

Your patients won't need to be scared of the drill if you don't *need* the drill

There are few things more iconic in dentistry than the dental drill. Entirely unmistakable, the high-pitched whine of a high-speed handpiece is considered one of the most recognisable noises in modern dentistry – and the one that inspires the most fear.

Indeed, according to statistics, as many as one in seven adults in the UK have, at one point, suffered from extreme dental anxiety.¹ The most commonly cited reason for this was the sound of the drill.

Quite why this should be the case is still unclear. The reasons that patients give vary widely depending on the individual. Nevertheless, it is believed that it has very little to do with the noise itself – rather, the fear is associative and is simply an audible representation of the expected pain of the impending dental work. Indeed, the sound and the perception of pain seem inextricably linked, with studies showing that those individuals who respond worse to the sound of the drill will subsequently experience greater pain.²

However, some studies have also indicated that the sound does trigger certain areas of the brain that are closely related to emotional response³ – suggesting that the noise does have an affect on people at a neurological level. Sadly, this research is still very much in its infancy and more studies will be required to fully elucidate the meaning of these initial findings.

What is clear, however, is why dental professionals need to use their drills so often. In the UK, it is estimated that approximately 31 per cent of the adult population is afflicted by dental caries.¹ Furthermore, a shocking third of school age children across the country present with some level of dental decay.¹

Of course, the most common treatment for patients with dental caries is the removal of all decayed material and filling the subsequent cavity with a filling material. Indeed, in most cases, nothing more than this can be done. Enamel decay can be arrested and will repair itself if identified early. However, this regenerative capacity is lost once cavitation occurs meaning the softer, more sensitive dentine and pulp layers of the tooth are exposed. If allowed to progress further, the restorative spiral increases with even more invasive treatments, like a root canal or, in the worse cases, extraction of the affected tooth.

It is these later procedures that most often necessitate the use of the dental drill and are, thus, the most common culprits for dental fear. While an individual filling may not take a particularly long time, a phobic patient will hate every moment of the procedure. This is naturally exacerbated in the case of a root canal, which will take far longer than a simple restorative filling – and requires more extensive use of the drill.

To make matters worse, new research has confirmed that those patients who suffer from dental phobia are more likely to have active dental caries – indicating a direct link between patients’ fears and their oral health.⁴ Naturally, the simplest explanation for this is that patients who are afraid of the dentist and their drills will be less likely to attend regular check ups, to the detriment of their oral health.

There is a solution to these problems, however. The ‘Steele’ report from 2009⁵ has shifted the dental paradigm, with clinicians encouraged to focus on preventive dental care rather than the restorative measures. In this case, the benefits of doing so are clear. If phobic patients can have their dental caries treated in a preventive and non-invasive way, they will not have to suffer the dental drill.

Unfortunately, active dental caries is notoriously difficult to detect in its earliest stages, exactly at the time when it can be regenerated. Normally, a patient will be diagnosed with tooth decay once they have attended a routine check-up and a carious lesion, along with the resultant cavitation it has caused, has been physically detected by the practitioner. After this, there is no choice but the dental drill.

With the new CALCIVIS imaging system, however, clinicians can identify active demineralisation on the surface of a tooth in its earliest and most reversible stages. Through innovative bioluminescent (light-emitting) technology, the CALCIVIS imaging system can help clinicians practice true preventive dentistry, effectively reducing the need for the dental drill – after all, a tooth doesn’t need drilling if the decay has been spotted early!

There are many positive aspects to preventive dentistry beyond the simple need to improve the nation’s overall oral health. By treating patients for dental decay preventively, and avoiding the need for ‘drilling and filling’, phobic patients won’t need to face the dreaded sounds of the dental drill.

Contact CALCIVIS now - your patients will approve!

Visit www.calcivis.com

¹ Oral Health Foundation: National Smile Month, Facts and Figures. Link: <http://www.nationalsmilemonth.org/facts-figures/> [accessed 16/6/17]

² The Guardian: *Scared of the dentist? This is why, say neuroscientists*. Published online: 10/11/13; link: <http://www.theguardian.com/society/2013/nov/10/dentists-drills-brain-neuroscientists> [accessed 16/06/17]

³ Common Health: *Drilling Into Our Fear Of The Dentist – And What To Do About It*. Published online: 20/12/13; link: <http://commonhealth.wbur.org/2013/12/afraid-of-the-dentist-tips-therapy> [accessed 16/06/17]

⁴ KCL: *Those with dental phobia more likely to have cavities or missing teeth, study confirms*. Published online: 20/04/17; link: <http://www.kcl.ac.uk/dentistry/newsevents/news/newsrecords/2017/April/Those-with-dental-phobia-more-likely-to-have-cavities-or-missing-teeth-study-confirms.aspx> [accessed 16/06/17]

⁵ NHS England: *NHS dental services in England: An independent review led by Professor Jimmy Steele, June 2009*. Link: http://www.sigwales.org/wp-content/uploads/dh_101180.pdf [accessed 16/06/17]