



**BODY WEIGHT MANAGEMENT AS A FACTOR IN OPTIMIZING HYPERTENSION  
TREATMENT IN THE ELDERLY**

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**Abstract:** This article examines the impact of body weight management on arterial hypertension in older adults in outpatient settings. The study included 80 patients aged 60–74 years with a confirmed diagnosis of hypertension. Most participants were overweight or obese. Patients received dietary counseling and structured physical activity programs. Results of the 3-month follow-up showed that a 5–10% reduction in body weight led to a significant decrease in systolic blood pressure by 10–15 mmHg and diastolic pressure by 6–8 mmHg, as well as improvements in overall well-being, sleep quality, and physical activity. Weight reduction proved to be a crucial factor in achieving stable hypertension control, reducing the need for pharmacotherapy, and preventing cardiovascular complications. The study emphasizes the importance of outpatient body weight management as an effective component of comprehensive hypertension care in elderly patients.

**Keywords:** arterial hypertension, elderly patients, body weight management, outpatient care, blood pressure reduction, cardiovascular risk prevention, obesity, overweight.

**Relevance of the Topic:** Currently, arterial hypertension (AH) is one of the most common chronic conditions among older adults and remains a leading cause of cardiovascular diseases, stroke, chronic heart failure, and renal dysfunction. Aging is associated with natural physiological changes, including a slowing of metabolic processes, reduced physical activity, and alterations in dietary patterns, which often lead to overweight or obesity. Excess body weight, in turn, significantly affects blood pressure, increasing the load on the cardiovascular system, exacerbating functional and structural changes in the heart and vessels, and elevating the risk of complications.

Outpatient management of AH in elderly patients represents a complex challenge that goes beyond merely prescribing antihypertensive medications. An effective therapeutic approach should include not only pharmacological interventions but also lifestyle modifications, such as weight normalization, dietary optimization, increased physical activity, and stress management. Recent studies have shown that a 5–10% reduction in body weight can lead to a significant decrease in both systolic and diastolic blood pressure, lower doses of antihypertensive drugs, improved lipid and glucose metabolism, and overall enhancement of quality of life in older patients.

The investigation of the relationship between arterial hypertension and weight control in outpatient settings is particularly important, as it not only ensures clinical effectiveness but also addresses public health goals, including the prevention of cardiovascular complications, reduction of hospitalizations, and decreased economic burden on healthcare systems. Considering the high prevalence of AH among older adults and its close association with



metabolic disturbances, systematic monitoring of body weight and regular lifestyle interventions become key components of a comprehensive strategy for managing hypertensive patients.

Therefore, studying the impact of weight management on blood pressure in elderly patients in outpatient settings represents a relevant area of clinical research and is crucial for developing effective preventive and therapeutic programs aimed at improving health and quality of life in this population.

**Aim and Objectives:** The aim of this study is to identify and quantitatively assess the relationship between arterial hypertension and body weight control in elderly patients in outpatient care. Additionally, the study seeks to determine the clinical significance of weight reduction in achieving stable blood pressure control, reducing the need for pharmacotherapy, and enhancing overall quality of life in older adults. Particular attention is given to a comprehensive approach that includes the assessment of anthropometric parameters, blood pressure changes, and the effects of lifestyle modification on the cardiovascular system in this patient group.

**Research Objectives:**

1. To conduct a detailed analysis of the prevalence of arterial hypertension among elderly patients, assess body weight, body mass index (BMI), and categorize patients according to weight status (normal, overweight, obesity).
2. To investigate the dynamics of systolic and diastolic blood pressure changes with a 5–10% weight reduction and determine the correlation between the degree of weight loss and the level of hypertension control.
3. To evaluate the clinical effectiveness of different body weight management strategies applied in outpatient care, including dietary optimization, moderate physical activity programs, and individualized lifestyle recommendations.
4. To develop practical recommendations for outpatient physicians and patients regarding the importance of weight management in the prevention and comprehensive treatment of arterial hypertension in elderly patients, with an emphasis on long-term cardiovascular health maintenance.

This study will not only confirm the clinical significance of weight correction in managing arterial hypertension in older adults but also provide a foundation for the development of personalized preventive and therapeutic programs aimed at reducing the risk of complications and improving quality of life in this patient group.

**Materials and Methods:** This study was conducted in outpatient settings using a prospective observational design involving elderly patients with arterial hypertension. A total of 80 patients aged 60–74 years with a confirmed diagnosis of arterial hypertension according to current clinical guidelines were included. Patients with a history of acute cardiovascular events (myocardial infarction, stroke), decompensated chronic diseases, or those unable to follow lifestyle or physical activity recommendations were excluded.

Each patient underwent a comprehensive clinical and questionnaire-based assessment, including medical history, evaluation of risk factors, lifestyle habits, and comorbidities. Anthropometric measurements included body weight, height, calculation of body mass index (BMI), and classification into weight categories (normal, overweight, obesity).

Blood pressure was measured using standardized sphygmomanometry, following patient rest and averaging two to three consecutive readings. Both systolic and diastolic blood pressure values were used to analyze pressure dynamics.

Patients received individualized lifestyle modification recommendations, including a personalized diet plan with caloric restriction and limitation of foods contributing to elevated



blood pressure, as well as a program of moderate physical activity tailored to the patients' age and somatic condition.

Collected data were statistically analyzed using modern analytical methods, including calculation of means, standard deviations, correlation analysis to assess the relationship between weight reduction and changes in blood pressure, and significance testing of differences before and after intervention. Results were interpreted considering both clinical significance and practical applicability in outpatient care.

This approach allowed for the evaluation of the effectiveness of an outpatient weight management program within the framework of comprehensive arterial hypertension management in elderly patients and highlighted the role of body weight reduction in achieving stable blood pressure control.

**Results and Analysis:** The study included 80 patients aged 60–74 years with a confirmed diagnosis of arterial hypertension. The majority of participants were classified as overweight or obese, highlighting the relevance of investigating the relationship between weight management and blood pressure control in elderly individuals.

Patients received individualized recommendations for dietary modification and a program of moderate physical activity tailored to their age and comorbidities. Follow-up was conducted over a period of three months, with regular assessment of clinical parameters, anthropometric measurements (weight, height, body mass index – BMI), and blood pressure.

Analysis of blood pressure data revealed that patients who achieved a weight reduction of 5% or more experienced a significant decrease in systolic blood pressure by 10–15 mmHg and diastolic pressure by 6–8 mmHg. The greatest reductions were observed in patients with initially higher BMI and more pronounced hypertension. Patients who lost less than 5% of their body weight also demonstrated improvements, although the reductions in blood pressure were less pronounced.

Beyond the direct impact on blood pressure, weight loss was associated with improvements in overall patient well-being: increased levels of physical activity, enhanced sleep quality, better general health, and reduced fatigue and weakness. These changes contribute to improved adherence to long-term lifestyle recommendations and pharmacological therapy.

Statistical analysis identified a significant correlation between body weight reduction and decreases in blood pressure parameters ( $p < 0.05$ ), indicating a direct relationship between weight management and the effectiveness of hypertension therapy in elderly patients.

In conclusion, the findings confirm that weight reduction is a key factor in stabilizing blood pressure and decreasing the need for pharmacological intervention. Weight control represents an effective non-pharmacological strategy that supports comprehensive health improvement and reduces the risk of cardiovascular complications in elderly patients with arterial hypertension.

**Conclusion:** Ambulatory monitoring of elderly patients with arterial hypertension demonstrated that weight management is a key component of comprehensive care for this patient population. A reduction in body weight of 5–10% from baseline was associated with a significant decrease in both systolic and diastolic blood pressure, as evidenced by the observed outcomes: mean reductions in systolic pressure of 10–15 mmHg and diastolic pressure of 6–8 mmHg.

Weight management not only contributes to blood pressure stabilization but also improves overall well-being, sleep quality, and physical activity levels, thereby positively influencing the quality of life in older adults. Additionally, a decrease in the need for antihypertensive therapy was observed in some patients, which reduces the risk of adverse drug effects and enhances the safety of treatment.



The findings confirm that weight control is an integral part of preventing cardiovascular complications in elderly patients with hypertension. The development and implementation of individualized weight reduction programs, including dietary guidance and moderate physical activity, represent an effective strategy for comprehensive management and complication prevention.

Thus, integrating weight management into the ambulatory care of patients with arterial hypertension allows for the achievement of the following objectives:

1. Stabilization of blood pressure and reduction of the risk of hypertensive crises.
2. Reduction in dosage or number of prescribed antihypertensive medications.
3. Improvement in overall well-being, sleep quality, and physical activity levels.
4. Enhanced prevention of cardiovascular complications and improvement in quality of life.

In summary, weight management should be regarded as an essential and effective component of comprehensive ambulatory care for elderly patients with arterial hypertension, aimed at optimizing therapy, preventing complications, and enhancing overall quality of life.

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