

Aerobic exercise is usually performed in a moderate intensity for 30–45 min in the form of continuous running, cycling, or swimming. The number, duration, and intensity of training per week are important features of an exercise program. In patients with hypertension, there are studies showing that the office and ambulatory BP levels decrease after the aerobic exercise session. It is specified that after each session sympathetic modulation is associated with low BP. In a meta-analysis of 72 studies, in which 4000 people were examined at rest and after regular aerobic exercise; a 3 mmHg decrease in resting BP and 2.4 mmHg decrease in average daytime ambulatory BP were observed. The authors of the study concluded that aerobic endurance exercise positively affects sympathetic nervous system and renin-angiotensin system, resulting in alleviation of cardiovascular risk factors, reduction in BP, and vascular resistance. Aerobic exercise has beneficial effects in long-term management of BP of hypertensive patients. It is found that a single aerobic exercise session reduces 24-h ambulatory BP levels in hypertensive patients and increases the percentage of patients who has achieved target BP values. In meta-analysis of randomized studies, in which approximately 2400 individuals were examined, it is found that aerobic exercise reduces systolic BP by 3.84 mmHg and diastolic BP by 2.58 mmHg. This effect was observed in the whole study population which included hypertensive, normotensive, underweight, overweight, white, black, and Asian subjects and regardless of the frequency, intensity, and type of aerobic exercise. The authors also emphasized that aerobic exercise-related BP reduction is independent of weight loss. In another meta-analysis which included 24 studies, with aerobic exercise sessions changing from 3 to 8 times a week maintained for 15–60 min for 3 weeks–12 months, systolic BP was reduced by 5 mmHg and diastolic BP by 3.09 mmHg. In this meta-analysis, reduction in BP was more evident in diabetic and hypertensive patients. The authors therefore recommended aerobic exercise especially is in high-risk individuals for both primary and secondary prevention purposes. In another meta-analysis involving 23 studies, included 1226 people and compared individuals who lived sedentary over the age of 60 to individuals 89% of whom exercised as walking and slow running. Exercise duration was 30–50 min and average of three sessions per week. When compared to the control group, with controlled aerobic exercise a net decrease of 3.68 mmHg was observed at DBP and 5.39 mmHg decrease in SBP. According to the results of meta-analysis it is observed that regular aerobic exercise decreased systolic BP by approximately 5 mmHg in and diastolic BP by approximately 3 mmHg.