# Antioxidative properties of black tea

This article was given to us by the <>Tea Council .

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***BACKGROUND:*** Black tea, obtained by tea leaves fermentation, is an oxidized product and contains mainly multimeric polyphenols, whose biological activity is not well documented. This paper reviews the available literature on the effects of black tea on health with a focus on its antioxidative activity.

***METHODS:*** A review of the different issues and studies relating to composition, manufacturing, and antioxidative effects of black tea and its components in vitro as well as in vivo is presented.

***RESULTS:*** It is generally believed that polyphenols such as theaflavins and thearubigins as well as catechins as major constituents of black tea are mainly responsible for antioxidant actions. Antioxidative properties of black tea are manifested by its ability to inhibit free radical generation, scavenge free radicals, and chelate transition metal ions. Black tea, as well as individual theaflavins, can influence activation of transcription factors such as NFkappaB or AP-1. Theaflavins have been also proved to inhibit the activity of prooxidative enzymes such as xanthine oxidase or nitric oxide synthase.

***CONCLUSIONS:*** Black tea consumed throughout the world is believed to be not only a popular beverage but also an antioxidative agent available in everyday life.