



Journal of Prosthodontics Dentistry
An Official Publication of Bureau for Health & Education Status Upliftment
(Constitutionally Entitled as Health-Education, Bureau)

Bridging Health: Advances In Implant Biomaterials

¹Dr. Anusha R, ²Dr. Bharanija Kalidasan Selvi & ³Dr. H. Annapoorni

¹PG Student, Department of Prosthodontics, Meenakshi Ammal Dental College & Hospital

²Professor Department of Prosthodontics, Meenakshi Ammal Dental College & Hospitals

Department of Prosthodontics

³Professor & Head of Department of Prosthodontics, Meenakshi Ammal Dental College & Hospitals

Department of Prosthodontics

Email Id: serviceheb@gmail.com

Abstract

This literature review explores how the biomaterials have evolved in time in dental implantology. It features the impact made in terms of osseointegration, biocompatibility and the clinical success. Traditional materials such as titanium which is known for its biocompatibility and mechanical strength are compared with newer materials introduced in the recent time such as zirconia which offers better aesthetics and also has an approach in terms of nanotechnology. Bioactive coatings incorporating antimicrobial agents and other factors such as osteogenic factors are also known of its ability to reduce infections thus promoting better osseo-integration. 3D printed models are getting more popular especially SLS and EBM has given way to developing customized implants in terms of dimension so that it suits the patients need. This review provides insights into improving dental implant materials which are crucial in enhancing better clinical outcomes. The findings marks the importance of welcoming newer innovations to drive implant success to higher levels.

Keywords: Dental implants, Biomaterials, Titanium, Zirconia, Surface modifications, Bioactive coatings, Osseointegration, 3D printing.

Access this Article Online

Website: <http://heb-nic.in/jopd>

Received on 28/03/2025

Accepted on 04/04/2025 © HEB All rights reserved

Quick Response Code:

