



12. THE CONNECTION BETWEEN THE TREATMENT OF HYPOTHYROIDISM WITH LEVOTHYROXINE AND ITS EFFECTS ON THE CARDIOVASCULAR SYSTEM

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Introduction. Hypothyroidism is a common clinical condition. Thyroid hormones have multiple effects on the function of the cardiovascular system.

Aim of study. Literature analysis to determine the relationship between treatment with Levothyroxine and its effects on the function of the cardiovascular system.

Methods and materials. A bibliographic study of the specialized scientific literature was analyzed, searching for the necessary information on platforms such as: PubMed and Aha Journals.

Results. Levothyroxine treatment has been shown to have beneficial effects on the lipid profile, reducing total cholesterol, LDL and triglycerides, improving blood pressure, diastolic dysfunction, heart rate and heart rate variability during exercise. It has also been shown that the progression of atherosclerosis is delayed in patients under treatment. In a study of women with hypothyroidism, after 18 months of treatment, it was observed that it led to normalization of systolic and diastolic blood pressure and total and LDL cholesterol, as well as a decrease in carotid intimal thickness. Although there are no randomized clinical trials evaluating long-term cardiovascular outcomes and mortality in levothyroxine-treated patients, one study of levothyroxine-treated patients demonstrated that those with elevated TSH had a higher risk of cardiovascular events despite the administration of the drug, resulting in adverse effects.

Conclusion. Thyroid hormones play a significant role in the regulation of cardiac, vascular and metabolic physiology. The pathological changes of hypothyroidism on the cardiovascular system are varied, and treatment can reverse some, if not all, of the effects. There is evidence to suggest that treatment of mild dysfunctions may improve cardiovascular outcomes; however, randomized controlled clinical trials in this area are lacking and warranted. It is important to note that TSH levels can be higher in the elderly.