

EFFECTS OF MILD PHYSICAL ACTIVITY ON WHITE CELL COUNT

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An experiment was carried out in normal adults to study the effects of mild physical activity such as coming to hospital on a bicycle. The subjects came to the Department of Physiology and rested on a bed for 30 minutes (rest). Then they worked on cycle-ergometer (set with a constant mild resistance) at a speed of 10 km/hr. for four minutes (E1). After resting for about 20 minutes they worked at a speed of 20 kg/hr. for four minutes (E2). Total and differential white cell counts were done on capillary blood obtained by finger prick at the end of each procedure.

Mean white cell count at rest was 5853 (SD-905)

The subjects were divided into two groups on the basis of previous training on muscular activity (sports etc.). Subjects with exercise training did not show statistically significant alteration at E1. The alteration was statistically significant at E2 (mean increase- 1038, SD-919) and the difference between E1 and E2 was also statistically significant (mean- 950, SD-831).

Those who had no exercise training showed a statistically significant reduction at E1 (mean reduction- 808, SD-796). The difference between rest and E2 was highly variable ranging from -1350 to 1450 (mean= -100, SD- 1179). The difference between E2 and E1 also was the same (mean= 708, SD= 886, range- from -400 to 2050). The changes in total count were seen in both lymphocyte and neutrophil counts. In general, the results indicated a reduction at E1 and an increase at E2.

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