

Editorial

Eco-Friendly Dentistry: Merging Oral Health with Environmental Responsibility

Modern dentistry has made remarkable advancements in technology and patient care. However, the environmental impact of dental practice has become an increasing concern. Traditional clinical processes generate biomedical waste, consume significant energy, and rely heavily on plastic and other non-biodegradable materials. In response, the concept of Green Dentistry has emerged, aiming to provide high-quality oral healthcare while minimizing the ecological footprint.

Green Dentistry, also known as eco-dentistry, emphasizes the use of sustainable materials, energy-efficient technologies, and waste reduction strategies. The adoption of digital radiography is a notable example, as it reduces radiation exposure, eliminates chemical processing of films, and significantly decreases hazardous waste. Similarly, the use of CAD/CAM technology and 3D printing reduces material wastage while enhancing precision in restorative and prosthodontic procedures. Another important aspect is the management of water and energy consumption in dental clinics. High-efficiency suction systems, LED lighting, and water-saving sterilization equipment can reduce resource use without compromising quality of care. Infection control remains paramount, yet eco-friendly alternatives such as biodegradable disinfectants and recyclable barriers are being explored to balance safety with sustainability. Patient education also plays a role in Green Dentistry. Encouraging preventive care reduces the need for invasive treatments and associated resource use. Furthermore, dental professionals can promote environmentally conscious habits, such as recommending biodegradable toothbrushes or toothpaste with minimal packaging.

Despite its advantages, implementing Green Dentistry faces challenges. The initial investment in eco-friendly equipment may be higher, and awareness among practitioners remains limited. Regulatory support, incentives, and training are crucial to encourage widespread adoption.

In conclusion, Green Dentistry is not merely an environmental initiative but a responsibility for healthcare professionals to align oral health with global sustainability goals. By integrating eco-friendly practices into everyday dental care, the profession can contribute to both healthier patients and a healthier planet. The future of dentistry must not only be technologically advanced but also environmentally responsible.

References

- Farman AG. Digital radiography: The balance between image quality and dose. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2005;99(5):633-4.
- Dawood A, Marti Marti B, Sauret-Jackson V, Darwood A. 3D printing in dentistry. *Br Dent J.* 2015;219(11):521-9.
- Avinash B, Avinash BS, Shivalinga BM, Jyothikiran S, Padmini MN. Going green with eco-friendly dentistry. *Indian J Dent Res.* 2013;24(6):697-701.
- Sunil MK, Shilpa G, Vardhan KP. Eco-dentistry: The environment-friendly dentistry. *Ann Essences Dent.* 2010;2(2):91-6.
- Gharatkar AA, Zingade SS, Pathak SD, Aher GB. Green dentistry: A metamorphosis towards an eco-friendly dentistry. *J Indian Prosthodont Soc.* 2016;16(3):215-22.

Dr. Sukhpal Kaur

**Professor, Dept of Orthodontics & Dentofacial Orthopaedics
Faculty of Dental Sciences, Desh Bhagat University.**