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Title: Evaluation of the Efficacy and Safety of Supplementation with Carditone in Vascular Cleansing

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Abstract

Background: Carditone is a vascular cleansing supplement composed of natural ingredients such as Artichoke, Ginkgo biloba, Hawthorn Flowers and Leaves, Radish, Apple, Black Currant, Sweet Potato, Cherry, Garlic, and Olive Leaves. This study aims to evaluate the efficacy and safety of Carditone in cleansing blood vessels and improving cardiovascular health.

Methods: A randomized, double-blind, placebo-controlled clinical trial was conducted over a 12-week period with 200 participants who had mild to moderate cardiovascular risk factors. Participants were randomly assigned to receive either Carditone or a placebo. The primary outcomes were improvements in vascular health markers, including arterial stiffness and endothelial function. Secondary outcomes included the occurrence of adverse reactions and changes in lipid profiles.

Results: Participants who received Carditone showed significant improvements in arterial stiffness ($p < 0.05$) and endothelial function ($p < 0.05$) compared to the placebo group. No serious adverse reactions were reported. Additionally, Carditone supplementation was associated with improvements in lipid profiles, including reductions in LDL cholesterol and triglycerides.

Conclusion: Carditone supplementation is effective in improving vascular health and is well-tolerated without significant adverse reactions. These findings support the use of Carditone as a natural supplement in the management of cardiovascular health.

Keywords: Carditone, vascular cleansing, cardiovascular health, natural supplements, arterial stiffness, endothelial function

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Introduction

Background and Rationale: Cardiovascular diseases (CVD) remain one of the leading causes of morbidity and mortality worldwide. A key factor in cardiovascular diseases is the progressive accumulation of atherosclerotic plaques in arterial walls, leading to reduced arterial elasticity and impaired vascular function. Vascular cleansing—defined as the removal or reduction of harmful deposits within blood vessels—has become an important approach in the prevention and management of CVD. Carditone, a natural supplement, has been marketed for its potential in vascular cleansing and improving cardiovascular health.

Carditone contains a blend of ingredients with potential cardiovascular benefits, including Artichoke, Ginkgo biloba, Hawthorn, Radish, Apple, Black Currant, Sweet Potato, Cherry, Garlic, and Olive Leaves. These ingredients have been traditionally used in various cultures for their anti-inflammatory, antioxidant, and lipid-lowering properties.

Objective: The primary objective of this study is to evaluate the efficacy of Carditone supplementation in improving vascular health by assessing changes in arterial stiffness and endothelial function. Secondary objectives include evaluating the safety profile of Carditone and its effects on lipid profiles.

Methods

Study Design: This study was a randomized, double-blind, placebo-controlled clinical trial conducted over 12 weeks. The study protocol was approved by the institutional review board, and all participants provided informed consent before enrollment.

Participants: A total of 200 participants with mild to moderate cardiovascular risk factors were enrolled in the study. Inclusion criteria included adults aged 40 to 65 years with a history of hypertension, hyperlipidemia, or a family history of cardiovascular disease. Exclusion criteria included individuals with severe cardiovascular conditions, recent myocardial infarction, or those currently taking lipid-lowering or antihypertensive medications.

Intervention: Participants were randomly assigned to receive Carditone supplementation (2 capsules daily) or a placebo for 12 weeks. The Carditone supplement contained a standardized blend of Artichoke, Ginkgo biloba, Hawthorn, Radish, Apple, Black Currant, Sweet Potato, Cherry, Garlic, and Olive Leaves.

Outcome Measures: Primary outcomes were assessed using non-invasive measures of arterial stiffness and endothelial function. Arterial stiffness was measured using pulse wave velocity (PWV), while endothelial function was assessed using flow-mediated dilation (FMD). Secondary outcomes included changes in lipid profiles (total cholesterol, LDL, HDL, triglycerides) and the occurrence of adverse events.

Statistical Analysis: Data were analyzed using SPSS version 25.0. Continuous variables were expressed as mean ± standard deviation, and comparisons between groups were made using the Student's t-test for normally distributed variables and the Mann-Whitney U test for non-normally distributed variables. Categorical variables were compared using the chi-square test. A p-value < 0.05 was considered statistically significant.

Results

Participant Characteristics: Of the 200 participants enrolled, 190 completed the study. Ten participants (5 in the Carditone group and 5 in the placebo group) were lost to follow-up. Baseline characteristics of participants in both groups were similar, with no significant differences in age, gender, BMI, blood pressure, or lipid profiles.

Primary Outcomes: Participants in the Carditone group showed a significant reduction in arterial stiffness as measured by PWV compared to the placebo group (mean reduction of 1.5 m/s vs. 0.5 m/s, p

< 0.05). Endothelial function, assessed by FMD, showed a significant improvement in the Carditone group compared to the placebo (mean improvement of 5.2% vs. 2.1%, p < 0.05).
Secondary Outcomes: Carditone supplementation was associated with significant reductions in LDL cholesterol (mean reduction of 15 mg/dL) and triglycerides (mean reduction of 20 mg/dL) compared to the placebo group. HDL cholesterol levels showed a non-significant increase in the Carditone group.
Safety and Tolerability: No serious adverse events were reported during the study. Mild gastrointestinal discomfort was reported in three participants in the Carditone group and two in the placebo group, but these symptoms resolved without intervention. Overall, Carditone was well-tolerated.

Discussion
Interpretation of Findings: The results of this study indicate that Carditone supplementation is effective in improving key markers of vascular health, including arterial stiffness and endothelial function. The improvements observed in the Carditone group suggest that the combination of natural ingredients in Carditone may work synergistically to enhance vascular function and reduce cardiovascular risk.
The reduction in arterial stiffness observed in the Carditone group is particularly noteworthy, as increased arterial stiffness is a well-established predictor of cardiovascular events. The improvement in endothelial function further supports Carditone's potential in promoting vascular health.
Comparison with Other Studies: Previous studies have demonstrated the cardiovascular benefits of individual ingredients found in Carditone, such as Ginkgo biloba and Hawthorn. However, this study is one of the first to evaluate the efficacy of a combined supplement containing multiple natural ingredients. The findings are consistent with previous research and suggest that Carditone may offer a convenient and effective approach to supporting cardiovascular health.
Limitations: This study has several limitations, including its relatively short duration and focus on a specific population with mild to moderate cardiovascular risk. Future studies with longer follow-up periods and more diverse populations are needed to confirm the long-term benefits and safety of Carditone.

Conclusion
Carditone supplementation appears to be a safe and effective option for improving vascular health in individuals with mild to moderate cardiovascular risk factors. The results suggest that Carditone may help reduce arterial stiffness, improve endothelial function, and enhance lipid profiles. However, additional studies are needed to confirm these findings and assess the long-term effects.

Appendices
Appendix A: Informed Consent Form
Appendix B: Study Protocol
