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# Benefits of Chewing™

## Chewing Gum is Good for Oral Health

### Background

Chewing sugarfree gum after meals has clinically proven benefits for oral health. Many scientific studies have explored the role of chewing gum in promoting healthy teeth. The science is supported by expert reviews and statements from authoritative bodies indicating that chewing sugarfree gum can help reduce the risk of dental caries (cavities).

### The Oral Health Benefits of Chewing Sugarfree Gum

Chewing sugarfree gum can impact oral health in many ways:

- Stimulates flow of saliva in the mouth<sup>1</sup>
- Cleans the mouth of food debris<sup>2,3</sup>
- Relieves dry mouth discomfort<sup>1,3</sup>
- Neutralizes plaque acids that form in the mouth after eating fermentable carbohydrates<sup>2,4,5</sup>
- Helps remineralize enamel to strengthen teeth<sup>6,7</sup>
- Helps reduce plaque<sup>1,3</sup>
- Helps reduce the risk of dental caries<sup>8,9</sup>
- Helps whiten teeth by reducing and preventing stains<sup>10</sup>



### Chewing Gum and Saliva

Chewing gum stimulates one of the most powerful defense mechanisms in the body – saliva. Saliva is vital to good oral health. Saliva has three main protective (anti-caries) functions: (1) the water dilutes and washes away food debris; (2) the bicarbonate neutralizes and buffers plaque acids; and (3) the calcium and phosphate ions contribute to remineralization of early dental caries lesions. Saliva also contains antibacterial agents.

Saliva alone is a powerful protector of the oral cavity. And, chewing gum is an efficient and pleasant way to increase saliva without drugs. Increasing saliva in the mouth is accomplished by the stimulation of flavors and the gustatory action of chewing. Together these forces stimulate the salivary glands to increase their flow rate by about 10 times the resting state during the first few minutes of chewing and keep it significantly elevated for as long as one chews.<sup>1</sup>

<sup>1</sup> Edgar WM, Dawes C, O'Mullane D. *Saliva and Oral Health: An Essential Overview for the Health Professional. (Third Edition); British Dental Association Publication, 2004; London, W1G 8YS.*

<sup>2</sup> Addy M, Perriam E, Sterry A. "Effects of sugared and sugar-free chewing gum on the accumulation of plaque and debris on the teeth." *J Clin Periodontol.* 1982; 9(4): 346-354.

<sup>3</sup> Moss SJ. *Benefits of Chewing.* New York: Health Education Enterprises, Inc. 2003.

<sup>4</sup> Park KK, Schemehorn BR, Bolton JW, Stookey GK. "Effect of sorbitol gum chewing on plaque pH response after ingesting snacks containing predominantly sucrose or starch." *Am J Dent.* 1990; 3(5): 185-191.

<sup>5</sup> Manning RH, Edgar WM. "pH changes in plaque after eating snacks and meals, and their modification by chewing sugared or sugar-free gum." *Brit Dent J.* 1993; 174: 241-244.

<sup>6</sup> Leach SA, Lee GTR, Edgar WM. "Remineralization of artificial caries-like lesions in human enamel in situ by chewing sorbitol gum." *J Dent Res.* 1989; 68: 1064-1068.

<sup>7</sup> Kashket S, Yaskell T, Lopez LR. "Prevention of sucrose-induced demineralization of tooth enamel by chewing sorbitol gum." *J Dent Res.* 1989; 68(3): 460-462.

<sup>8</sup> Szoke J, Banoczy J, Proskin HM. "Effect of after-meal sucrose-free gum-chewing on clinical caries." *J Dent Res.* 2001; 80(8): 1725-1729.

<sup>9</sup> Beiswanger BB, Boneta AE, Mau MS, Katz BM, Proskin HM, Stookey GK. "The effect of chewing sugar-free gum after meals on clinical caries incidence." *J Am Dent Assoc.* 1998; 129: 1623-1626.

<sup>10</sup> Yankell SL, Emling RC. "Efficacy of chewing gum in preventing extrinsic tooth staining." *J Clin Dent.* 1997; 8: 169-172.

