Too much selenium can increase your cholesterol

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A new study from the University of Warwick has discovered taking too much of the essential mineral selenium in your diet can increase your cholesterol by almost 10%.

Selenium is a trace essential mineral with anti-oxidant properties. The body naturally absorbs selenium from foods such as vegetables, meat and seafood. However, when the balance is altered and the body absorbs too much selenium, such as through taking selenium supplements, it can have adverse affects.

A team led by Dr Saverio Stranges at the University's Warwick Medical School has found high levels of selenium are associated with increased cholesterol, which can cause heart disease.

In a paper recently published in the Journal of Nutrition, the research team examined the association of plasma selenium concentrations (levels of selenium in the blood) with blood lipids (fats in the blood).

The researchers found in those participants with higher plasma selenium (more than 1.20 µmol/L) there was an average total cholesterol level increase of 8% (0.39 mmol/L (i.e. 15.1 mg/dL). Researchers also noted a 10% increase in non-HDL cholesterol levels (lipoproteins within your total cholesterol that can help predict the risk of someone suffering a heart attack or chest pain).

Also, of the participants with the highest selenium levels, 48.2%

admitted they regularly took dietary supplements.

The study was conducted among 1042 participants aged 19-64 in the 2000-2001 UK National Diet and Nutrition Survey. All participants were interviewed face-to-face to assess lifestyle factors such as diet and drinking habits. Blood samples were then taken for analysis.

Dr Saverio Stranges said although high selenium levels were not exclusively caused by people taking dietary supplements, the results of the study were concerning because the use of selenium dietary supplements had risen considerably in the UK in recent years. He said this was largely due to the perception that selenium can reduce the risk of cancer and other diseases.

He said: "This use has spread despite a lack of definitive evidence on selenium supplements efficacy for cancer and other chronic disease prevention. The cholesterol increases we have identified may have important implications for public health. In fact, such a difference could translate into a large number of premature deaths from coronary heart disease.

"We believe that the widespread use of selenium supplements, or of any other strategy that artificially increases selenium status above the level required is unwarranted at the present time. Further research is needed to examine the full range of health effects of increased selenium, whether beneficial or detrimental."

Source: University of Warwick (news : web)

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