

Protein injection shows promise in lowering elevated triglycerides

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Injecting a protein that helps break down triglycerides may someday help treat an inherited form of high triglycerides, according to a new study in *Arteriosclerosis, Thrombosis, and Vascular Biology*, an American Heart Association journal.

Triglyceride is a type of fat in the blood. Elevated levels in the blood — hypertriglyceridemia — have been linked to coronary artery disease.

In the study, researchers tested a new compound in mice genetically altered to be deficient in a protein called apolipoprotein (apo)A-V, which causes them to have high blood levels of triglycerides. ApoA-V boosts the efficiency of lipoprotein lipase, an enzyme needed to break down triglycerides. The active compound consists of apoA-V complexed with phospholipid to form a reconstituted high density lipoprotein (HDL). The researchers administered the compound in the mice intravenously.

"We asked a simple question: If you just inject apoA-V into these mice that are lacking apoA-V and have very high levels of triglyceride, will it go down?" said Trudy Forte, Ph.D., study senior author and a scientist at Children's Hospital Oakland Research Institute in California. "We were very gratified to see that it went down, and it continued to do so over an eight-hour period."

By the end of the treatment, triglycerides had dropped about 87 percent.

However, in engineered mice lacking a [protein](#) called GPIHBP1, which also leads to very high triglycerides, the apoA-V injection didn't lower levels.

Intravenous apoA-V may have a therapeutic benefit in humans with severely elevated [triglycerides](#) due to genetic changes that affect their levels of apoA-V, the researchers said.

Provided by American Heart Association

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