

Tooth Staining

Smiles have a huge impact on first impressions. Stained teeth can make a smile look unsightly and can be the source of embarrassment, affecting a person’s confidence and self-esteem. The colour of the teeth is of particular cosmetic importance to a large number of people who seek dental treatment to improve their appearance. Knowing the cause of staining may influence dental hygiene treatment options and outcomes.

TYPES OF TOOTH STAINS

There are two main types of tooth stains:

Intrinsic stains – occur inside the tooth structure and cannot be removed by professional scaling (cleaning) or polishing. Stains can result from alterations during tooth development, associated with antibiotic use (tetracycline), trauma, infection and dental fluorosis – swallowing large amounts of fluoride that cause white/brown spots on teeth and weaken the enamel.

Extrinsic stains – appear on the tooth surface and can usually be removed by professional scaling or polishing. Stains occur from dyes in food, beverages, tobacco, mouth rinses, exposure to metallic compounds, the presence of chromogenic bacteria (colour-producing bacteria) and poor oral hygiene. The stains are absorbed onto tooth surface deposits such as plaque bacteria (white, sticky substance) that accumulate on teeth, especially around the gum line.

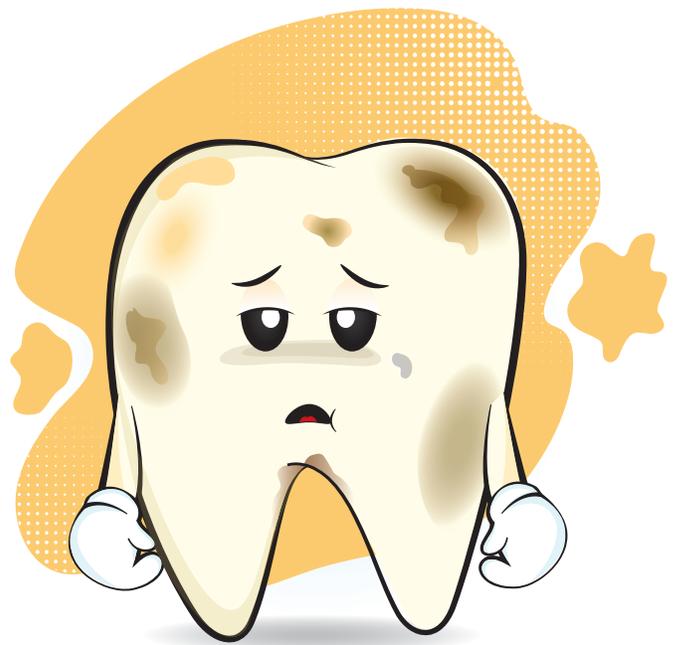
EXTRINSIC STAIN COLOUR

Sources and treatment

Sources of the stain can often be identified by the colour, as well as the client’s lifestyle, diet, work environment and oral self-care, which helps to determine the most effective way to remove and control staining. (See chart, right)

CAUSES OF INTRINSIC AND EXTRINSIC TOOTH STAINING

- Poor oral hygiene
- Age
- Smoking and/or smokeless tobacco
- Beverages, e.g., coffee, tea and red wine
- Food, e.g., berries, soy sauce and curries



Type	Source	Treatment
Yellow	Plaque build-up on tooth surfaces due to poor oral hygiene	Proper home care to remove plaque
Green	Most common in children with enamel irregularities; inadequate daily plaque removal	Proper home care to remove plaque
Black line	A persistent stain from iron in saliva, oral solutions and supplements; industrial exposure to iron, manganese and silver	Professional scaling and polishing
Brown	Tobacco tar, food and beverage pigment and tannins (e.g., tea, wine); insufficient brushing	Professional scaling and polishing
Yellowish-brown	Stannous fluoride and chlorhexidene in mouth rinses	Professional scaling and polishing
Orange	Chromogenic bacteria from poor oral hygiene	Professional scaling and polishing or client removes with proper brushing
Blue-green	Exposure to mercury and lead dust	Professional scaling and polishing
Red-black	Chewing betel leaves and nuts, and lime (paan)	Professional scaling and polishing

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- Certain medications
- Dental fluorosis
- Trauma to the teeth

RISK FACTORS

- Plaque forms a rough surface on enamel where stains can attach, giving teeth a dull and unsightly appearance.
- Poor oral hygiene allows plaque and stains to build up.
- Some restorations and crowded teeth can make plaque removal difficult.
- Dry mouth and the absence of saliva to wash away food and harmful bacteria promote plaque growth.

PREVENTION AND HOME CARE

When plaque is removed, most stains cannot adhere to smooth tooth surfaces. Dental hygienists develop specific treatment plans for stain removal and prevention, which can vary depending on the cause and extent of the stains. They work with clients to customize home-care programs to help keep mouths healthy and plaque-free.

Maintain good oral care:

- Visit a dental hygienist regularly for professional scaling to remove extrinsic tooth stains, plaque and calculus (hardened plaque).



- Brush twice a day with fluoridated toothpaste and a soft toothbrush. (An adult should assist/supervise children until the age of 10.)
- Floss or clean between teeth at least once a day.
- Brush or scrape the tongue daily; it can harbour harmful bacteria.
- Use a mouth rinse, if recommended by a dental professional.
- Eat a nutritious, well-balanced diet.
- Reduce sugar consumption.
- Avoid beverages, food and products that cause staining.
- Do not smoke or use smokeless tobacco.

In addition, dental hygienists:

- Provide advice on smoking cessation and healthy eating, including nutritional snacks and beverages.
- Educate clients and give instruction on effective ways to brush and floss.
- Recommend products that help reduce stain formation, e.g., whitening toothpaste, power toothbrushes.
- Remove plaque and stains from dentures and recommend cleaning products, as plaque and stains can affect the condition and function of dentures.

See fact sheets on: Smoking and Smokeless Tobacco; Nutrition and Oral Health; Brushing, Flossing and Rinsing; and Xerostomia.

As professional health-care providers, dental hygienists are primarily concerned with promoting good oral health. Dental hygiene is among the largest of the regulated health-care professions in the province. In Ontario all dental hygienists are registered with the College of Dental Hygienists of Ontario, which regulates the profession to ensure the public receives safe and ongoing comprehensive oral care.

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