

**Regular training modulated carbonyl group levels in psychologically stressed rats #19**

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The present work was designed to assess the utility of an 8-week swimming training program as a healthy tool to reduce protein oxidation expressed in terms of carbonyl group content in psychological stressed rats. To get this goal, sixty 6-8-weeks-old male albino Wistar rats weighing 145-155 g were used in this experimental study. The animals were randomly divided into three groups: control (lot A; n=20), stressed (lot B; n=20) and stressed & exercised (lot C; n=20). Rats were stressed by placing animals in a 25x7 cm plastic bottle 1 h/day, 5 day/week for 8 weeks. Protein oxidation was assessed as carbonyl group content in liver homogenates by reading the absorbance at 366 nm. The policy statement of the American College of Sports Medicine on Research with Experimental Animals was followed. Protein carbonyl content levels in liver homogenates were significantly decreased in stressed & exercised animals ( $0.58 \pm 0.02$  vs  $0.86 \pm 0.03$  nmol/mg;  $p < 0.05$ ) when compared with the stressed rats. Accordingly, the most striking feature of our study was that an 8-week moderate training program reduced oxidative damage induced by psychological stress.

**Key- Words:** Regular training, carbonyl group, psychologically stressed