Inhibiting ApoC-III reduces triglyceride levels in mice

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Some individuals remain at high risk for developing cardiovascular disease even after preventative treatment with cholesterol-lowering medications. This persistent risk has been linked to triglyceride levels, which can remain elevated in spite of substantially lowered LDL, the form of cholesterol associated with heart disease. Triglyceride concentrations are highly correlated to levels of apolipoprotein C-III (ApoC-III), suggesting that ApoC-III may be a potential target for controlling triglyceride levels.

In this month's issue of the JCI, a team led by Jeffrey Esko at the University of California San Diego determined that ApoC-III increases triglyceride levels in blood by interacting with the same pathways that control LDL cholesterol levels.

They found that treating mice with an inhibitor of ApoC-III reduced triglyceride levels, but this effect was prevented in mice lacking two key components of the LDL cholesterol signaling pathway.

These findings suggest that blocking ApoC-III may be an effective approach for reducing the risk of cardiovascular disease in patients with high triglyceride levels.
