DENTAL PRODUCTS REPORTED IN CONTROL OF THE PROPERTY OF THE PRO

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PRODUCTS IN PRACTICE

STAFF TRAINING







Becoming an environmentally friendly dental practice begins with some understanding of terminology, product research and commitment on the part of the dental team.

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ABOUT THE AUTHOR

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A positive trend occurring within dentistry is the adoption of "green" or environmentally-friendly strategies. These strategies include the selection and use of products that are biodegradable and have less toxic byproducts, such as volatile organic compounds (VOCs). Other strategies incorporate replacing disposable items that can be reused, recycling used instruments, reducing water and energy consumption, choosing products that consume fewer resources to manufacture, and recycling waste from the dental facility. Becoming environmentally friendly begins with some understanding of terminology, products and commitment on the part of the dental team.

Terminology

Some terms commonly used in describing green products are listed in Table A. It is important to note that some manufacturers use these terms in their product descriptions—especially the terms biodegradable and eco-friendly. In most cases, the claims are accurate. In some cases, however, the claims may be used simply to sell products.

How do dental team members evaluate products for authenticity in regard to the environment? Understanding the definitions of these terms is a starting point, followed by research—reading product labels, package inserts and Material Safety Data Sheets (MSDS); and reading ingredient lists for compounds known to emit VOCs, cause indoor air pollution and water pollution, or that cannot be easily recycled or dis-

posed of safely. Another resource for information regarding green dental products is the Eco-Dentistry Association (ecodentistry.org), which has a wealth of information.

Reducing products with Volatile Organic Compounds is advisable both at work and at home, because prolonged exposure to these compounds can have adverse health effects.

Table A — The terms		
Term	Definition	
Biodegradable	Able to be broken down to more basic components (carbon, hydrogen and oxy- gen) by bacteria, fungi and other simple organisms	
Carbon footprint	The amount of carbon (CO ₂) gas emitted in a year. This gas is primarily responsible for global warming and climate changes	
Eco-friendly — "green"	Refers to low toxicity, ability to be recycled, no VOC emission	
VOC — volatile organic compound	Gasses emitted from certain solids or liquids	

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Know the contents

Table B lists compounds known to emit VOCs. If these chemicals are listed on a product label or an MSDS, searching for an effective substitute would be wise. VOCs are not the only hazardous chemicals found in products used in dentistry. These products may be in dental materials as well as consumer products, such as cleaners, solvents, paints and cosmetics. Eliminating or reducing the VOCs in a dental practice may be rather time consuming, because this will require the most product research.

Table C contains a list of other chemicals that pose environmental hazards from use and/or disposal of products they're in. It is important to note that not all dental products and materials and/or consumer products contain the chemicals or compounds in Tables B and C. Again, checking labels for these chemicals and researching alternatives to products containing these materials is a positive step in becoming a green dental practice.

Read those labels

Another indicator to look for on product labels is the Design for the Environment Program (DfE), created by the Environmental Protection Agency (EPA). The program promotes development of cleaning products that are safer for the consumer and the environment, and it recognizes manufacturers that are dedicated to manufacturing such products. It is also important to note that effective

Table B — What's in there?	
VOC emitting compounds	Dental or other products that may contain VOCs
Acetone	Bonding agents, adhesives
Benzene	Adhesives
Ethylene glycol	Paints, consumer products (cosmetics)
Formaldehyde	Solutions for chemical vapor sterilizers, composites
Methylene chloride	Composites and impression materials
Perchloroethylene	Solvents
Toluene	Composites, consumer products (nail polish)
Xylene	Gutta-percha softener
Source: Environmental Protection Agency	/

Table C — Possible hazards	
Hazardous Chemicals or Compounds	Products that may contain these chemicals
BisPhenol A	Dental composites and sealants
Lead	Autoclave tape, x-ray film (lead foil), x-ray shields
Mercury	Dental amalgam
Phosphates	Detergents, cleaning solutions
Phthlates	Plastic and vinyl devices, skin moisturizers, composites and denture material
Polyvinylchloride (PVC)	Plastic devices, exam gloves
Source: Environmental Protection Agency	

alternatives may not be available yet to substitute for certain products or materials. But at least reducing the number of these products is a step in the right direction.

Green movements

Several dental distributors have placed special emphasis on green products in their catalogs and on their websites.

Manufacturers also have initiated strategies to provide products and

programs that are more eco-friendly, such as Hu-Friedy with Enzymax Earth™ ultrasonic detergent, Team Vista™ dental unit waterline cleaner, IMS® Lead/Latex Free Autoclave Tape and the Environdent® instrument recycling program. Enzymax Earth™ is an effective dual enzyme detergent for cleaning instruments, is VOC and phosphate free, is rapidly biodegradable and meets the criteria for the DfE program from the EPA. Vista Clean, a component of Team

Vista™, contains citrus botanicals, which are safe for the environment, and is free of any pesticides and silver, which may be harmful to the environment. Many other ecofriendly products are listed on the Eco-Dentistry website.

Make a commitment today to begin or enhance your green strategies for your dental practice. It's good for the environment and the health of your patients and team. ●