

Short Fibres, Long-term Vision: Protecting the Tooth, not just the Restoration

Interview with Dr Pascal Magne

Modern restorative dentistry is shifting away from simply repairing damaged teeth and towards preserving natural tooth structure for long-term survival. This philosophy is central to biomimetic dentistry, as outlined by Dr Pascal Magne in a recent Dental Tribune International interview.¹ ([link to article here](#))

Rather than focusing solely on the strength or aesthetics of restorations, biomimetic dentistry aims to replicate the natural biomechanics of enamel and dentine, ensuring restorations support — rather than compromise — the remaining tooth. Dr Magne highlights that many traditional approaches, such as full crowns and rigid posts, may survive mechanically but often lead to catastrophic tooth fractures. The true measure of success, he argues, is not whether a restoration lasts, but whether the tooth itself is protected.¹

A key focus of the article is the role of short fibre-reinforced composites (FRCs). These materials contain randomly oriented glass fibres that help halt crack propagation, distribute stress more evenly, and increase fracture toughness, particularly in large posterior restorations.¹ By reinforcing the tooth internally, FRCs support conservative preparations and reduce the need for aggressive tooth reduction.



Dr Magne also challenges the routine use of ceramic restorations, noting that while they offer excellent aesthetics and wear resistance, they can be abrasive to opposing enamel and less forgiving biomechanically. In contrast, well-placed composite restorations — particularly when reinforced with fibres — can fail more favourably and are gentler on natural tooth structure.¹

Beyond materials, the article reinforces the importance of clinical philosophy and skill. Mastery of direct composite techniques enables clinicians to offer minimally invasive solutions that preserve pulp vitality and natural tooth behaviour. Looking ahead, Dr Magne points to innovations such as digital workflows, 3D printing, and advanced fibre technologies as key drivers of future biomimetic care.¹

Ultimately, this article serves as a reminder that restorative dentistry should prioritise biology over mechanics —protecting what remains of the natural tooth rather than simply replacing what has been lost.

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Magne P. Short fibres, long-term vision: Protecting the tooth, not just the restoration. Dental Tribune International.

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