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Effect of ProPectin on Patients
with Elevated Cholesterol Levels:
A Clinical Pilot Study

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Purpose

The purpose of the study is to follow the effect of ProPectin on volunteers with different cholesterol levels who take the product for a period of 25 weeks.

Introduction

Bulgaria is one of the leading countries in the world in incidence of cardiovascular diseases, which are one of the most frequent causes of death in the country.

The elevated cholesterol levels and the imbalance in the level of lipids in the blood is a major risk factor for cardiovascular disease, some types of diabetes, malignancy, indigestion, obesity and other diseases.

Pectin is a naturally distributed polysaccharide that has gained in importance and use in recent years. This growing interest in it is due to its qualities as a bio-regulator. Its biodegradability and its gel-forming qualities allow it to be used in the food and pharmacy industry.

Materials and Dosage

The study participants taking oral ProPectin (a solution containing highly esterified apple pectin and fructose) at 9 g daily divided into three equal doses three times over a course of 175 days.

Protocol of the Study

The study was conducted on three groups of volunteers – 45 people.

The first of the three groups consisted of 25 people (14 women and 11 men) with an overall cholesterol level above 6 mmol/l., including 12 smokers and 4 diabetics.

In the second group, all the participants had normal overall cholesterol levels (up to 4.9 mmol/l). There were 15 healthy volunteers participating in this control group (10 women and 5 men). Two of them were smokers.

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The third group consisted of 5 volunteers (3 women and 2 men) with an overall cholesterol level above 6.2 mmol/l. The age of all the participants in the ProPectin test was between 25 and 60 years.

Method

Before the participants began taking ProPectin (a highly esterified apple pectin and fructose), their cholesterol levels (overall, LDL, HDL and triglycerides) were reported, as the test subjects had not had any food for a period of 12 hours before the study.

All the test subjects from the three groups were placed on the same diet, with a controlled food intake of up to 330 mg of cholesterol daily. Only participants in the first two groups received ProPectin, three times daily on an empty stomach for a period of 25 weeks for each dose of ProPectin.

The volunteers from the third group did not receive ProPectin during the study.

Analysis of the Data and Results

It was reported that as early as the third week there was a decrease in the total amount of cholesterol, LDL and triglycerides. The decrease in the total cholesterol level in the women in the first group was higher than in the men.

For some of the participants in the first group who had hypertension, a reduction in blood pressure was reported by the end of the first month. In 23 out of a total of 25 people in the first group, a decrease in the amount of cholesterol was reported.

In the control group there was no significant change in the amount. A greater difference was reported in the cholesterol levels during the first 4 weeks than during the rest of the period, and the decreasing tendency in the lipid parameters continued until the end of the study, but at a slower pace.

Table 1

Period	Total Cholesterol		LDL		Triglycerides	
	First Group	Control	First Group	Control	First Group	Control
1 st month	6.7 mmol/l	4.2 mmol/l	5.1 mmol/l	2.7 mmol/l	2.6 mmol/l	1.8 mmol/l
2 nd month	6.2 mmol/l	4.1 mmol/l	4.6 mmol/l	2.6 mmol/l	2.5 mmol/l	1.8 mmol/l
3 rd month	6.0 mmol/l	4 mmol/l	4.2 mmol/l	2.5 mmol/l	2.4 mmol/l	1.8 mmol/l

4 th month	5.9 mmol/l	4 mmol/l	3.8 mmol/l	2.5 mmol/l	2.3 mmol/l	1.7 mmol/l
5 th month	5.6 mmol/l	4 mmol/l	3.3 mmol/l	2.5 mmol/l	2.2 mmol/l	1.7 mmol/l
6 th month	5.2 mmol/l	4 mmol/l	3.1 mmol/l	2.5 mmol/l	2.1 mmol/l	1.6 mmol/l

*The amounts for the individual groups are averaged.

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At the time of the study, a biochemical analysis of the electrolytes in the blood was conducted, and no significant changes were reported in their values. In conclusion, based on the study of 40 volunteers, it was established that taking ProPectin leads to a decrease in total cholesterol and LDL cholesterol, as well as triglycerides, which indicates that ProPectin is suitable for the prevention of cardiovascular diseases and certain forms of diabetes.

Table 2

Period	Total Cholesterol		LDL		Triglycerides	
	First Group	Third Group	First Group	Third Group	First Group	Third Group
1 st month	6.7 mmol/l	6.4 mmol/l	5.1 mmol/l	5.0 mmol/l	2.6 mmol/l	2.4 mmol/l
2 nd month	6.4 mmol/l	6.3 mmol/l	4.6 mmol/l	4.9 mmol/l	2.5 mmol/l	2.3 mmol/l
3 rd month	6.1 mmol/l	6.4 mmol/l	4.2 mmol/l	5.0 mmol/l	2.4 mmol/l	2.4 mmol/l
4 th month	5.9 mmol/l	6.4 mmol/l	3.8 mmol/l	5.0 mmol/l	2.3 mmol/l	2.4 mmol/l
5 th month	5.6 mmol/l	6.4 mmol/l	3.3 mmol/l	5.0 mmol/l	2.2 mmol/l	2.4 mmol/l
6 th month	5.2 mmol/l	6.3 mmol/l	3.1 mmol/l	5.0 mmol/l	2.1 mmol/l	2.4 mmol/l

*The amounts for the individual groups are averaged.

In the group that was simply put on a diet without taking ProPectin, no significant changes were noticed in the total cholesterol, the LDL cholesterol or the triglycerides, which once again confirms the effectiveness of ProPectin.

Conclusion:

Based on the study of the effects and effectiveness of the ProPectin product on a total of 45 volunteers, only 40 of which were given ProPectin, we may make the following conclusion:

The inclusion of the ProPectin product in a comprehensive therapy for treatment or prevention would increase its effectiveness. This study shows that regular intake of apple pectin has a healing effect on the human body. In people with disorders in the lipid balance, ProPectin leads to a reduction in overall cholesterol as well as LDL, and it restores the lipid balance.

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