



The Rise of 3D Printing in Endodontics: Revolutionizing Dental Care

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Editorial Article

In recent years, 3D printing has emerged as a groundbreaking technology with far-reaching applications across various fields including healthcare. 3D printing is revolutionizing endodontics by enhancing precision, improving clinical outcomes, and streamlining workflows in dental care. It is also known as additive manufacturing, has introduced a new era in dental practice. Endodontics, dealing primarily with root canal procedures and related surgeries, requires detailed knowledge of internal structure of teeth, making 3D printing a perfect fit for this discipline. This 3D printing technology allows for the creation of customized surgical guides and dental models for surgical and nonsurgical procedures. These guides are based on CBCT scans and enable clinicians to accurately navigate root canals, minimize damage to surrounding tissue, and reduce procedural time. Further, Custom dental models used for treatment planning, patient education and training purpose. Beyond its current clinical application, 3D printing holds significant potential in field of regenerative endodontics. Researchers are exploring bioprinting techniques that could one day allow the printing of tissues and scaffolds to support tooth regeneration. Such advancements could eventually replace the need for traditional root canal treatment by regenerating damaged pulp tissue or even entire tooth. Challenges in 3D printing is its high cost and can be prohibitive for smaller dental practice. The future of endodontics is undeniably digital and 3D printing will be at the forefront of this transformation, reshaping how dental professionals diagnose, plan and treat complex cases.

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