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Hypertension – General Information

Introduction

Hypertension (HTN) is a major public health problem in the United States, with 58.4 million (28.7%) Americans aged 18 yr or older having HTN (systolic blood pressure [SBP] > 140 and/or diastolic blood pressure [DBP] > 90 mmHg) . HTN prevalence is increasing whereas awareness of the condition and control rates is suboptimal. The positive relationship between cardiovascular disease [CVD] risk and blood pressure (BP) occurs with a BP as low as 115/75 mmHg and doubles for each 20/10 mmHg increase. The BP classification of "prehypertension" (SBP120–139 or DBP 80–89 mmHg) has been introduced to stress the public health importance of reducing BP and preventing HTN via healthy lifestyle interventions for all people. There are minimal cost and side effects associated with lifestyle interventions, and they interact favorably with other CVD risk factors.

Hypertension is associated with an increased incidence of all-cause and CVD mortality. Lifestyle modifications are advocated for the prevention, treatment, and control of HTN, with exercise being a n integral component. Exercise programs that primarily involve endurance activity prevent the development of HTN and lower blood pressure (BP) in adults with normal BP and those with HTN. The BP lowering effects of exercise are most pronounced in people with HTN who engage in endurance exercise with BP decreasing approximately 5–7 mmHg after an isolated exercise session (acute) or following exercise training (chronic). Moreover, BP is reduced for up to 22 h after an endurance exercise bout (e.g., post exercise hypotension), with the greatest decreases among those with the highest baseline BP. The proposed mechanisms for the BP lowering effects of exercise include neurohumoral, vascular, and structural adaptations. Decreases in catecholamines and total peripheral resistance, improve dinsulin sensitivity, and alterations in vasodilators and vasoconstrictors are some of the postulated explanations for the antihypertensive effects of exercise.

An abnormal or exaggerated exercise BP contributes to the prediction of future HTN in persons with normal BP.

Excerpts From:

Exercise and Hypertension – Position Stand (Am. College of Sports Medicine) N/D