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## **Abstract P 284**

### **American Heart Association meeting report:**

## **Fiber supplements may lower cardiovascular risk in type 2 diabetes**

WASHINGTON, D.C., April 30 – Fiber supplements lowered “bad” low-density lipoprotein (LDL cholesterol) and increased “good” high-density lipoprotein (HDL cholesterol) in people with type 2 diabetes, according to a study presented at the Sixth Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology.

Type 2 diabetes occurs when the body is unable to produce or properly use insulin to turn food into energy. Heart disease is the leading cause of diabetes-related deaths. According to the most recent statistics published by the American Heart Association, half of all diabetics have high cholesterol, which is a major risk factor for heart disease.

Supplements that increase dietary fiber have been shown to reduce blood cholesterol levels, which led researchers at Unicity International in Orem, Utah to study its effect on type 2 diabetes.

“The remarkable observation is that this works on two sides: it decreased LDL and increased HDL by significant amounts at 90 days,” said the study’s lead author, Peter J. Verdegem, Ph.D., chief science officer at Unicity International. “This approach is virtually free of side effects. It opens up an alternative treatment option.”

The study is one of the first to examine the effect of fiber in heart disease risk reduction for type 2 diabetes, said Verdegem.

The 78 participants in the open label trial had type 2 diabetes and an average age of 59 years. Total blood cholesterol, triglycerides, LDL and HDL were measured at baseline and again at 90 days.

Cholesterol is a soft, waxy fat that is used by the body to form cell membranes and perform other important functions. Lipoproteins transport cholesterol through the body. LDL escorts cholesterol through the circulatory system; HDL carries it to the liver where it can be eliminated.

Elevated cholesterol levels can raise the risk of hard deposits called plaques forming in the arteries, which likewise increases the risk of heart attack and stroke. LDL levels of 160 milligrams per deciliter (mg/dL) and above are considered high.

Soluble fiber has been shown to help lower blood cholesterol levels. However, most adults in the United States do not consume enough dietary fiber. According to the American Heart Association, average daily intake for adults is 15 grams, whereas 25 to 30 grams of fiber is recommended.

“The product was designed to fill that gap between the real intake and the advised intake,” Verdegem said.

Study participants received 10 to 15 grams of a fiber supplement called BiosLife 2, an over-the-counter product manufactured by Unicity International. The drink contains both soluble and insoluble fiber from guar gum, gum arabic, locust bean gum, pectin and oat fiber dispersed in calcium carbonate. It was administered in five-gram doses two to three times daily five to 10 minutes before eating.

“When it is in the intestines, the fiber decreases reabsorption of cholesterol from a meal,” said Verdegem.

At the end of the study period, total cholesterol had dropped from 215 mg/dL to 184 mg/dL, a decrease of 14.4 percent. Triglycerides also improved. Levels dropped from 299 mg/dL to 257 mg/dL, a decrease of 14.0 percent.

LDL decreased from 129 mg/dL to 92 mg/dL--a 28.7 percent improvement. HDL rose from 43 mg/dL to 55 mg/dL--a 21.8 percent increase.

“With a normal pharmaceutical intervention you see a decrease in LDL but not an increase in HDL to these levels,” Verdegem said. “It is usually only a one-sided effect.”

Statin drugs are among the most commonly used cholesterol-lowering medications. Verdegem said the study demonstrates that dietary fiber supplements are an alternative to statins for people with moderately high cholesterol who are unable or unwilling to take statins.

Co-authors are Steven H. Freed and David J. Joffe.

Statements and conclusions of study authors that are presented at American Heart Association scientific meetings are solely those of the study authors and do not necessarily reflect association policy or position. The American Heart Association makes no representation or warranty as to their accuracy or reliability.

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