

# Reduce Blood Pressure in Older Persons by Exercise and Other Non-pharmacological Approach

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## ABSTRACT

Hypertension is becoming more common as people become older, and it is a major health problem. In most therapy protocols, lifestyle modification is the first-line intervention; however, the majority of evidence for this comes from trials using young people who were given therapies that may not always be practical in the elderly. The management of pain without the use of pharmaceuticals is known as non-pharmacological pain management. To better control and lessen pain, this strategy employs techniques for altering thoughts and focusing concentration. Weight loss, smoke cessation, reduced alcohol consumption, biofeedback, and self-measured blood pressure monitoring are all included. Continuous positive airway pressure has been demonstrated to improve blood pressure in people with obstructive sleep apnea. In older hypertensive persons, low-intensity endurance exercise training appears to be the most successful at lowering blood pressure. In addition to lowering blood pressure, metabolic adaptations to exercise training can considerably reduce other risk factors for coronary artery disease and atherosclerosis.

**Keywords:** Exercise; Non-pharmacological; Blood pressure

## INTRODUCTION

The suppression of pain signalling is used in nonpharmacological pain relief therapies. Pain is caused by nociceptive transmission from the spinal cord to higher brain nuclei and the cerebral cortex through tiny afferents. Peripheral and central components that enhance or inhibit this input mediate nociceptive signals. Midbrain networks modify these signals, exerting bidirectional control over nociceptive transmission through the spinal cord. Substance P, which enhances transmission, and endogenous opioid-based substances, which block transmission, is among the neurotransmitters involved in mediating nociceptive signals. As a result, nonpharmacological analgesia entails inhibiting nociceptive input while stimulating antinociceptive outputs. Analgesic effects are achieved by suppressing the nociceptive signal, as in transcutaneous electrical nerve stimulation and acupoint stimulation [1].

Psychological interventions (stress management, hypnosis, and other cognitive-behavioral interventions), acupuncture and acupressure, transcutaneous electrical nerve stimulation, and physical therapies are nonpharmacological approaches to pain relief that are more commonly associated with non-acute settings [2]. In some types of pain, these approaches to pain management may complement or even replace pharmacological therapy. Chronic pain, such as cancer pain, lower back pain, and specific disorders associated with pain like endometriosis, is one circumstance where

a variety of interventions may be employed to manage complex health problems. The kind of pain, type of intervention, patient characteristics, physician ability and experience, and different trial populations may all contribute to the lack of evidence of efficacy.

Exercise is one of the most important factors in lowering blood pressure. If we already have hypertension, working out improves the effectiveness of our blood pressure medicine [3]. Hypertension, or high blood pressure, is a serious health concern that affects many older people. The vascular system, or network of blood vessels in the body, varies with age. Blood pressure rises as arteries get stiffer. This is true even for persons who follow heart-healthy routines and appear to be in good health. High blood pressure is known as "the silent killer" since it rarely causes visible or audible symptoms. Despite the fact that it affects over half of all people, many are unaware they have it.

If people have high blood pressure, regular physical activity – such as two to three hours per week, or approximately half an hour most days of the week – can drop your blood pressure by 5 to 8 mm Hg. It's critical to maintain consistency because stopping exercise might cause blood pressure to rise again. Hypotension is defined as a systolic blood pressure of less than 90 or a diastolic blood pressure of less than 60 [4]. Low blood pressure causes people to feel lightheaded, weak, disoriented, or even faint. It can be brought on by a lack of fluids, blood loss, certain medical disorders, or drugs, such as those used to treat high blood pressure.

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High blood pressure can affect anyone. High blood pressure can be caused by a variety of medical diseases, including metabolic syndrome, kidney illness, and thyroid issues. Some people have a higher probability of getting it due to factors they can't control, such as age, gender, family history, race, and so on. High blood pressure frequently has no symptoms, but regular blood pressure checks can help detect rising levels. If your blood pressure is high at two or more visits, your doctor may urge you to take your blood pressure at home. Other health issues and overall fitness are key concerns for older persons when deciding whether to begin therapy for high blood pressure if it is above 130/80. Doctors may work with patients to determine the optimal blood pressure target for their health, and may recommend exercise, dietary changes, and medication [5].

People can often lower their blood pressure by modifying their daily behaviours and, if necessary, taking medication. Treatment necessitates constant examination and talks with a doctor, especially if you have additional medical issues such as diabetes. To help avoid and lower high blood pressure, undertake the following lifestyle changes: Make an effort to maintain a healthy weight. Exercise; Make sure you eat a heart-healthy diet. Reduce your salt intake. Don't smoke, and drink less alcohol. Get a good night's sleep and control your stress.

## CONCLUSION

The management of pain without the use of pharmaceuticals is known as non-pharmacological pain management. To better control and lessen pain, this strategy employs techniques for

altering thoughts and focusing concentration. Aside from lifestyle adjustments, your doctor will most likely prescribe medication to bring your blood pressure down to a healthy level. Isolated systolic hypertension, the most frequent kind of high blood pressure in older persons, is treated similarly to regular high blood pressure, but it may necessitate the use of multiple blood pressure medications. You may need to test a variety of drugs or combinations of medications before settling on a treatment plan that works best for you. Medication can help you manage high blood pressure, but it won't make it go away. If your doctor prescribes high blood pressure medicine, you may need to take it for a long time.

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