4LIFE TRANSFER FACTOR CARDIO PROTECTS CARDIOVASCULAR HEALTH IN A PRECLINICAL STUDY*

Technical White Paper

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OBJECTIVE

The purpose of this study was to evaluate the effect of 4Life Transfer Factor Cardio (Cardio hereafter) on the cardiovascular system in a preclinical model.*

BACKGROUND

Heart disease is the number one killer in the USA and globally.[1] High blood pressure and high blood cholesterol, which are often caused by unhealthy, high-fat western diets, are the top risk factors for heart disease. A healthy diet can support cardiovascular health. Another crucial factor for cardiovascular health is nitric oxide levels. Nitric oxide is a molecule that promotes cardiovascular health by supporting healthy blood vessels and healthy blood flow.

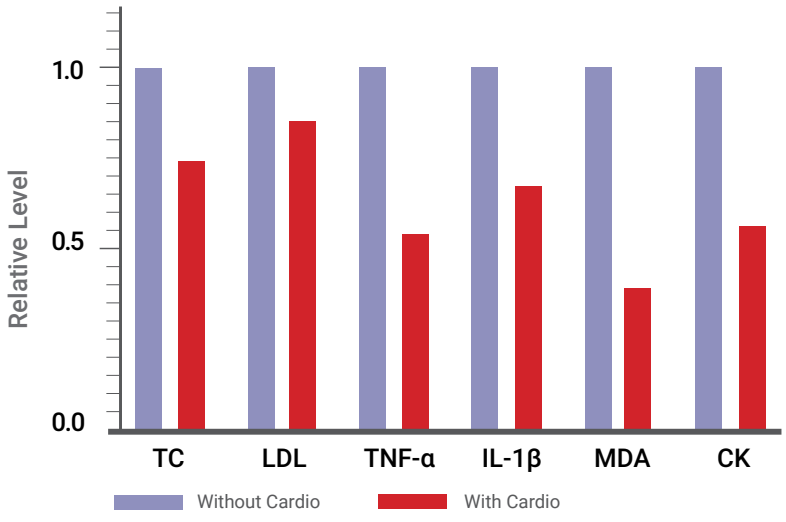
The cardiovascular system and the immune system communicate with each other and impact each other closely.[2] That means a healthy immune system is beneficial for the cardiovascular system, and a healthy cardiovascular system is also good for the immune system. Defective immune responses might contribute to cardiovascular diseases, and cardiovascular diseases can often worsen immune function and immune responses.

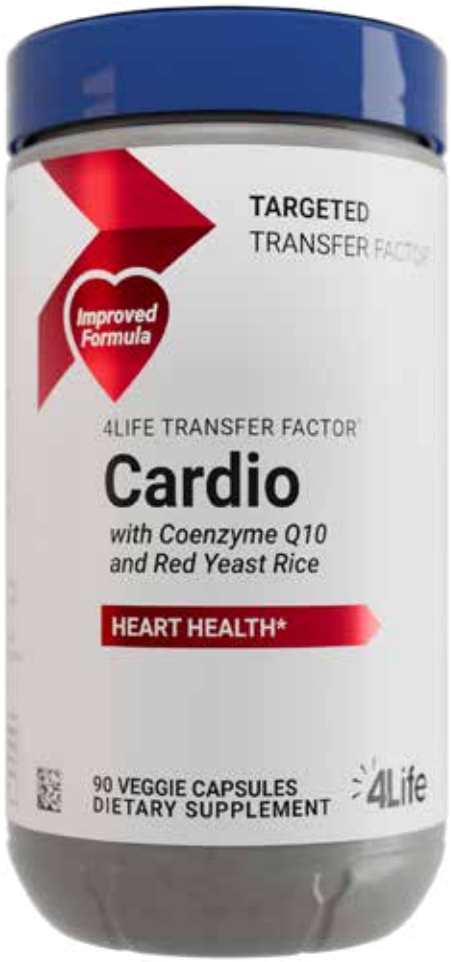
RESULTS AND DISCUSSION

As expected, compared to the regular diet group, the high-fat diet group had worse lipid profiles, inflammation responses, heart damage, and heart dysfunction. Interestingly, high-fat diet groups that were also fed Cardio showed similar outcome measures to the control group, suggesting Cardio's protective effects against dyslipidemia, inflammation, and damage of heart cells and heart function caused by an unhealthy, high-fat diet. Specifically, Cardio significantly reduced total cholesterol (TC), LDL (also known as bad cholesterol), inflammation markers TNF-α and IL-1β, oxidative stress marker MDA, and heart muscle damage marker CK (see Figure 1). Cardio was also shown to increase the activity of eNOS (endothelial nitric oxide synthase): a vital enzyme that is responsible for nitric oxide production.*

FIGURE 1

Cardio reduced total cholesterol (TC), LDL (also known as bad cholesterol), inflammation markers TNF-α and IL-1β, oxidative stress marker MDA, and heart muscle damage marker CK, suggesting its protective effects against dyslipidemia, inflammation, and damage of heart cells and heart function caused by an unhealthy, high-fat diet.





RESULTS AND DISCUSSION

Cardio benefited the heart by reducing oxidative stress and modulating inflammation responses in a preclinical model. Cardio further protected against a modern, high-stress lifestyle and low-quality diet in this preclinical study. In this study, Cardio also improved eNOS: an enzyme that is vitally linked to nitric oxide production.*

[1]https://www.cdc.gov/nchs/data/databriefs/db456.pdf
[2]https://vb.bioscientifica.com/view/journals/vb/1/1/VB-19-0023.xml
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