

**Effect of Muscular Exercise Programme With
and Without Antioxidant on Serum Level Of
S100B Protein In Male Albino Rats As A Marker
Of Central Exhaustion And Some Related
Parameters**

Thesis

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Summary

S100B is a reliable indicator of BBB disruption, its elevation during exercise may be a cause for concern, as a compromised BBB can allow for movement of substances into the brain.

Elevated S100B levels are recorded post-exercise and are most frequently attributed either to an increase in BBB permeability or to trauma to the head. However, it is noted that many studies were also able to show S100B increases even in sports without significant head impact.

The present study was conducted on 27 male albino rats of local strain .Rats have been selected for age 8-10 weeks old.

The rats were divided into 3 equal groups:

Group 1:- Included 9 for control.

Group 2:-Included 9 exposed to muscular exercise program only,

Group 3:-Included 10 exposed to muscular exercise program and take vitamin C.

All rats subjected to pre-exercise exhaustion test. All groups ran on a treadmill; after an initial 5-min warm up, the running speed was gradually increased to 25 m/min, which was maintained till exhaustion. Then blood samples were collected.

The rats in group 2 and 3 were subjected to treadmill exercise program for 3 months with supplementation of Vit.C as an

antioxidant in group 3. The blood samples were collected after post-exercise program exhaustion from all groups.

The following parameters were studied in each animal before exercise and after exercise program in resting and exhaustion state:

*S100B.

*MDA.

*TAC.

* Lactic Acid

Results obtained in this study revealed a significant increase in S100B protein after pre-exercise program exhaustion and post-exercise program exhaustion in all group. On comparing between pre and post exercise exhaustion in group 2 and 3 we found a statistically non-significant decrease in the level of increase of S100B after exercise program. Also degree of increase in S100B level in group 3 who received Vit.C is little than that of group 2.