

Do you bond with your fingers crossed?

Marc Gresley BDS, looks at dentine and enamel bonding and the significance of surface preparation



Figure 1: A new patient to the practice presented with a debonded veneer at tooth 22. Close inspection revealed a bonded failure between the veneer and the bonding resin



Figure 2: The old bonding resin was carefully removed from the tooth with air abrasion. Adjacent teeth were protected with a metal matrix strip

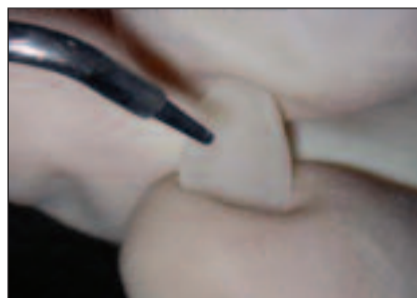


Figure 3: The veneer is cleaned of any remaining resin and silane



Figure 4: After re-etching and silanisation, the veneer was re-bonded

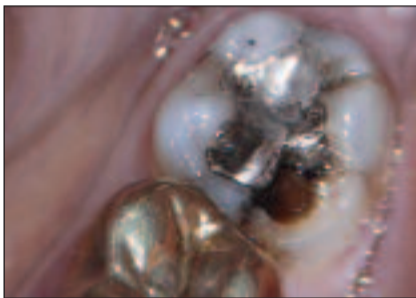


Figure 5: Defective amalgam restoration to be replaced

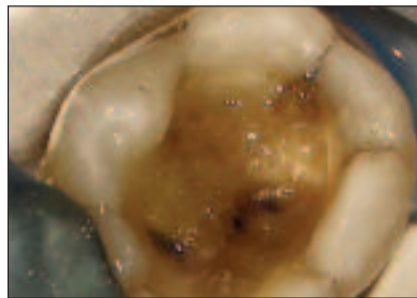


Figure 6: After amalgam and decay are removed, the PrepStart is used to remove any amalgam staining and to prepare the tooth for bonding

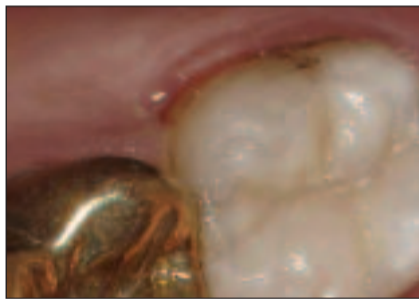


Figure 7: Completed restoration



The PrepStart air abrasion unit

Marc graduated from Sheffield University in 1991 and has been at Clarence House Dental Health Centre in Gloucester ever since. He enjoys all aspects of General Dentistry and has special interests in: Occlusion and Endodontics.

He is a full member of the British Academy of Cosmetic Dentists, British Society of Occlusal Studies, British Endodontic Society and the British Society of Periodontology. Marc is married with two young children and is a keen golfer when he gets the chance to play.



Marc Gresley, the author

I am always looking for ways of improving my dentistry and the service I provide to my patients. Having read numerous articles several years ago about the use of air abrasion in minimal intervention, pain-free dentistry, I thought it was probably something I could use in my practice. After a very useful demonstration and trial, I purchased a PrepStart air abrasion unit.

Initially, I used the PrepStart for preparing minimal occlusal and class V cavities. Often this was achieved without the need for local anaesthetic, a feature greatly appreciated by my patients. As I became more comfortable with air abrasion, I expanded the range of procedures in which I used it. This is greatly helped by the slim, ergonomic handpiece.

Removal of intrinsic staining within a cavity is effectively and efficiently done with air abrasion – it is particularly useful in removal of staining found whilst replacing old amalgam restorations. This produces the ideal foundation for an aesthetic composite restoration.

I found that, regardless of the material being prepared,

the surface quality produced after air abrasion inspired a greater confidence, borne out by a marked reduction in bonding failures.

Like most general practitioners, I regularly place composite restorations, cement crown and bridgework, bond onlays and inlays, repair composite and porcelain restorations and, perhaps, re-bond the occasional Maryland bridge

or veneer. Air abrasion gives me the ability to carry out these procedures with the added confidence that comes from bonding optimally prepared surfaces.

As I do more adhesive dentistry, I find that air abrasion plays a bigger role in my restorative treatment – I would certainly find dentistry more difficult without my PrepStart. ■

Applications and benefits of PrepStart air abrasion

- Small cavity preparation without LA
- Enhance surface bonding to dentine and enamel
- Pit and fissure preparation
- Removal of intrinsic staining in cavity preparation
- Preparing all metals, porcelain, composites & amalgam
- 'Etching' orthodontic brackets and bands
- Rapid cement removal

PrepStart, the compact air abrasion unit, is available from Evident. FreeCall 0500 321111 to arrange a no-obligation demonstration.