شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومـــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قَسَـــم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

EFFECT OF AEROBIC TRAINING EXERCISE ON NATURAL KILLER CELLS BEFORE AND AFTER PUBERTY IN GIRLS

Thesis

Submitted in partial fulfillment for requirement of master degree

By

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Effect of aerobic training exercise on Natural Killer cells before and after puberty in girls.**Sahar Mahmoud Mohamed El Sayed.** Supervisors; **Prof. Dr.Neveen Abd El Latif Abd El Raoof,** Assistant professor of physical therapy, **Dr. Soheir Shehata Rezq Alla,** Lecturer of physical therapy, Basic Science department Faculty of Physical Therapy, Cairo University; **Dr. Zinab Ali Hassan El Saadany,** Lecturer of clinical and chemical pathology, Clinical and Chemical Pathology Department, Faculty of Medicine Cairo University; Master degree thesis, 2011, p 96.

Abstract

Background: Effect of exercise on the immune system becomes a very interesting area for research especially in children and period of puberty. ***Purpose:*** This study was conducted to investigate the effect of aerobic training exercise on Natural Killer (NK) cells before and after puberty in girls. ***Subjects:*** sixty healthy girls aged from 10-15 years divided into two equal groups. The mean age (11.0 ±0.59) for group A (pre-pubertal) and (14.5 ±0.78) for group B (post pubertal). ***Material:*** Both groups received aerobic training exercises by walking on treadmill with moderate intensity 60-75% of the maximum heart rate 3 sessions per week for 4 weeks. Blood samples were drawn from both groups before beginning the training and after 24 hours of completing last session to measure NK percentage by measuring its 3phenotypes: $CD3^-$, $CD16^+$, $CD56^+$. ***Results:*** There was significant difference between before and after exercise in both groups in $CD16^+$ and the dual($CD16^+ + CD56^+$)(P=0.000) and between before and after exercise in measuring $CD56^+$ in group A, in $CD56^+$ not significant difference between before and after exercise in group B(P=0.110) between two groups there was significant difference in pre training level of $CD56^+$ (P=0.02)and in post-training level of $CD16^+$ and the dual $CD16^+ + CD56^+$ (P=0.000), there was no significant difference in post-training level of $CD56^+$ (P=1.000)and also in pre-training level of $CD16^+$ (p=0.266). ***Conclusion:*** The aerobic training exercise had a potent effect on NK cells percentage in healthy girls before and after puberty and the effect was clear on NK cells phenotypes: $CD16^+$ and $CD56^+$ and was greater in group A (pre-pubertal) than group B (post-pubertal). Exercise training can substitute the suppressive effect of estrogen on NK cells. So it was recommended with training of girls in pre& post puberty age and especially for pre-puberty girls.

Key Words: Natural Killer cells, Aerobic exercise, Puberty, immune system.

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