 to 21/6/2000 on 5 players from outside the research sample and from the same sample population and the measurements was applied. This pilot study aimed to :

- Standardization of the training loads intensities.
- Determining the best methods to conduct measurements.
- Adjusting apparatuses and tools.
- Determining the roles of cooperators.
- Knowing the difficulties that may be faced.

Essential study :

The researcher conducted the laboratory measurements in Port-Fouad sports club and was :

- Pre measurement :
    - Blood samples were drawn from players at rest at Thursday 22/6/2000.

- A blood sample was drawn from players after endurance shuttle run test (5x55m) run as moderate load in Friday 23/6/2000 (heart rate 136-155 beat/minute).
- A blood sample was drawn from players after speed test (50m) run as maximum load in Friday 30/6/2000 (heart rate 169-180 beat/minute).

- The training program was applied for 8 weeks with 5 units per week from 1/7/2000 to 25/8/2000 on the experimental group and the traditional program on the control group.
- Post- measurements :
  - A blood sample was drawn from players after endurance shuttle run test (5x55m) run as moderate load in Saturday 26/8/2000 (heart rate 131-150 beat/minute).
  - A blood sample was drawn from players after speed test (50m) run as maximum load in Saturday 2/9/2000 (heart rate 164-175 beat/minute).

Statistical analysis :

The researcher used the following statistical manipulations :

- Mean.
- Standard deviation.
- Skewness.
- Kruskal Wallis test.
- Friedman test.

-

- The main results :

1- The training program for the experimental group that include different training loads intensities (moderate and maximum) as an experimental variables showed marked improvement in blood coagulation factors.

2- The experimental group using different training intensities (moderate and maximum loads) in the training program showed marked improvement in comparison with the control group as the results showed statistically significant differences between both groups in the post-measurement after the moderate intensity in favour of the experimental group in (bleeding time, clotting time, prothrombin time, hematocrit, total calcium, cortisol) while there is no statistically significant difference in (partial thromboplastin time and platelet count), and for the maximum intensity there was no statistically significant differences in all variables in the post-measurement except (partial thromboplastin time) that give significant difference in favour of the experimental group.

Recommendations :

1- Using a mix of the moderate and maximum loads in the training program to give the body their benefit on bloods coagulation factors.

2- Practicing standardized sports activity to increase the physiological adaptation and so reflected on the general health.

3- Increasing the research in the fields of sports and coagulation to gain more knowledge that will be reflected on the general health.

ABSTRACT

The Effect of Using Training Loads of Different Intensities on Some Blood Coagulation Factors For Football Youngsters

This research aims to know the changes in some blood coagulation for soccer youngsters under using different training load intensities, the researcher used the experimental method with two groups design one experimental and the other control, the sample was 20 players chosen purposely from Port-Fouad sports club under 15 years and the training program was applied from 1/7/2000 to 25/8/2000 and the result showed :

- Marked improvement in the experimental group using the training program for with different training loads intensities (moderate and maximum).
- There are statistically significant differences between the control and experimental groups in the post-measurement after the moderate intensity in favour of the experimental group in (bleeding time, clotting time, prothrombin time, hematocrit, total calcium, cortisol) while there is no statistically significant difference in (partial thromboplastin time and platelet count), and for the maximum intensity there was no statistically significant differences in all variables in the post-measurement except (partial thromboplastin time) that give significant difference in favour of the experimental group.

Suez Canal University
Faculty of Physical Education
Port - Said
Health Science and Health
Education and Dep.

The Effect of Using Training Loads of Different Intensities on Some Blood Coagulation Factors for Football Youngsters

By
Ahmed Ahmed Dobai
Thesis Submitted For Partial Fulfillment For The Requirement of Ph.D degree in Physical Education

Supervisors
Prof. Dr.
Hussein Ahmed Heshmat
Professor and Head of Physiology and Biochemistry Dep. in Faculty of Veterinary Medicine
Zagazig University

Dr.
Ahmed Mohamed Said Ahmed
Lecturer in Health Science and Health Education Dep., Faculty of Physical Education in Port-Said, Suez Canal University

Dr.
Adel Ibrahim Omar
Lecturer in Sports Training Dep., Faculty of Physical Education in Port-Said, Suez Canal University

2001