

# Sustainability in contemporary orthodontic practice

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Environmental sustainability has become a core responsibility for every organization, workplace, and profession in dentistry around the world, and orthodontics is no exception. There is a growing push in the orthodontic field for practitioners to adopt a more sustainable approach to practicing medicine and treating patients, one that reduces landfill waste and the toxic burden on our planet. In contemporary orthodontic practice, it is essential to adopt means that reduce aggression to the environment.

The materials used in orthodontics must be re-thought and chosen based on the environmental impact they may cause. There are several ways of performing orthodontic treatment in a sustainable manner, bringing benefits to ecology without affecting the efficacy of orthodontic treatment. Use of self-etching adhesive systems, for example, dispenses the washing step required when conventional adhesive systems are used; thus, reducing water consumption in this procedure, the use of orthodontic archwires capable of being sterilized, reduce discard of solid residues that may have been contaminated before use in the patient, recycling of brackets by roughening their base with aluminum oxide and performing new bonding helps eliminate solid residues that would go to the trash can, making it possible for them to have a longer useful life. In the same way, sterilization and use of the same mini-implant that was removed in the same patient, reduces solid residues that are constituents of the mini-implant

Reducing and recycling present the greatest opportunities for sustainable impact of our activities. The use of best practice guidelines through the adoption of technology, effective logistical management systems and environmental regulations are key to a more sustainable practice. Moreover, in this manner, the profession will show its willingness to be part of the solution and not a continuing part of the problem.