

# Vital statistics

*Private Dentistry* talks to **Nick Williams** about how Biodentine has helped revolutionise his practice and keep teeth vital

When Dr Nick Williams first heard about Biodentine he was sceptical, but after trialling the product in his clinic for the past eight months, as part of a national research group known as the PREP panel, he describes it as 'one of those products you wonder how you lived without'.

Dr Williams, who heads up the Lime Tree Dental Practice in Portishead alongside partner Dr Jonathan Jones, started using Biodentine in November 2010. The product was launched by Septodont two months earlier and is an all-in-one, biocompatible and bioactive material that can be used wherever dentine is damaged, both in the crown and the root.

## PREP panel

The PREP panel is a select group of dentists, run by the University of Birmingham, which researches and evaluates the use of new state-of-the-art materials in the dental practice environment. This allows dentists such as Dr Williams to assess the best materials for use in their patients and publish advice for other dentists on the use of the materials assessed.

It was because of his association with the panel that Dr Williams first heard about Biodentine.

He explains, 'Last October I was invited to a scientific meeting in Birmingham with the PREP panel where the subject was going to be Biodentine. The claims Septodont was making about what the material could achieve were very interesting and exciting.'

'As always with these things, you are sceptical at first as to whether or not it

is going to do everything it says. Actually, so far, with our usage in practice it does exactly what it says it is going to do on the tin.'

Often described as 'dentine in a capsule', Biodentine is designed to treat damaged dentine both for restorative and endodontic indications. Based on active biosilicate technology, Biodentine is highly biocompatible, thanks to its tricalcium silicate core, and thus makes the risk of adverse tissue response a thing of the past.

It also helps preserve pulp vitality by promoting reactionary dentine genesis and has outstanding sealing properties to reduce the risk of clinical failures through bacterial percolation, thus ensuring the absence of post-operative sensitivity.

Dr Williams says, 'Biodentine fits in to the practice in a multitude of situations and is very quickly becoming one of those products I wonder how I lived without it. There is nothing else that does the same across the board. There are individual materials that do some of the things that Biodentine does but there is nothing that does all of the things it does.'

'We are using it a lot in direct pulp capping as well as in indirect pulp capping. I have also used it in surgical situations where we have been repairing roots that have been damaged through previous treatments – to try to save the tooth.'



## Clock watching

Dr Williams says dentists will have to learn to get used to the time Biodentine takes to set. 'In dentistry we have become used to materials that set in 15 to 20 seconds. Biodentine takes 12 minutes, which is something you have to get around from a business practice point of view. When you have got a flap of skin open and access into roots and bone, to leave that flap up while the material is setting is a concern. However, in the small number of cases we have used it in that environment it has healed beautifully well.'

'To us the benefits are for the patient, there is no doubt about it. For a tooth with a large cavity that has got in contact with the nerve we would usually advise a root filling – which is expensive and requires extensive and invasive treatment. However, if the patient has not had any pain or infection with this tooth they may not wish to proceed. We know that the

nerve is going to die off and cause them to have an abscess with the consequences that will bring.

'What we are finding with these teeth is that if we pack Biodentine straight into the cavity then, despite the fact they might get some pain and discomfort immediately after the treatment (which is to be expected because we are packing directly onto the nerve), within a week the pain subsides.

'We have been reviewing some of these patients at three and six months and we have seen that the nerves on the whole have stayed alive and that the teeth are staying vital with no signs of an infection and no reason to do a root filling.


'It is great for us as a practice to show that we are acting in the patients' best interests and are trying to save them a considerable cost and avoid doing invasive treatments. I also believe that the tooth will actually last longer if it is vital than it will if you do

a root filling – so it is a win-win situation for both the patient and the practice.'

### Successful treatments

Dr Williams has also performed some very successful treatments with indirect pulp capping using Biodentine.

He says, 'I had a patient who was complaining of bad sensitivity, both with hot and cold foods and on biting. We could see there was some decay in the tooth under an old amalgam filling and there were fracture lines in all directions within the tooth as well. We took the filling out and most of the cusps fell off because it was all so badly cracked and decayed. Due to the extent of tooth tissue loss, I suggested to her that we needed to do a crown but as we were extremely close to the nerve we also needed to protect the nerve and replace some of the missing dentine.

'We packed in Biodentine, in the hope that it would calm the tooth down and also act a core material inside of the tooth. She came back a week later and said she had had no pain whatsoever and that all the sensitivity had settled down so we were able to prepare the tooth for a temporary crown. She was absolutely over the moon. There is a chance in that scenario that that tooth may die off in time. However, if we had done any other treatment on that tooth the chances would have been much greater.' 

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