Coronary artery disease is the leading cause of death worldwide. A sedentary lifestyle accounts for 9% of premature mortality and creates a substantial health economic burden. Measurement of physical activity in daily practice refers to metabolic equivalent tasks and assessment of cardiopulmonary fitness to measurements of peak oxygen uptake during ergometry, which can be used to classify an individual's physical activity and maximum exercise capacity. Physical activity is a multifunctional intervention tool in prevention, which exerts its effects on multiple biochemical pathways, in contrast to conventional drug therapy. These changes reduce cardiovascular morbidity and mortality. Moderate physical exercise reduces blood pressure, improves insulin sensitivity and dyslipidemia, improves body composition and enhances weight reduction. Exercise of higher intensity seems to have superior effects compared to moderate intensity training; however, the training volume also seems to be important, as negative effects of long-term intensive training have been reported, e.g. atrial fibrillation or coronary sclerosis. Overall, exercise training has a major role in primary prevention of cardiovascular disease but seems to have a maximum threshold for benefit, which may be exceeded by some individuals.