



A ROM study was conducted at the department above from October 1 to December 15, 1994. In the study there were student volunteers exercising on the ROM, according to specified direction, for a period of two months. A total of 18 subjects completed the training program. Of this group, ten trained for a total of FOUR minutes/day for 5 days/week. The remaining eight subjects trained for EIGHT minutes/day for 5 days/week. The average total number of days of training per subject was 38. In addition to these two experimental groups there was also a control group of six subjects who basically did no exercise during the study period. All subjects who volunteered for the study were untrained and not engaged in any other exercise program. Prior to beginning the ROM exercise program each subject was tested for the following measures:

- 1) Body weight,
- 2) Body composition (percentage fat and fat-free body weight),
- 3) Maximal oxygen consumption or aerobic capacity (V02 Max) using the open ended-method treadmill test, collecting expired air and analyzing for oxygen and carbon dioxide. This measure is considered the most accurate estimate of cardiorespiratory endurance capacity,
- 4) Maximal concentric strength for the upper right leg.

After the pre-testing was administered to the subjects they were familiarized with the ROM and assigned to either the 4MIN or 8MIN group. The 4MIN group was required to exercise for 4 minutes/day, 5 days/week. They alternated upper body and lower body workouts every other day. The 8MIN group did both the upper and the lower body workouts, 4 minutes each, 5 days/week. Resistance on the ROM was set for each subject based upon their body weight, at the lowest (easiest) resistance level. After subjects completed half the study (20 workouts) the resistance was increased from level 1 to level 5 (of 20 levels of resistance). Otherwise, the exercise was consistent for the entire 8.5 weeks of the study.

At the end of the training program (8.5 weeks) subjects were retested using the same criteria and methodology used prior to the study. The results of the testing appear in Tables 1, 2, and 3 on the reverse of this page. As expected, the control group (Table 1) who did no exercise, experienced no change in any of the tests. The most striking result of the **4MIN** group test results was that there was a statistically significant ( $P < .05$ ) **increase in V02 Max (aerobic power) of almost 6 per cent**. Even more striking was the fact that in the **4MIN group, 9 of the 10 subjects increased their V02 Max value**, and of the total subjects in both groups, **15 of the 18 subjects increased their V02 Max value**. In summation, there indeed was a **POSITIVE TRAINING EFFECT IN TERMS OF AEROBIC CAPACITY**.

Also of interest is the fact that in the ROM 8MIN group there was a trend for an improvement in body composition. **Percent Body Fat was lower by an average of 5 1/2 percent and Fat Free Weight was higher. This translates to an average of 2 1/4 pounds of Reduced Body Fat per subject.**