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Black tea shows heart health benefits: RCT data

By Stephen Daniells, 16-May-2012

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Three cups of black tea per day may improve heart health measures, such as cholesterol and triglyceride levels, says a study from Mauritius, Scotland, and the USA.

Nine grams per day of the black tea infusate were associated with a 36% decrease in triglyceride levels and an improvement in the ratio of LDL to HDL cholesterol of about 17%, according to results of a clinical trial with 87 people.

"Moderate intake of black tea improves the levels of independent risk factors of cardiovascular disease and antioxidant defenses in plasma," wrote the researchers in *Preventive Medicine* .

"The effects seem to be ascribed primarily to the synergistic effects of the tea phenolics and most probably with other antioxidant elements (endogenous or exogenous) not characterized in this study.

"Although the underlying biological mechanisms for these effects and the exact role of phenolics warrant an extensive study, tea may provide an important source of dietary antioxidants in many individuals."

Interest in tea and its constituents has bloomed in recent years, with the greatest focus on the leaf's polyphenol content. Green tea contains between 30 and 40 per cent of water-extractable polyphenols, while black tea (green tea that has been oxidized by fermentation) contains between 3 and 10 per cent. Oolong tea is semi-fermented tea and is somewhere between green and black tea.

Study details

The researchers recruited 87 people aged between 25 and 60 to participate in their prospective randomized controlled clinical trial. Participants were randomly assigned to consume either three cups (200 ml) of black tea per day or the same volume of hot water for 12 weeks.

Results showed that consumption of black tea was associated with an 18.4% decrease in fasting blood sugar levels, and a 36% reduction in triglyceride levels.

In addition, black tea consumption was linked to a 17% significant decrease in the ratio of LDL to HDL cholesterol ratio, and there was an trend towards increased HDL cholesterol levels.

"The putative role of polyphenolics as effective in vitro antioxidants has been emphasized to explain tea effects," explained the researchers.

"High levels of polyphenolics, including thearubigins and theaflavins in tea can protect cells and tissues from oxidative damage by scavenging oxygen-free radicals. Tea phenolics may therefore be active antioxidants in the digestive tract and in other tissues after uptake."

Source: *Preventive Medicine*
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"The effect of black tea on risk factors of cardiovascular disease in a normal population"
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