

Does floss have a future?

By Kate Quinlan

As you cannot fail to have seen, dental flossing hit the mainstream news headlines in early August following news that the United States health department has removed daily flossing from its list of dental recommendations. Despite American dentists having recommended the use of floss to patients since the 1800s, an investigation by Associated Press (AP) said ‘there’s little proof that flossing works’ (<http://apne.ws/2aN6zoC>).

The British Dental Association’s (BDA’s) scientific adviser, Professor Damien Walmsley, has been widely quoted in the press as saying that floss can be ‘of little value’, and that small interdental brushes are preferable for cleaning the area in between the teeth, where there is space to do so.

The NHS is now set to review its own guidance on flossing the teeth, which is currently to floss once a day.

This feature for *BDJ Upfront* was started before the headlines of 2 August onwards. Contributors were asked their views on flossing, bearing in mind the following questions:

1. Is flossing essential to good oral health?
2. Do you floss yourself and if so, how often?
3. Do you recommend that all patients floss?
4. Do you think toothpicks/interdental brushes/other can be used as an alternative to floss?

‘Use interdental brushes where they fit and floss where they do not’

Phil Ower

President, British Society of Periodontology

There has been a lot of inaccurate and misleading information about flossing in the national press of late, both in the broadsheets and tabloids, which has implied that flossing was worthless. Such misreporting has stemmed from the findings of the 11th European Workshop on Periodontology (2015) on the effective prevention of periodontal and peri-implant diseases (freely available at www.prevention.efp.org) which, in relation to interdental cleaning, stated

that: ‘Flossing cannot be recommended other than for sites of gingival and periodontal health where interdental brushes will not pass through the interproximal area without trauma ... interdental brushes are the device of choice for interproximal plaque removal.’ This led to newspaper headlines such as ‘flossing is a waste of time’ which was giving out a misleading message because there was a danger that the public, who often regard all interdental cleaning as ‘flossing’, could interpret this as ‘interdental cleaning is a waste of time’. The systematic review suggested that interdental

health and wellbeing. There is little scientific evidence to support flossing being beneficial for managing gingivitis but the use of interdental brushes has good evidence, and where those don’t fit tight gaps then the professional recommendation is to floss.

I use the AirFloss daily and I use interdental brushes where they fit.

I recommend interdental brushes to all patients with periodontal disease.

The consensus statements listed below represent the current expert opinion in Europe.^{1,2}

1. Tonetti M S, Chapple I L, Jepsen S, Sanz M. Primary and secondary prevention of periodontal and peri-implant diseases: Introduction to, and objectives of the 11th European Workshop on Periodontology consensus conference. *J Clin Periodontol* 2015; **42 suppl 16**: S1–S4.
2. Chapple I L, Van der Weijden F, Doerfer C et al. Primary prevention of periodontitis: managing gingivitis. *J Clin Periodontol* 2015; **24 suppl 16**: S71–S76.

See if your gums bleed when you do it – if they don’t you’re doing enough and if they do you’re not!

brushes were more effective than floss where there was space for them but flossing should be used in areas of gingival and periodontal health. Brushes rather than sticks or other devices seem to have the best evidence base.

So what advice do I give to patients? Use interdental brushes where they fit and floss where they do not. A simple message that patients understand. As a preventive measure interdental cleaning should ideally be done daily but much of course depends on individual susceptibility and many patients will not need to do it that frequently. I’m lucky enough to be fairly resistant to gingival inflammation so I floss (and use ID brushes in the bigger spaces!) a couple of times a week, which is enough for me. How do patients know how often to clean interdentally? See if your gums bleed when you do it – if they don’t you’re doing enough and if they do you’re not!

‘Interdental cleaning is essential to good oral health’

Professor Iain Chapple

Professor of Periodontology and Consultant in Restorative Dentistry

Interdental cleaning is essential to good oral health and, therefore, indirectly to general

‘Flossing requires a good degree of manual dexterity’

Phillip Dowell

Past President of the British Society of Periodontology

My view on flossing is that it may form part of the armamentarium in the fight against reasonable plaque control but it is not a daily essential in order to achieve good oral health.

For me personally I only floss if I need to dislodge food debris between teeth with tight embrasures, which doesn’t happen very often.

I don’t recommend that all patients floss but I highly recommend the use of interdental brushes. Flossing requires a good degree of manual dexterity and many patients find this difficult to achieve.

‘Interdental plaque removal requires individualised planning, instruction and support to be effective’

Professor Ian Needleman

Unit of Periodontology, UCL Eastman Dental Institute

The question is really whether effective interdental daily plaque removal is essential to achieving and maintaining good oral health. The answer to this question is strongly yes,

at least for periodontal health. How people remove plaque effectively depends on many factors. If there is no loss of interdental papilla or gingival recession, dental floss can achieve this. If the interdental tissue no longer fills the interdental space, interdental brushes are more effective. Many people find dental floss difficult to use effectively or do not like it and in this situation alternative tools should be considered such as floss picks, tooth picks etc. Similarly, tooth crowding and other features that cause difficulty in reaching the interdental sites will affect choice of kit. In other words, interdental plaque removal requires individualised planning, instruction and support to be effective. The focus should be on the desired outcome, ie health, rather than the process, ie kit/technique.

I floss daily with tape.

In our practice we advise all patients about interdental plaque removal and select the best kit for them and their preferences, whether floss or other tools. Choose the right kit for the right situation taking into account people's preferences.

it is essentially contra-indicated. There is no evidence to show its use in reducing or preventing caries. Many large systematic reviews have shown that the vast majority of patients will never master effective flossing. I rarely teach flossing these days and only ever to those patients I am confident could master it. If the patient is not brushing effectively then flossing becomes somewhat irrelevant; walk before running. Interdental brushes are excellent where they fit and should be encouraged. I never floss.

'Regular flossing of children's teeth can dramatically reduce caries'

Nicole Sturzenbaum
Children's dentist

One of the greatest problems I see every day is that parents not only don't know that it is important that they floss their children's teeth (from around the age of five, as soon as the teeth touch each other), but even that they were told by dentists to not floss their

school) to use dental floss (mostly with little floss sticks instead of a string – because they are easier to handle).

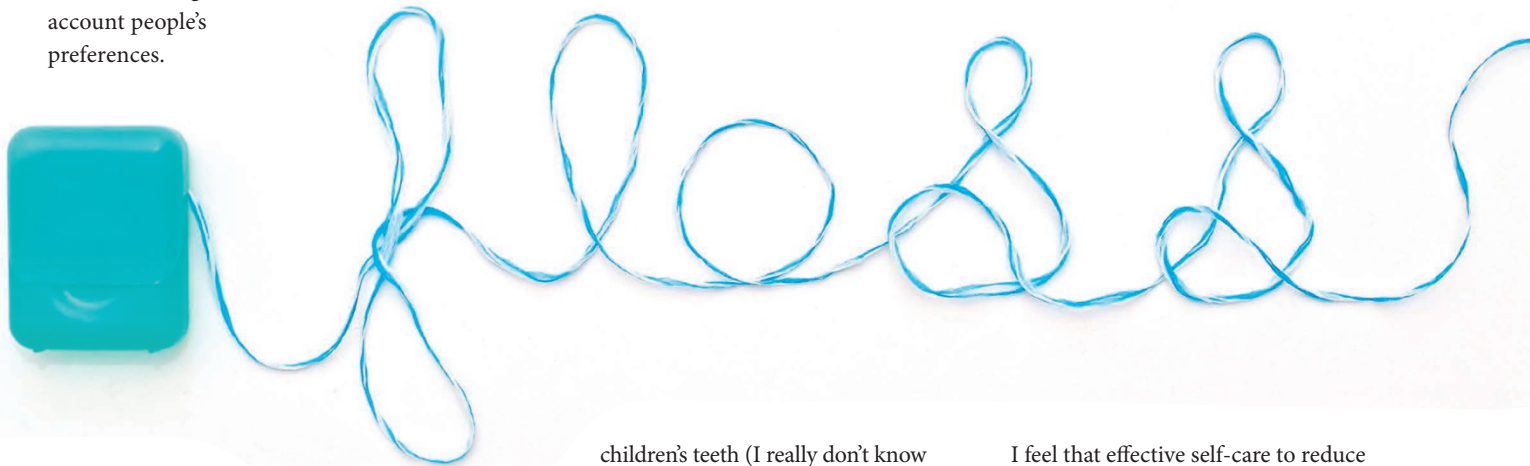
I personally use dental floss every morning (tape), but do recommend it to be used at night time.

1. Hujoel P P, Cunha-Cruz J, Banting D W, Loesche W J. Dental flossing and interproximal caries: a systematic review. *J Dent Res* 2006; **85**: 298–305.
2. Longbottom C. Professional flossing is effective in reducing interproximal caries risk in children who have low fluoride exposures. *Evid Based Dent* 2006; **7**: 68.

'Few studies will be free from bias'

Ben Underwood
Dentist and NHS Innovation
Accelerator Fellow

Yes I do floss, every evening before brushing, while listening to music on the Brush DJ app. I developed a video showing how to floss effectively which can be viewed at <https://youtu.be/dTQoxS6b9TE> and another one for using an interdental brush https://youtu.be/fkq_Mjdjz6U.



I find it also helpful to warn about initial side effects such as bleeding which might act as a barrier to use and to review regularly as adherence can drop away or the kit/technique might need to evolve, for instance as gingival inflammation reduces.

'The vast majority of patients will never master effective flossing'

Shaun Howe RDH

I am a bit odd as a dental hygienist as I think flossing is a bit pointless. There is little evidence to support the use of floss in the periodontal patient and the European Federation of Periodontology now suggest

children's teeth (I really don't know why some dentists are giving this advice, but I have heard it several times). This is a disaster, because one of the biggest issues is interproximal decay of the molars in 5-8-year-olds. The decay starts (hidden) in between the teeth, the children don't get X-rayed in their check-ups, the decay grows bigger and when finally detected (because the children are in pain), it is often too late to save the tooth.

There has been a comprehensive literature review which has shown that regular flossing of children's teeth by a trained adult can dramatically reduce interproximal caries in those at high risk.^{1,2}

That's why we at Toothbeary [my practice] are teaching and training the children and the parents (as part of our tooth brushing

I feel that effective self-care to reduce the risk of tooth decay and periodontal disease requires the disruption of the plaque biofilm on at least a twice daily basis (once interdentally is reasonable) on all tooth surfaces and at the gum line. This cannot be achieved by using a toothbrush alone, as the bristles cannot get between teeth – hence the need for interdental cleaning tools such as floss or interdental brushes. It is important that people know how to use these tools effectively and with interdental brushes use the correct size(s).

Does floss have a future?

Yes, flossing does have a future. Floss has a role in interdental cleaning, which our contributors all agree is essential to good oral health. ■