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OBESITY AND HYPERTENSION

Abstract

Although the association of obesity and hypertension is well recognized, the mechanism involved in pathogenesis of increased blood pressure in the obese is poorly understood. Several mechanisms have been proposed to explain this association. Selective insulin resistance, not just hyperinsulinemia, is probably the metabolic link between obesity and hypertension. Selective insulin resistance may modulate the development of hypertension through the following physiological and tissue-specific sequences: 1. Enhanced renal sodium retention, 2. Alteration in vascular structure and function, 3. Alterations in ion transport, 4. Stimulation of the rennin-angiotensin-aldosterone system, 5. Increased activation of the sympathetic nervous system, 6. Endocrine function of the adipose tissue, 7. Enhanced atherosclerosis.

Prevention or severe treatment of obese hypertensives will substantially reduce cardiovascular disease: left ventricular hypertrophy, congestive heart failure, coronary artery disease, arrhythmias and sudden death.

Key words: obesity, hypertension, insulin resistance, atherosclerosis, sympathetic nervous system, coronary artery disease.