

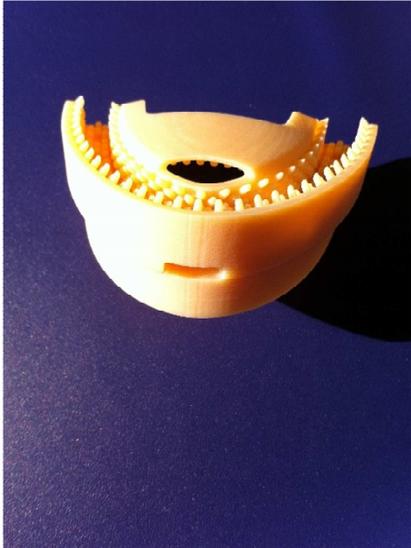
One more publication dated January 20th: <http://www.drBicuspid.com/index.aspx?sec=def>

Company develops edible 'toothbrush' for more accessible oral hygiene

By [DrBicuspid Staff](#)

January 20, 2014 -- [Dent-Chew Brush](#) has developed a dissolvable, single-use oral appliance that is made from edible materials and contains xylitol and its own dentifrice. Potential markets range from at-risk schoolchildren and travelers to the military and developing countries, according to the firm.

Shaped like a double mouthpiece, the patented Clean Bite is made of gelatin and other generally recognized as safe (GRAS) materials. Depending on the size, it contains up to 800 bristles set at 45° that brush the teeth, gingival margin, and tongue, according to the company.



The Clean Bite oral appliance. All images courtesy of Dent-Chew Brush.

The appliance contains a dentifrice, called "The Answer," with xylitol as the primary component. It is contained in four reservoirs, and after the first compression by the user, small ports rupture for equal distribution of the dentifrice. Water-soluble and biodegradable, it is used for 60 to 90 seconds, and then dissolves and can be ingested or disposed. It also has a front port that enables breathing for congested users.

Clean Bite comes in different sizes for both adults and children, and can be flavored for different consumers, such as mint for adults and grape for children.

It was invented by John Gallagher Jr., a former Army medic, and Roman Bielski, PhD, an adjunct professor of pharmaceutical sciences at Wilkes University. Gallagher came up with the idea of an alternative to brushing that didn't require water, a toothbrush, or toothpaste after serving in the Army during the Vietnam War and caring for amputee patients.

Dent-Chew Brush has collaborated with the Creighton University School of Dentistry and the University of Maryland, School of Dentistry, and is interested in seeking equity funding and licensing for manufacturing and global distribution.



The company is currently in discussions with an international firm that would enable the product to be manufactured and tested for efficacy and comfort within a short time, Gallagher told *DrBicuspid.com*. "Additionally we have working relationships that would provide at least two cohorts of patients that are affected by varying conditions of the oral cavity, for initial studies (others to follow) to measure sizing, comfort, and efficacy," he noted.

Clean Bite is an edible, single-use oral appliance for cleaning the teeth, gums, and tongue.

"If negotiations go as expected, we should be testing within four months, with availability to some markets within an additional three to six months," Gallagher said.

The primary market in the U.S. is at-risk children who receive free or reduced-cost meals at school and are three times more likely to have untreated caries, according to the company. "For this market, we are looking for a cost of 23¢ to 25¢ on the tray, and as a licensing firm this will be a point of negotiation," Gallagher said. Since Clean Bite is made from a high concentration of collagen, it offers a double benefit -- it contains 5-6 grams of protein, he noted.

Other markets include the military, travelers, hospitals, prisons, managed care facilities, organizations that provide disaster relief and support to developing nations, and even retailers such as Starbucks or businesses like airlines. Clean Bite can also be used as a delivery system for vitamins, nutrients, medications, and possibly microencapsulated vaccines in developing countries, the company noted. The price points will vary, but the firm is looking to have "one low-cost royalty per piece, regardless of use, to perpetuate use throughout the world," according to Gallagher.