Exercise for Cardiometabolic Health

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Regular exercise has neurological effects that reduce anxiety, depression, stroke and improve cognitive function. Oncologically, it lowers the incidence of prostate cancer, breast cancer and bladder cancer, and the primary effect of musculoskeletal system is to reduce osteoporosis, fall and muscle dysfunction through resistance exercise. Endocrinologically, it is effective in weight loss and prevention of diabetes, and is the main effect of cardiovascular disease, reducing mortality, preventing coronary artery disease and reducing recurrence. Particularly, the effect of exercise on cardiovascular health is absolute. Regular aerobic exercise in patients with coronary artery disease reduces mortality by 20-30% and improves quality of life. In addition, the total mortality rate can be lowered by 12% whenever the exercise capacity increases by 1 MET(metabolic equivalents). Cardiovascular disease participants in cardiac rehabilitation have lower mortality rates as their participation rate increases. Sedentary life style is more exposed to cardiovascular disease than those who stand up. Regular exercise improves endothelial function in patients with cardiovascular disease, improves arterial stiffness, lowers systolic blood pressure (11 mm Hg) and diastolic blood pressure (6 mm Hg) in hypertensive patients, lowers TG and LDL-C in the blood lipids and increases HDL. Consumption of at least 2000 kcal per week is recommended to prevent blood lipid improvement and recurrence of cardiovascular disease through exercise. However, excessive exercise, such as a marathon, can cause fatal arrhythmias, and atrial fibrillation, more than five times that of the general population, causing plaques in the coronary arteries and occasional sudden death. Excessive exercise can be defined as it has 5-10 times higher intensity than recommended guidelines for the prevention of cardiovascular diseases. Especially in the middle age, extreme exercise brings adverse effects on cardiovascular health, so exercise intensity and frequency should be carefully considered. Adequate exercise intensity for cardiovascular fitness is allowed up to 85% of maximal oxygen uptake or maximum heart rate, recommended daily exercise time 30 to 60 minutes, 4 to 6 times per week.