

**NEW EVIDENCE THAT BLACK TEA MAY PREVENT TYPE 2 DIABETES**

Black tea polyphenols may help to prevent type 2 diabetes according to two new studies just out.[[1]](#footnote-1) [[2]](#footnote-2)

Commenting on this new research evidence, Dr Catherine Hood from the Tea Advisory Panel (TAP) notes: “Diabetes is a condition of disordered glucose metabolism. The main source of glucose in the body comes from the digestion and hydrolysis of dietary carbohydrates. The digestive enzymes pancreatic alpha-amylase and the intestinal alpha glucosidases are responsible for digesting carbohydrates to form glucose.

“Inhibition of these enzymes and hence the inhibition of glucose formation could contribute to the prevention and management of type 2 diabetes.

“Acarabose is a medicine approved for the management of type 2 diabetes, which is a an alpha-glucosidase inhibitor. In the first study from the US,[[3]](#footnote-3) the potential of a black tea extract to inhibit these enzymes was studied. Black tea leaves were extracted in hot water and for comparison black tea pomace was extracted in acetone. The polyphenolic content of the water extract was 5.7mg/ml and of the acetone extract 8.9 mg/ml.

“The extracts were further evaluated in the laboratory to identify a variety of polyphenolic compounds. All had significant activity against the carbohydrate hydrolyzing enzymes, alpha amylase and alpha-glucosidase, suggesting that black tea extract may reduce the formation of glucose from these digestive enzymes.

“In the second study from Japanese researchers,[[4]](#footnote-4) a freeze dried powder extract of black tea leaves was found to inhibit the degradation of carbohydrates by alpha-glucosidase with a weaker but still positive effect on alpha-amylase

“Research is continuing on the potential effects of black tea on carbohydrate and glucose metabolism, but this study adds to a growing body of evidence that black tea may contribute to diabetes prevention and management. The findings from these two studies are not new. Black tea has previously been shown to inhibit alpha-amylase and alpha-glucosidase.[[5]](#footnote-5)

“This research provides encouragement to Britain’s black tea drinkers suggesting that black tea is a healthy, hydrating beverage that could help to control the digestion of carbohydrates and hence have a role in helping to manage type 2 diabetes and in some cases present the disease.”

In summary, Dr Tim Bond from TAP notes: “Tea is a very popular beverage in the UK and these latest findings together with many other published studies continue to suggest that Britain’s’ favorite beverage is good for our health including our heart and vascular system.”

-ENDS-

**The Tea Advisory Panel:** The Tea Advisory Panel is supported by an unrestricted educational grant from the **UK TEA & INFUSIONS ASSOCIATION**, the trade association for the UK tea industry. The Panel has been created to provide media with impartial information regarding the health benefits of tea. Panel members include nutritionists; dieticians and doctors. For further information please contact:

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1. Striegel, L, Kang, B, Pilkenton S, et al.Effect of black tea and black tea pomace polyphenols on α-glucosidase and α-amylase inhibition, relevant to type 2 diabetes prevention*. Frontiers in Nutrition* 2015. doi: 10.3389/fnut.2015.00003 [↑](#footnote-ref-1)
2. [Satoh T](http://www.ncbi.nlm.nih.gov/pubmed/?term=Satoh%20T%5BAuthor%5D&cauthor=true&cauthor_uid=25523370)1, [Igarashi M](http://www.ncbi.nlm.nih.gov/pubmed/?term=Igarashi%20M%5BAuthor%5D&cauthor=true&cauthor_uid=25523370)2, [Yamada S](http://www.ncbi.nlm.nih.gov/pubmed/?term=Yamada%20S%5BAuthor%5D&cauthor=true&cauthor_uid=25523370)2, Inhibitory effect of black tea and its combination with acarbose on small intestinal α-glucosidase activity.

[*J Ethnopharmacol.*](http://www.ncbi.nlm.nih.gov/pubmed/25523370)2015 Feb 23;161:147-55 [↑](#footnote-ref-2)
3. Striegel, L, Kang, B, Pilkenton S, et al. Effect of black tea and black tea pomace polyphenols on α-glucosidase and α-amylase inhibition, relevant to type 2 diabetes prevention*. Frontiers in Nutrition* 2015. doi: 10.3389/fnut.2015.00003 [↑](#footnote-ref-3)
4. [Satoh T](http://www.ncbi.nlm.nih.gov/pubmed/?term=Satoh%20T%5BAuthor%5D&cauthor=true&cauthor_uid=25523370), [Igarashi M](http://www.ncbi.nlm.nih.gov/pubmed/?term=Igarashi%20M%5BAuthor%5D&cauthor=true&cauthor_uid=25523370), [Yamada S](http://www.ncbi.nlm.nih.gov/pubmed/?term=Yamada%20S%5BAuthor%5D&cauthor=true&cauthor_uid=25523370), Inhibitory effect of black tea and its combination with acarbose on small intestinal α-glucosidase activity.[*J Ethnopharmacol.*](http://www.ncbi.nlm.nih.gov/pubmed/25523370)2015 Feb 23;161:147-55 [↑](#footnote-ref-4)
5. Kwon, Y-I., Apostolidis, E., and Shetty, K. Inhibitory potential of wine and tea against alpha-amylase and alpha-glucosidase for management of hyperglycemia linked to type 2  diabetes. *J Food Biochem*. 200832, 15-31. [↑](#footnote-ref-5)