

Does “Activated Charcoal” Effectively Whiten Teeth?

By Van B. Haywood, DMD, and Erin Boyleston, RDH, MS

Q One of my patients asked me about using activated charcoal to whiten teeth. While I had not heard of this before, upon a Google search, it seems to be a popular approach to at-home bleaching. How should I advise my patients on this trend?

A The answer to the question of whether activated charcoal can whiten teeth requires an understanding of the difference between the terms “whitening” and “bleaching,” as well as awareness of the current research and the position of the American Dental Association (ADA) on the use of “activated charcoal” to whiten teeth.

When the word “whitening” is used in most over-the-counter products, whitening means the product removes surface stains. It does not change the inherent color of the teeth; this is called “bleaching.” Bleaching also causes a whitening of the tooth, as it both removes the surface stains and changes the genetic color of the tooth, which is found in the dentin. Also, a colorimeter (which measures color) will read the tooth as “whiter,” whether the surface stain is removed, or the internal color of the tooth changes. As such, both bleaching products and whitening products create whiter teeth. At this time, a product that claims whitening can generally be assumed to remove surface stains, not change the color of the tooth or restoration.

According to ADA spokesperson Kimberly Harms, DDS, there isn’t available evidence demonstrating that activated charcoal provides any oral health benefits. Harms also notes that it is unclear whether using activated charcoal is safe, with the concern being with the use of abrasives to brush teeth and what effect this may have on the gingiva and enamel.¹

A 2017 literature review by Brooks et al² published in the *Journal of the ADA (JADA)* found insufficient evidence to support the efficacy claims of charcoal products. The authors also wrote a letter to *JADA’s* editor further questioning the safety of charcoal. They noted, “Clinical experiences are recorded in which the particles of charcoal became imbedded

in the gum tissue and produced a bluish line near the margin, which is removable only by surgical means.”³

Advertisements demonstrating the effectiveness of whitening techniques can also be misleading, as showing a model wearing red lipstick may suggest whiter teeth due to the color contrast. Patients’ complexions and make-up also influence the apparent color of their teeth, as do clothing choices. Darker gingiva—whether from charcoal or melanin pigment—also make the teeth appear lighter or whiter.

In summary, most over-the-counter products whiten teeth by removing surface stains, while techniques used in the dental office—whether tray bleaching or in-office bleaching—change the internal color of the teeth. Activated charcoal does not change the color of the teeth other than by abrasive action like a toothpaste, and its use may pose some risk to the enamel and gingiva. **D**

REFERENCES

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