The putative effects of green tea on body fat: an evaluation of the evidence and a review of the potential mechanisms.

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Abstract
The increase in the prevalence of obesity in recent years has prompted research into alternative methods of modulating body weight and body fat. The last decade has reflected this with a surge in studies investigating the potential of green tea as a natural agent of weight loss, with a view to confirming and elucidating the mechanisms underlying its effect on the body. Currently, it is widely believed that the polyphenolic components present in green tea have an anti-obesogenic effect on fat homeostasis, by increasing thermogenesis or reducing fat absorption among other ways. The data published to date, however, are inconsistent, with numerous putative modes of action suggested therein. While several unimodal mechanisms have been postulated, a more plausible explanation of the observed results might involve a multimodal approach. Such a mechanism is suggested here, involving simultaneous inhibition of the enzymes catechol-O-methyltransferase, acetyl-CoA carboxylase, fatty acid synthase and impeding absorption of fat via the gut. An evaluation of the available evidence supports a role of green tea in weight loss; however the extent of the effects obtained is still subject to debate, and requires more objective quantification in future research.

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