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The purpose of the study was to investigate the preferred temperature of the elderly after heat exposure. Since it is important to decide optimum ambient temperature in the homes of elderly people, the preferred temperature was determined by using temperature control by themselves.

The subjects were eight elderly females, ranging in age from 63 to 73 years, and nine young females 19 to 27 years. Both elderly and young subjects wore the same type of clothing, of which thermal insulation was 0.35 clo. They were exposed to moderate (25°C) and hot (35°C) environments for 30 minutes. Then they entered an artificial climatic chamber which was heated and cooled rapidly (0.4° C/min) by the direction of the subject using a two position switch labeled "warmer" and "cooler". The subjects were instructed to control the temperature for 90 minutes, keeping as thermally comfortable as possible. Since there was no neutral position, the subject had to make repeated evaluations of the ambient temperature and operate the switch to produce a "hunting" pattern.

The air temperature at 60 cm height was recorded continuously, and analyzed as (1) first preferred temperature, i.e. midpoint of the first maximum and minimum temperature recorded ; (2) final preferred temperature, i.e. midpoint of the final maximum and minimum temperature ; (3) first temperature range ; (4) final temperature range;and (5) frequency of temperature change, i.e., total number of switch operations. Rectal and skin temperatures, heart rate, and blood pressure were measured. Thermal sensation and comfort sensation were also recorded.

The most of elderly subjects displayed poor control of the ambient temperature than the young. The significantly lower first preferred temperature was found in the elderly subjects in comparison with those in the young. However, despite the differences in the first preferred temperature, no effects of heat exposure and age-groups were found on the final preferred temperature. Neither the temperature range recorded nor frequency of temperature changes was significantly different between the groups, and between moderate and heat exposures. It is suggested that effects of heat exposure on preferred temperature were only recognized within the beginning periods.

15 Early Rehabilitation for Patients with Myocardial Infarction after Reperfusion Therapy in Acute Stage

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To evaluate the effect of early rehabilitation for patients with myocardial infarction treated by reperfusion therapy, 20 patients with or without exercise training program for three months underwent graded exercise test of ergometer. As a result, the exercise group showed not only increase in oxygen uptake, but also improvement of cardiac stroke volume.

It is concluded that the physical and cardiac benefit of exercise training after reperfusion therapy for myocardial infarction is effective.

16 The Cooperation of Department of Medical Check and Department of Clinical Sports Medicine for Adult Diseases

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In Kure Kyosai Hospital, the Dpartment of Clinical Sports Medicine cooperates with the Medical Department to provide good care for patients with adult diseases. Among 2648 checked by medical examination in 1989, adult diseases were found in about half of them. Analysis of physical fitness of 43 patients with adult diseases found in medical check showed the reduced flexibility in men and the reduced muscle power in women. After 3 months of exercise therapy, significant improvements were obtained in aerobic power, flexibility, muscle power and body fat rate.

Aerobic exercise therapy also showed good effects for primary adult diseases. Two patients with hyperlipidemia who got a good response in our system were presented.

17 Effect of Exercise Therapy for Patients with Adult Diseases
—evalution of aerobic exercise time—

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To evaluate the time of aerobic exercise therapy for patients with adult disease, 316 patients were examined after 3-months training. Patients with hypertension, hyperlipidemia and diabetes mellitus etc, were divided into 2 groups according to aerobic exercise time (Group A: less than 60 min/week, Group B: more than 60 min/week). Physical fitness was measured by aerobic power (VO_2 max.), flexibility (foreward bend) and muscle power (sit up, cybex test at knee). After 3 months, physical fitness was improved significantly by improvement in all items in both group. Group B showed significant increase in VO_2 max and foreward bend than group A. This significantly increase was observed in both sexes. Body figure showed almost the same tendency as physical fitness. These results suggest that longer aerobic exercise brought better effects.

18 Effect of Exercise and Diet on Patients with Hyperlipidemia

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Aerobic exercise and diet effects on hyperlipidemia were examined in 61 patients for 6 months. Patients were divided into 2 groups, Group I (20 cases): only diet therapy, Group II (41 cases): diet therapy plus exercise therapy. Aerobic exercise therapy consumed 300 kcal each time. After 3 months, both group showed lower T-chol. and T. G. serum level, when compared with lipids before therapy. After 6 morths, group II showed significant improvement in T-chol., T. G. and HDL-ch, whereas group I showed rebound elevation in T-chol and TG inspite of no differences in nutrition intake between 2 groups. There was no correlation between frequency of training and serum lipids. In physical fitness, significant improvement was obtained in both groups. By our system, only diet therapy or exercise therapy was not enough to improve lipid metabolism, but the combination of these 2 therapies showed stable improvement. The important role of aerobic exercise was confirmed for the lipid metabolism.

19 A Survey on Workers in Cold Storage

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Subjects were 2 workers working in cold storage.

Air temperature in the inside of the cold storage was set at -25℃.

From the start to the end of the working day, the investigators followed the workers. They checked the time of stay in the cold storage, the frequency of