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Antihypercholesterolemic Activity of Catechin-free Saponin-rich Extract from Green Tea Leaves

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Catechins were removed from tea leaves to examine if there were any other components having the antihypercholesterolemic activity. The prepared catechin-free tea extract, TE, contained saponins and caffeine. The intake of TE suppressed the increase in the serum cholesterol level of rats induced hypercholesterolemia, and enhanced the excretion of cholesterol into feces. Since caffeine has been reported to enhance the serum cholesterol level, the effect of TE on the reduction of the cholesterol level appeared to be due to saponins. *In vitro* experiment showed that TE inhibited the incorporation of cholesterol into micelles. From all these results, TE exhibited the antihypercholesterolemic activity probably by preventing cholesterol from being incorporated into the micelles and thus inhibiting its absorption from the intestine.

Keywords: green tea, catechin, saponin, antihypercholesterolemic activity, cholesterol, rat, micelle

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