

Toothbrushes... Are they a health risk?

Dr. Peter Neal*

He explains why he believes toothbrushes, riddled with all kinds of bacteria, should carry a Government health warning....

Toothbrushes should carry a Government health warning: Using a toothbrush can damage your health.

It is well accepted that tooth-brushes harbour all kinds of micro organisms – bacteria, fungi and viruses. The controversial question seems to be, “does it matter?” – how much harm is the inevitable re-infection doing to the user?

After all, it is bacteria that cause dental decay, in addition to the mounting evidence that oral bacteria can cause such conditions as coronary heart disease, stomach ulcers and arthritis. And many of those bacteria can be found in their millions – alive and well – on a used toothbrush.

Nowadays, when all of our scaling and dental instruments are thoroughly cleaned and sterilised, the toothbrush stands out as the most unhygienic instrument used in the mouth, at least twice daily. It seems to me to be pointless going on about the importance of oral hygiene when the primary instrument used by the patients themselves is so contaminated. Furthermore, most patients share their bathroom with someone else and keep their toothbrushes together in a beaker. Toothbrush sharing, possibly by mistake, may be more common than we think, especially amongst young children. In these situations, cross-infection is an obvious problem and effective toothbrush disinfection becomes even more important.

We recommend electric tooth-brushes and they appear to be very good at cleaning teeth, but what about all the contaminated fluid that is retained in the working parts of the head and the electric shaft? All of these micro organisms are “sprayed” back into the mouth when an electric toothbrush is next used.

There is an argument that we can be “too clean” and that all of these germs are helpful to build up immunity – try telling that to the General Dental Council next time you fail a practice inspection on hygiene grounds! And yet our patients would fail an inspection on hygiene grounds every day, because they are using a contaminated instrument to clean their teeth. A great deal of research has been done on toothbrush contamination and many papers published, but surprisingly little notice has been taken of the findings.

As early as 1920 the toothbrush was implicated as a cause of repeated infections and in 1978 it was discovered that the bacteria known to be involved in the cause of tooth decay (*Streptococcus mutans*) was readily transferred to the toothbrush and thence to the toothpaste from infected individuals.

The toothbrush as an actual source of infection is supported by studies which show that patients with oral inflammatory disease and those very susceptible to oral disease – such as the frail and elderly or those with a depressed immune system to disease or therapy e.g. chemotherapy and immunotherapy – all respond to treatment far better if they renew their toothbrushes frequently.

It has been demonstrated that the Herpes simplex virus can remain viable on a dried toothbrush for at least 48 hours and for more than seven days in a moist environment, such as a bathroom, from which it could be assumed that the spread of a cold or influenza through a household could result from toothbrushes harbouring the micro organisms

Disinfection of Tooth Brushes

Household disinfection solutions, such as hypochlorite or mouth-washes such as chlorhexidine can be used, but this method involves soaking the toothbrushes upside down in a glass or other container, which can be easily knocked over by a child, resulting in safety issues. Boiling water and microwave ovens, although fairly effective, have a seriously detrimental effect on the toothbrush itself.

For several years there has been a reliable and very effective method of disinfecting toothbrushes on the market and I cannot understand why more dentists and hygienists have not taken on board the importance of using a clean toothbrush. To me it is basic personal hygiene, rather like washing one’s hands after going to the toilet and keeping food preparation work surfaces clean.

I would welcome any comment, both positive and negative, but I think it is the duty of every dentist and dental hygienist to draw patients’ attention to this basic oral hygiene gap.

*About the author, Dr. Peter Neal

Dr. Peter Neal worked in general dental practice for 35 years and is now a part-time clinical lecturer at Birmingham dental hospital. After many years of concern about patients’ oral hygiene he became involved in the development of Brushtox Antiseptic Toothbrush Cleaner.

Brushtox is now available in South Africa from Dentists, Dental Hygienists and leading Pharmacies. For more information visit the website www.brushtox.co.za or Sharecall: 086 010 9151.

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