Benefits of sugar-free gum

Chewing sugar-free gum for 20 minutes after eating or drinking has been proven to complement a healthy oral care routine primarily through increasing the production of saliva flow.¹ This has a positive impact on dental health and plaque neutralisation, helping to reduce dental cavities, also known as caries. The benefits of chewing sugar-free gum as part of a healthy oral care routine are recognised by the Australian Dental Association, the New Zealand Dental Association and 20 other national dental associations around the world.²

Plaque and the cause of dental caries

Plaque is a soft, sticky substance made of bacteria, which builds up near the gums and between teeth. Consumption of carbohydrate-dense foods cause the bacteria in plaque to produce plaque acids. This plaque acid, combined with acids from food, causes the mouth’s pH level to drop to dangerously low levels, increasing the risk of tooth decay.

As the pH drops below 5.7, the acids from the bacterial fermentation begin to dissolve minerals on the tooth surface, creating a demineralised subsurface lesion or ‘white spot’. The low pH state can last hours after eating. Over time, the acid can dissolve areas of the tooth, creating a cavity.

The importance of saliva

Saliva is the body’s own natural defence mechanism which protects our teeth. Saliva helps to wash away food particles that may have lodged in teeth and gums to neutralise harmful plaque acid in the mouth. Stimulated saliva contains more bicarbonate, calcium and phosphate, not only helping rebalance the pH in the mouth after eating and drinking, but also helping to remineralise tooth enamel and neutralise plaque acid.³

The effect of chewing sugar-free gum on saliva

Chewing sugar-free gum increases the rate of saliva flow by almost 10 times.¹ This increase in saliva raises the mineral concentration in the mouth, raising the pH of the saliva and increasing its buffering power. This improves the saliva’s ability to neutralise and protect teeth from food acids and acids produced by plaque.³

These changes in the composition of stimulated saliva lead to a greater ability to protect against tooth decay caused by plaque acid.

Saliva protects teeth in three ways:
- Restores the pH balance in the mouth, neutralising acids
- Helps to wash away food debris that may have lodged in teeth and gums
- Increases mineral concentration in the mouth to repair ‘white spots’ or lesions caused by plaque acid.

Sugarfree gum helps reduce plaque and bacteria levels

Chewing sugarfree gum has been associated with the reduction in the quantity and development of plaque on teeth, as well as a reduction in the acid-forming ability of plaque.4,5,6

Chewing sugarfree gums helps clean the mouth of food debris

Food that gets stuck in the teeth or mouth after eating increases the exposure of teeth to the acids produced by plaque from the fermentation of carbohydrates.

Chewing sugarfree gum after eating increases the rate of food debris clearance from teeth compared with not chewing gum during the initial 15 minutes after eating,7 reducing the exposure of the teeth to acids produced by plaque.

Chewing sugarfree gum assists with plaque acid neutralisation

Salivary stimulation caused by chewing sugarfree gum after consuming carbohydrate-dense snacks or meals has been demonstrated to reduce the ability of plaque to produce the acids which cause tooth decay.8

Enamel remineralisation

Stimulating saliva flow increases the concentration of calcium and phosphate ions in the mouth, which helps to restore minerals in tooth enamel.9,10 Whilst tooth remineralisation is a process which occurs naturally in the mouth, studies have shown subjects that chewed gum as part of their oral care routine experienced double the remineralisation of those who did not chew gum.10

Relieve dry mouth discomfort

The salivary flow stimulation caused by chewing gum can relieve some of the discomfort of xerostomia or ‘dry mouth’, which can be a risk factor for dental caries. In fact, chewing sugarfree gum has been shown to be one of the most preferred treatments for xerostomia.9,11,12

How gum can make a difference
Chewing sugar-free gum can help protect teeth in a number of ways:

- Helps reduce plaque
- Helps neutralise plaque acids
- Helps maintain tooth mineralisation
- Clean the mouth of food debris
- Stimulate saliva slow
- Relieve dry mouth discomfort


