Wizards of O

The latest alternative medicine burst onto the national scene last month in full-page newspaper ads, including one in *USA Today*. Hawkers of Vitamin O, as it's called, are charging about $10 per 30 ml of a formula made with "the newest generation of superoxygenation technology." The ingredients: "stabilized oxygen molecules in a liquid solution of sodium chloride (salt) and distilled water"—what most people would call a simple saline solution.

The Vitamin O producer, R-Garden Internationale of Kettle Falls, Washington, claims it treats everything from "mild fatigue to life-threatening diseases," eliminating toxins and beefing up the metabolism. R-Garden marketing director Dennis Roberts boasts that the product has 30,000 parts per million (ppm) oxygen, compared with only 3 ppm for tap water. According to the company, the souped-up saltwater "makes pure oxygen available to be immediately absorbed directly into the bloodstream."

Chemist Gilbert Gordon of Miami University in Oxford, Ohio, knows about Vitamin O because he's an expert in the chemistry of sodium chlorite—which has been cited in the development of "stabilized oxygen." He has even been quoted—wrongly, he says—as seeing "great promise" in the formulation, a quote that appeared in an online newsletter touting the product. But Gordon maintains that, in fact, "stabilized oxygen means nothing. Oxygen is stable to start with." The maximum solubility of oxygen in water at room temperature is 7500 ppm, he says; to get it any higher the container would have to be sealed under pressure. "I get five to 10 calls a week from people whose relatives are dying," asking if Vitamin O would do any good, Gordon says. His response: "All water has some dissolved oxygen, but not enough to make any difference to health."

A spokesperson for the Office of Alternative Medicine says her shop hasn't heard about the fad. The Food and Drug Administration is "aware of it" but has "no opinions," says a spokesperson, because it's not a drug but a "dietary supplement." But the formulation hasn't slipped past junk science vigilante Robert Park of the American Physical Society. He notes that R-Garden's ad tells the truth—that oxygen is good for you. And it says exactly what they're selling—"ordinary saltwater." As he notes wryly, "The supplier seems to have correctly gauged the scientific literacy of the American public." And a public shopping for the holidays, to boot: In 2 years, says Roberts, "our sales have gone from nothing to almost 60,000 [60-ml vials] a month."

Nature's Art

Ancient patterns in limestone.

From fingerprints to mountain ranges, so-called "zebra patterns" have one defining feature: Ridges separated by a constant distance but otherwise randomly self-organizing. The zebra pattern above, found in a cave in a German limestone quarry, is a cast from a 184-cm chunk of 30-million-year-old limestone. The pattern extended over several square meters, says Yale geologist Adolf Seilacher.

What created it remains a mystery, although the artist was probably not living: "Inorganic processes can produce magnificent patterns." Seilacher is the force behind the exhibit of casts, called "Fossil Art," which is on view at Yale's Peabody Museum of Natural History through 3 January.

CREDITS: (RIGHT) PEABODY MUSEUM

Particle Precocity

Most kids obsess over dinosaurs. Not Daniel Derrig. By the age of 7 he had already designed his first particle accelerator and worn down several pencils calculating the mass of the ephemeral neutrino. Derrig, who lives in Mountain Home, Arkansas, with his dad, a retired cop, and mom, a nurse, knows it's never too soon to start cultivating the right contacts. So to celebrate his 8th birthday last month, he asked Fermilab officials if he could come visit. Director John Peoples went a step further and threw him a party, complete with cake and tour. "He's an endearing kid," says theoretical physics head Keith Ellis. "He said he thought he'd seen a [long-sought] supersymmetric particle on his way in. ... [That] sort of blew my mind."

Derrig told *Science* he has attempted what has eluded more seasoned minds—to predict the mass of neutrinos. He tried using subtraction, but the answers "turned out pretty silly," he says: "The electron neutrino weighed more than an electron! I mean how could they go at the speed of light if they're that heavy?" Not surprisingly, Derrig hopes to work at Fermilab someday.

California Grad Students Walk

In what may be the largest student labor strike in U.S. history, the graduate student employees' union at eight University of California (UC) campuses began a walkout last week, demanding that the administration recognize their union. UC officials say that's out of the question, although they're willing to negotiate over working conditions.

The strike was timed to wreak maximum havoc, coming just a few weeks before the end of the term. Without grad student help, professors will be swamped grading final exams and term papers and won't have assistants to provide prefinals review sessions.

It's not yet clear how many are striking, although the union now comprises more than 9000 teaching assistants, tutors, and readers. Grad students, who say the administration is unresponsive to their grievances, are demanding collective bargaining rights. A major complaint is that the classes they teach are too big.

UC President Richard Atkinson, in an open letter, has reiterated the university position that graduate students are primarily students and cited a 1992 court ruling making it illegal for UC to recognize teaching assistants as employees. But, he pledged to "work in good faith to resolve the issues of interest to them." No meetings between the two sides had been scheduled as *Science* went to press.