

CANCER

HDL CHOLESTEROL
AND CANCER RISK

High serum levels of HDL cholesterol are associated with a reduced risk of developing colon cancer, according to a study published in *Gut*.

The metabolic syndrome, which is characterized by altered levels of lipids and lipoproteins, high blood pressure and high glucose concentrations, is linked with an increased risk of colorectal cancer (CRC). However, “few studies have explored the separate component of lipid and lipoprotein concentrations in relation to CRC risk,” explains author Bas Bueno-de-Mesquita. The researchers investigated this potential association as part of the European Prospective Investigation into Cancer and Nutrition (EPIC) study.

EPIC included >520,000 participants who completed a dietary and lifestyle questionnaire and gave a blood sample when they were recruited to the study. Of these participants, 1,238 developed CRC during the study. The researchers compared the levels of HDL cholesterol and apolipoprotein A in the baseline blood samples of the participants who developed CRC with the blood samples of 1,238 control individuals.

The researchers found that high levels of serum HDL cholesterol at baseline were associated with a reduced risk of colon, but not rectal, cancer. This association was independent of other biomarkers of cancer. Several mechanisms could explain this association, including the involvement of HDL in the regulation of levels of proinflammatory cytokines and the modulation of oxidative stress. However, Bueno-de-Mesquita notes that “the exact role of HDL cholesterol in the development of colon cancer should be further investigated”.

The authors conclude that once these findings have been confirmed in other studies, levels of HDL cholesterol could be used to help advise patients about lifestyle modifications.

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Original article van Duijnhoven, F. J. B. *et al.* Blood lipid and lipoprotein concentrations and colorectal cancer risk in the European Prospective Investigation into Cancer and Nutrition. *Gut* doi:10.1136/gut.2010.225011