

New links between cholesterol and depression in the elderly

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Most people know that high cholesterol levels place them at increased risk for heart disease and stroke. Prior research has shown that particular types of strokes contribute to one's risk for depression, and that abnormal blood lipid levels can increase the risk of depression in the elderly.

However, new findings by French researchers, published in [Biological Psychiatry](#), suggest the link between increased cholesterol and [depression](#) may be complicated. They evaluated a large population of elderly men and women (aged 65 and over) over a seven year follow-up period, assessing them for symptoms of depression and measuring their lipid levels.

They found that, in women, depression was associated with low levels of the "good" form of cholesterol, [high density lipoprotein](#) (HDL). This disturbance in their cholesterol levels put them at higher risk for vascular disease, including stroke, by increasing their risk for developing lesions in their blood vessels called atherosclerotic plaques.

In contrast, the men who were at greater risk of depression had low levels of the "bad" form of cholesterol, [low density lipoprotein](#) (LDL). This was especially true for those men with a genetic vulnerability to depression related to a [serotonin transporter gene](#).

This finding in men raises important considerations. Although this pattern of low LDL levels seemingly protects them from developing

cardiovascular diseases or strokes, this study suggests that it increases their mental health risk at the same time.

Dr. Marie-Laure Ancelin, corresponding author for this study, commented: "Our results suggest that clinical management of abnormal lipid levels may reduce depression in the elderly, but different treatment will be required according to sex. LDL-C [serum level](#) seems to be an important [biological marker](#) in men, with a narrow range for normal functioning. Above this range, cardio- or cerebro-vascular risk increases and below it, there is increased risk of depression."

Therefore, the authors suggest that properly regulating the levels of HDL and LDL may help to prevent depression in the elderly. However, particularly careful management of LDL levels in men seems to be warranted. Dr. John Krystal, Editor of *Biological Psychiatry*, agreed, noting that "these new data provide yet another important reason that doctors and patients should monitor and regulate cholesterol levels carefully, through a combination of diet and medication."

More information: The article is "Gender and Genotype Modulation of the Association Between Lipid Levels and Depressive Symptomatology in Community-Dwelling Elderly (The ESPRIT Study)" by Marie-Laure Ancelin, et al. The article appears in *Biological Psychiatry*, Volume 68, Issue 2 (July 15, 2010)

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