



It's Easy Being Green

Environmentally Friendly Practices Are Sprouting Everywhere

By Carol Bommhardt

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As Kermit the Frog likes to say, "It's not easy being green." Unfortunately, he's got a point. In today's throwaway society of convenience, gigantic SUVs, and plastic galore, being "green," or environmentally conscious, certainly is not the easiest task to take on. Making an effort to change the way we live may not always be easy, but luckily for Kermit and the rest of us, many people seem to be seeking out and embracing greener ways of life.

According to a *Washington Post* article (2008), on June 23, 1988, a National Aeronautics and Space Administration (NASA) scientist first told a U.S. Congressional hearing that global warming was a certainty, and it was already happening. Twenty years have passed, but only recently has "going green" become popular. The term is popping up everywhere these days, along with endless opportunities to contribute to helping the environment. As more people become aware of the importance of caring for the environment, more are taking steps to do their part. Although it easily could be considered a passing fad, going green is much more than that, and may very well be the most important

concept of our time.

From grocery stores selling reusable shopping bags to car manufacturers creating more energy-efficient vehicles, the world is catching on to what some have been warning about for years. The amount of information can be overwhelming when discussing global warming and its implications for the earth. One term that is particularly significant is *carbon footprint*. This refers to the amount of carbon dioxide (CO₂) emitted as a direct or indirect result of an activity. Every day, almost everything that we do—from turning on lights in our homes to traveling to work—results in carbon dioxide emissions. Problems occur when these gases are released into the atmosphere faster than they can be absorbed. Currently, CO₂ is being released about three times faster than it can be reabsorbed and concentrations of greenhouse gases are higher than they have been at any point in the past 800,000 years, according to *How to Reduce Your Carbon Footprint* (2008). The Natural Resources Defense Council says that the consequences of this include spread of disease, extreme weather patterns, and drought, and they are not to be taken lightly.

Concerns for the environment have been voiced for decades, but the world has been slow to get the message. Now, many people are eager to move toward a greener way of life, including several dentists who believe that going green can and should be incorporated into every aspect of their lives, including their profession.

A comprehensive, sustainable approach

Jason McMillan, DMD, of Portland, Ore., opened Mint Dental Works in 2007. It is the first Leadership in Energy and Environmental Design (LEED)-certified dental office in the nation. LEED is a third-party certification program and the nationally accepted benchmark for the design, construction, and operation of high-performance green buildings (U.S. Green Building Council, 2008). Dr. McMillan chose LEED because, he says, "We knew that LEED could provide us with the comprehensive, sustainable approach that I wanted to employ in my practice."

Doors opened for business in June 2007, about a year after Dr. McMillan signed the lease. "It was a challenging process—one that pushed us to think differently about the status quo in design and construction methods," says Dr. McMillan. "Nearly 95 percent of our construction waste was recycled, and the majority of materials utilized in the new office's build-out were either reclaimed or manufactured locally. We specified only low-VOC paints, laminates, and adhesives, as well as custom dental cabinetry constructed with no added urea-formaldehyde to meet stringent air quality requirements." Dr. McMillan's office received the highest rating possible: a LEED Platinum certification, ranking it among the country's 100 most sustainable projects in any category.

In addition to having a green building, Dr. McMillan's office uses a number of bio-friendly products. "Our practice has a waterless vacuum system, and we chose a medical-grade hand sanitizer in operatories to limit our water consumption," he says. According to the practice's Web site, estimates show that opting for a hand sanitizer saves the practice 360 paper towels and 90 gallons of water each day. The office installed low-flow fixtures, energy star appliances, and sensor-operated faucets. The office's dry evacuation is a water-saving alternative to traditional systems that consume approximately one gallon per minute. Mint Dental Works also purchases renewable power from Portland General Electric (PGE). Approximately 50 percent of the electricity purchased comes from new wind sources, 40 percent from new geothermal sources, and 10 percent from new biomass (wood waste) power.

A common misunderstanding is that going green will be costly and inconvenient, so it's no surprise to find only a handful of green dentists in the United States. "I think there may be a misconception that going green means spending more. It's true that there may be some additional upfront expenses, but many studies have proven that over time, sustainable practices provide an exceptional return on investment," says Dr. McMillan. "The biggest obstacle is changing people's perception of sustainability from an environmental issue to a public health issue. Polluted air and water and rising temperatures from global warming will have dire health consequences for all of us."

A commitment to the profession

Namrata Patel, DDS, of San Francisco is another dentist who has combined her passion for the environment with her profession by opening Green Dentistry. Dr. Patel asserts that Green Dentistry is about her commitment to find a more organic way of dentistry while building relationships with clients and educating them about proper care. She, too, has a LEED-certified office, earning a Gold certification. The building is composed of recycled contents, using recycled sheetrock and denim for acoustical insulation, and panels made of recycled plastic. The furniture in the office is made of eco-resins and bamboo, and the wood used for cabinet laminates consists of PVC-, chlorine-, and formaldehyde-free Forest Stewardship Council-certified wood. The office is fully equipped with energy-conserving appliances and energy-efficient lighting systems. Chair covers and barriers are made of organic bamboo and organic cotton. To reduce waste, bottles and cans have been eliminated, shot glasses are used for mouthwash, and efforts are being made to go paperless.

"Dr. Nammy," as she is called, provides patients with a considerably different experience than that of a typical dentist's office. Clients are treated to herbal shoulder wraps, warm cloth face towels, and, during procedures, iPods with noise cancellation headphones for relaxation. "Once they come in, they get comfortable and see what we're all about," says Dr. Patel. "It's nice because they've really never had such attention to detail or such comprehensive care before, and they've been very happy with that." Patients also receive non-petroleum-based lip balm and toothbrushes made from recycled yogurt cups. Thanks to the use of digital imaging technology, patients are exposed to 90 percent less radiation than they would be with traditional X-rays.

Ten percent of Green Dentistry's proceeds go to non-profits, and Dr. Patel hopes to inspire other dentists by giving back to the community. "We've created a community of people with like-minded values," she says. "This is a new era of dentistry; we need to go this route. We really want to create a space where we can do what's best for the world, and we want to do something that's conserving the environment while also making sure that we can do what's best for the clients."

Changing the world

Fred Pockrass, DDS, and his wife, Ina, co-founded Transcendentist in 2002, in Berkeley, Calif. Inspired by Gandhi's words "Be the change you wish to see in the world," the Pockrasses began building their office in early 2003, before being green became a national concern. Shortly after doors were open for business, the Bay Area Green Business Program invited Transcendentist to apply to become a certified green business. First certified in mid-2003, Transcendentist became the first green dental office in the country.

Says Dr. Pockrass, "Environmental stewardship is important to us because we believe that each of us really can make the difference, and that if each of us did all that we could in our personal and business lives, our fragile planet would benefit greatly. Because our business is a healing profession, we had an even greater obligation to ensure that the environment in which we practiced and the materials and processes we chose were as people-friendly and earth-friendly as possible."

Every aspect of the office was designed with preserving the environment in mind: The wallpaper is made of reclaimed paper pulp and bark, while the floors are finished with water-based polyurethane. Biocompatible dental materials are used. The office also installed an amalgam separator to allow environmentally sound disposal of old mercury fillings, preventing pollution of the water system.

"We became conscious of the myriad of decisions we had to make—everything from whether to use chemical or steam-based sterilization methods, digital or conventional X-rays, to the kind of paint we used on the walls," says Dr. Pockrass. "When there was a choice between an option that had a lighter impact on the earth, like steam sterilization or paint that doesn't 'off gas' toxins, we chose the environmentally friendly option."

An obvious strategy for a green dental office is reducing waste by reusing products. This brings hygiene into question. One of the comforts of a sterile environment in any type of health care setting is the fact that, typically, virtually everything is disposable, including bibs, cups, instrument wrappers, and so forth. However, using disposable products means literally tons of waste that ends up in landfills. The Pockrasses maintain that their patients appreciate the use of cloth alternatives because patients "share our environmental values and feel good that we don't use disposables that end up in the landfill. We take great care to properly clean all reusable items; even our dishwasher has a special sanitizer cycle on it. For the cloth sterilization process we employ, we always use a special indicator tape that conclusively tells the practitioner that the instruments inside are sterile. And we've ensured that our methods meet OSHA and all health code requirements." Cloth instrument wrappers are used with steam sterilization, saving an estimated total of 23,400 pieces of paper and 23,400 pieces of plastic during the five-year life of the practice.

Patient awareness and education

Carey O'Rielly, DDS, and his wife, Victoria, founded Integrative Dental Practice, a holistic dental office in Encinitas, Calif., which focuses on prevention and overall health. "Holistic dentistry is ultimately a green approach, whether you are talking about the environment of the body or the overall environment we live in. There is a tie-in between the two approaches," says Victoria. The practice is environmentally conscious, using fresh air ventilation, extensive air filtration, and non-chemical steam sterilization.

The practice emphasizes the relationship between holistic dentistry and the environment, because the mouth and the body are environments in and of themselves. Special attention is paid to what materials are used and what goes into the body—only biocompatible materials are used in the practice, and patient-specific materials testing is done upon request.

To the O'Riellys, the organic movement is an important indicator of future trends. "People are becoming concerned with what they are putting into their bodies and they want to be educated," says Dr. O'Rielly. "The green movement is a paradigm shift. This is the next wave and it's going to be patient-driven. Dentistry would be well-served to be at the leading edge."

In adopting a greener approach to his profession, Dr. O'Rielly affirms that he truly enjoys the way he practices dentistry. "I wouldn't practice any other way, because it is aligned with my personal lifestyle," he says. "In this day of specialization, having a niche like environmentally friendly dentistry also is a great way to differentiate oneself. By adopting a more holistic or green philosophy, I enjoy a more engaged, loyal client base and a better working environment. This is the future. You have to stay a little progressive in order to stay competitive."

Advice for going green

By setting the bar for green dentistry, these dentists have made it easier to convert a practice into one that is environmentally conscious. "As the general public becomes more educated about the environment, there will be pressure in every industry to identify and reduce our environmental impacts," says Dr. McMillan. "For dentists, this is a wonderful opportunity to stay ahead of the curve, be proactive, and be leaders in our communities. My experience has shown me that your efforts won't go unnoticed."

Dr. McMillan's advice? "Look at the four main areas for improvement: energy efficiency, water conservation, higher air quality, and waste reduction. Spend some time evaluating your impacts in each area and develop strategies to address these impacts. Start with small steps that work with any budget and don't require a lot of effort. By simply implementing an employee recycling program, changing your incandescent bulbs to compact fluorescents, or using non-toxic cleaning products, you can have a large impact over time."

The Pockrasses have established the Eco-Dentistry Association in order to stimulate a movement in the dental profession to adopt green practices. The Eco-Dentistry Association (www.ecodentistry.org) offers practitioners easy and cost-effective tips for going green and provides consumers with ready access to practitioners who use green methods. Also, a number of environmentally sound dental products are offered for sale on the Transcendentist Web site.

Whether dentistry is ready for it or not, the green movement is catching on, and it's moving fast. Everyone, dentists included, has the ability to make professional and lifestyle changes that will positively impact the environment. Says Dr. Patel, "It's really time to start thinking about this. It's no longer out there. It's here—it's now. We need to deal with it now, so just do it."

To comment on this article, send an e-mail to impact@agd.org.

More Information...

For more information about these practices, check out their Web sites:

Jason McMillan, DMD
Mint Dental Works
www.mintdentalworks.com

Namrata Patel, DDS
Green Dentistry
www.sfgreendentist.com

Fred Pockrass, DDS, and Ina Pockrass
Transcendentist
www.transcendentist.com

Carey O'Rielly, DDS, and Victoria O'Rielly
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www.a-zholisticdentistry.com

