

Abstract—The purpose of this study was to determine the effect of a 10-week training program on the heart rate (HR) and heart rate reserve (HRR) of sedentary middle-aged men. The subjects were 15 men, 40 to 50 years of age, who had been sedentary for at least 1 year. They were randomly assigned to a 10-week training program or a control group. The training program consisted of 30 minutes of aerobic exercise, 3 times per week, at 60% of the maximum HR. The control group did not exercise. The HR and HRR were measured at rest and during a maximal exercise test at baseline and at the end of the 10-week period. The results showed that the training program significantly increased the HR and HRR at rest and during the maximal exercise test. The control group showed no significant changes. The results suggest that a 10-week training program can improve the cardiovascular fitness of sedentary middle-aged men.

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The diagram illustrates the proposed system architecture. At the center is a box labeled 'Proposed System'. Surrounding it are four boxes representing different user roles: 'Proposed User' (top), 'Proposed Admin' (right), 'Proposed Teacher' (bottom), and 'Proposed Student' (left). Each role box contains a list of specific responsibilities or actions. The 'Proposed User' box lists 'User', 'Admin', 'Teacher', and 'Student'. The 'Proposed Admin' box lists 'Admin', 'Teacher', and 'Student'. The 'Proposed Teacher' box lists 'Teacher' and 'Student'. The 'Proposed Student' box lists 'Student'. Arrows indicate the flow of interaction between the central system and each role, and between the roles themselves.