

Study finds apple and lettuce can remedy garlic breath

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Garlic – no one likes it when the scent of it sticks around on their breath. Now, garlic lovers may have a new solution to their halitosis problem. A study published in the September issue of the *Journal of Food Science* found that eating raw apple or lettuce may help reduce garlic breath.

Researchers from the Ohio State University gave participants three grams of softneck garlic cloves to chew for 25 seconds, and then water (control), raw, juiced or heated apple, raw or heated lettuce, raw or juiced mint leaves, or green tea were consumed immediately. The volatiles responsible for garlic breath include diallyl disulfide, allyl mercaptan, allyl methyl disulfide, and allyl methyl sulfide. The levels of volatiles on the breath after consumption were analyzed by selected ion flow tube mass spectrometry.

Raw apple and raw lettuce and decreased the concentration of volatiles in breath by 50 percent or more compared to the control for the first 30 minutes. Mint leaves had a higher deodorization level compared to raw apple and raw lettuce for all volatile compounds measured. Apple juice and mint juice reduced the levels of volatiles, but not as effectively as chewing raw apple or raw mint. Both heated apple and lettuce produced a significant reduction of volatiles. Green tea had no deodorizing effect on the garlic compounds.

According to the researchers, foods deodorize garlic breath through two mechanisms. First, enzymes in the raw foods help to destroy the odors, and then, phenolic compounds in both the raw and cooked foods destroy



the volatiles. This is why raw foods were generally more effective because they contain both the enzymes and the <u>phenolic compounds</u>.

More information: Rita Mirondo et al. Deodorization of Garlic Breath by Foods, and the Role of Polyphenol Oxidase and Phenolic Compounds, *Journal of Food Science* (2016). DOI: 10.1111/1750-3841.13439

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