

The acid attack

Studies have shown that the saying, 'you are what you eat', applies to both our brain power and our bodies. With this in mind, Professor Andrew Eder explores how what we eat and drink can affect our smiles



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The London Tooth Wear Centre offers an evidence-based and comprehensive approach to managing abrasion, attrition and erosion, using the latest clinical techniques and an holistic approach in a professional and friendly environment.

To request advice, make a referral or for further information on the work of the London Tooth Wear Centre, visit www.toothwear.co.uk, email info@restorative-dentistry.co.uk or call 020 7486 7180.

Medicine and dentistry have become progressively more adept at keeping us healthier for longer; however, one consequence of this longevity is that a number of health issues are becoming more widespread, including that of tooth wear.

The Adult Dental Health Survey 2009 indicates that tooth wear is on the rise – over three-quarters of adults and more than 50% of children show signs of abrasion, attrition and/or erosion. Tooth wear is a natural part of life, we expect teeth to wear as we age, so it is fair to suggest that having some tooth wear is unavoidable. Nonetheless, the growth of moderate wear in young adults over the last few years is of clinical relevance because it is indicative of destruction beyond that which we would expect for the patient's age – making it pathological rather than chronological.

For dental professionals, the signs and symptoms that indicate tooth wear is occurring and action is needed include:

- Sensitive teeth
- Sharp or chipped anterior teeth
- Discolouration, including yellowing and loss of shine (where some of the outer enamel layer has been lost)
- Teeth losing their surface morphology
- Occlusal surfaces wearing flat and taking on a shiny, pitted appearance
- Altered occlusion as vertical height changes
- Restorations standing proud of the teeth
- V-shaped notches or shallower cupping present cervically
- Abfraction lesions developing cervically.

One of the greatest contributors to tooth wear is what our patients consume. Even those conscientiously following what is generally considered a 'healthy' diet can fall foul of tooth erosion.

Realistic advice

It is important to offer realistic advice, including what patients can do themselves to help prevent damage when they do opt for something acidic, including:

- Consume acidic foods and drinks only at meal times, no more than four times per day
- Drinking still water or low fat milk between meals
- Limit fruit juice to once per day and avoid fizzy drinks, sparkling drinks and alcohol
- Rinse the mouth with water for 15 to 30 seconds after consuming acidic foods or drinks
- Chew sugar-free, xylitol-containing gum after consuming acidic food or drink
- Wait at least an hour to brush teeth after consuming any acidic foods or drinks
- Use a low abrasion toothpaste that contains 1,400ppm fluoride and a non-abrasive toothbrush
- Use a fluoridated mouthwash every day at a different time to tooth brushing, as well as before or after acidic foods and drinks, to help limit their erosive potential.

An acid test

Telling a patient they are showing signs of tooth wear can come as something of a shock, especially for those in their 20s, 30s and 40s who are well educated and make an effort to live a healthy lifestyle.

Patients may be surprised to learn that foods such as yoghurt, honey and fruit are not as good for them as they may have thought – because they are acidic. This rings true too for sports drinks, fizzy diet drinks and fruit juices.

It is important to communicate this to patients, perhaps with examples of some of the more commonly consumed culprits (see right). In addition, the internet makes it easy for patients to ascertain whether the food or drink they want to consume is acidic by searching for its pH value. A diet diary can also be useful in identifying aetiological factors.

Tooth wear-friendly choices have a pH above the critical measure of 5.5, the point at which erosion of tooth enamel commences. Therefore, it is important to inform patients that if a pH value is between 0 and 5.5, it will contribute to acid erosion; the lower the number, the greater the potential for damage.

Dentally aware

Whatever their age and status, patients need to be made aware that imprudent food and drink choices can cause damage to the tooth surfaces. Early diagnosis of tooth wear is essential so that simple treatment, including monitoring and prevention, may be provided to help patients achieve long-term dental health. Left unaware and uneducated, patients will continue with their destructive habits, which will have serious implications for their oral health in years to come. **DH&T**

The food criminals

Popular food and drinks with a pH below 5.5:

- Apples
- Alcohol
- Cherries
- Coffee
- Cottage cheese
- Fizzy drinks (including diet)
- Fruit smoothies
- Grapes
- Honey
- Jam
- Ketchup
- Lemons
- Limes
- Oranges
- Quinoa
- Soy sauce
- Sports/energy drinks
- Vinegar
- Yoghurt