International Federation of Sports Medicine: Physical exercise—an important factor for health

The human body possesses great potential for functional and structural adaptation to vigorous physical exercise. Humans have been nomads and hunters throughout thousands of years of evolution. During recent history, a drastic reduction has occurred in the amount of physical activity in daily life because of labour-saving devices and motorized transport.

One result of this reduction in physical exercise has been a lowered state of physical fitness in the populations of the industrialized world, with a simultaneous increase in the prevalence of cardiovascular disease as a cause of death and disability. This suggests that the change to a sedentary life-style may be both detrimental to the individual and potentially expensive for society.

Studies have not demonstrated a direct cause-and-effect relationship between the lack of physical exercise and cardiovascular morbidity and mortality. However, epidemiological evidence strongly suggests the beneficial effects of physical exercise in the prevention of coronary artery disease and the reduction of all-cause mortality when exercise constitutes an integral part of occupational and leisure time activities.

Moreover, physical exercise can alter other risk factors by improving the blood lipid profile, maintaining blood pressure within safe limits, and controlling body weight. In addition, exercise can contribute to the control of diabetes mellitus and the maintenance of bone density in the elderly.

Although physical health, as appraised by morbidity and mortality rates, has been steadily improving throughout the world, epidemiological and experimental evidence indicates that it is important for a person to engage in a programme of regular physical exercise as part of a healthy life style. Adherence to a regular programme of aerobic exercise involving large muscle groups can result in enhancement of the physiological systems that support such activity and a concomitant improvement in the capacity for such exercise, a state commonly referred to as physical fitness. A physically fit person has greater ability to tolerate the physical challenges of daily life whereas an unfit person would terminate activity because of fatigue.

Physical fitness and good health are not synonymous but are complementary. While good health merely means the absence of illness, physical fitness implies ample vigour to reach for life's abundant rewards and not be physically dependent on others. In sports medicine, the problem of preventing or remediating the ill effects of a sedentary life-style and aging is considered to be of paramount importance.

Therefore, appropriate physical activity constitutes a valuable component in therapeutic regimens for the control and treatment of coronary heart disease, systemic hypertension, obesity, musculoskeletal disorders, respiratory diseases, and depression. Physical fitness can also contribute to feelings of well-being and self-esteem.

It is the recommendation of the International Federation of Sports Medicine that each person should engage in a regular programme of aerobic exercise consisting of three to five exercise sessions each week, and that each exercise session should have a duration of 30 to 60 minutes. The aerobic exercise may consist of such activities as walking, running, hiking, swimming, cycling, rowing, skating, or cross-country skiing. Racquet sports and team sports can also be employed if the intensity is regulated and bursts of high activity are avoided. The intensity of the exercise should routinely elicit a heart rate within 50 to 80 per cent of the individual's maximum. The choice of activity for each individual should depend on such factors as interest, access to facilities, age, and physical condition. A screening examination performed by a medical doctor is advised, especially for older adults (e.g., age 35 and over) and those with known risk factors.

Regular physical exercise can contribute to an enhancement in health and can provide an individual with a more productive and enjoyable life.

References

10. American Heart Association, 'Exercise testing and training of individuals with heart disease or at high risk for its development: A handbook for physicians' Dallas, American Heart Association, 1975