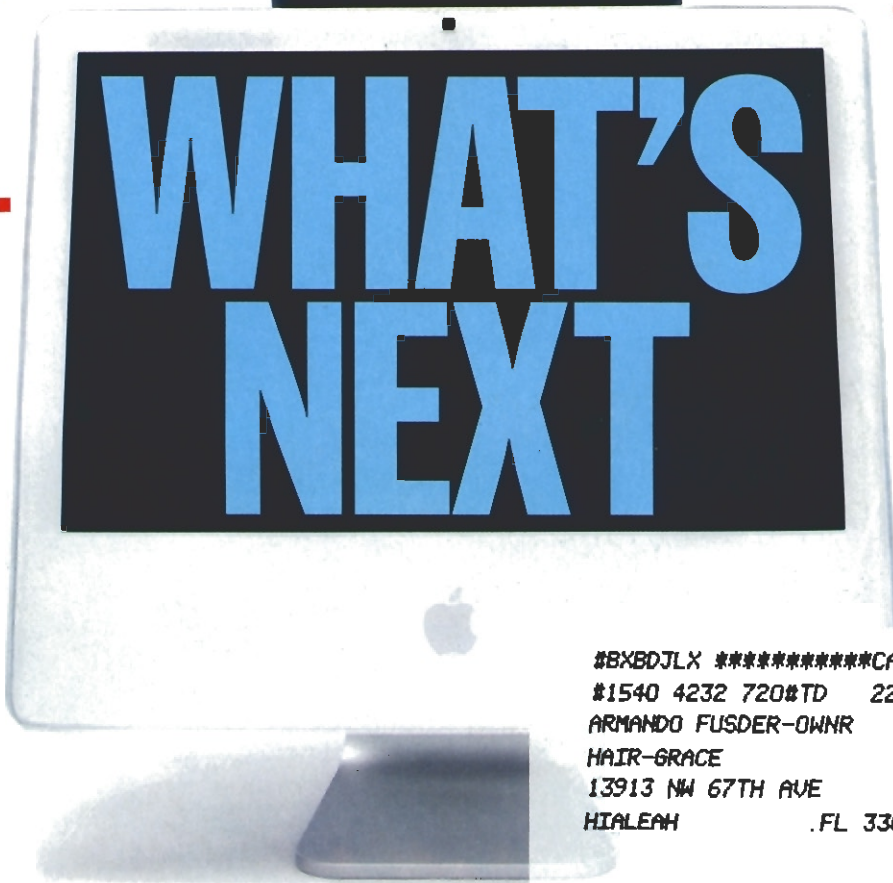


IRAQ: SUICIDE TRAINER ■ THE GREAT PLANET HUNT ■ FAT FIGHTERS

TIME



**THE
MAN
WHO
ALWAYS
SEEMS
TO
KNOW...**



Apple CEO Steve Jobs with the new video iPod and iMac

**PLUS
TRENDSPOTTING**
with Moby, Malcolm Gladwell, David Brooks and Esther Dyson

5 NEW THINGS
that will blow your mind

CLINT EASTWOOD'S
revolutionary movie for 2006

#BXBDJLX *****CAR-RT LOT**C-079
#1540 4232 720#TD 2294FL35 A JAN06
ARMANDO FUSDER-OWNR 0010
HAIR-GRACE #06381
13913 NW 67TH AVE P00078
HIALEAH .FL 33014-2935

FLUORIDE FIGHTERS
The Weavers of Bellingham, Wash., with a yard sign



PHIL SCHORFIELD FOR TIME; BUTTON; MAKE BURNS FOR TIME

Not in My Water Supply

It hardens teeth and prevents cavities, but 60 years after it began, fluoridation is meeting new resistance

By **MARGOT ROOSEVELT** BELLINGHAM

I've looked at BOTH sides of the FORCED Fluoride issue. Have you?

SOMEBODY PUT A DEAD RAT in Curtis Smith's mailbox. Someone else has made anonymous phone calls accusing him of trying to poison his neighbors. And all around the usually placid university town of Bellingham, Wash., activists from a group called Citizens Against Forced Fluoride have planted lawn signs adorned with skull and crossbones. "I had no idea it would get this intense," says Smith, 70, a retired dentist who is leading a Nov. 8 ballot initiative to add fluoride to the local drinking water. "These are very angry people."

Angry indeed: fluoridation to fight tooth decay, a hot-button issue from the 1950s—when it was attacked as a communist plot—is back on the front burner and not just in Washington State. Fueled by health concerns, cancer fears and a grassroots campaign that has flooded the Internet with antifluoridation Web pages, citizens across the U.S. are increasingly suspicious of what the Centers for Disease Control (CDC) considers "one of the 10 great public-health achievements of the 20th century." In the past three years, legislation to encourage fluoridation has been defeated or tabled in Oregon, Arkansas, Nebraska and Hawaii. New battles are brewing in New Jersey, Massachusetts and across the Canadian border in Montreal.

No one disputes the fact that fluoride, a natural element found in rocks and groundwater, protects tooth enamel. Since 1945, municipal systems serving 170 million Americans have added fluoride (mostly in the form of hydrofluorosilicic acid) to their water, and the prevalence of cavities in the U.S. has fallen dramatically. "A community can save about \$38 in dental-treatment costs for every \$1 invested in fluoridation," says William Maas, the CDC's director of oral health. "How many other investments yield that kind of return?"

But much has changed since 1945, starting with our toothpastes. Today fluoride is an ingredient in most brands of dentifrice on the market. Because toothpaste is designed to be spit out, it's a more efficient way to get the decay-fighting ingredient where it is needed and nowhere else. Even some dentists, who see firsthand the benefits of fluoridation, wonder whether people

who get fluoride from toothpaste should get it in their drinking water as well.

What has also changed is how much toxicologists know about the harmful effects of fluoride compounds. Ingested in high doses, fluoride is indisputably toxic; it was once commonly used in rat poison. Hydrogen fluoride is regulated as a hazardous pollutant in emissions from chemical plants and has been linked to respiratory illness. Even in toothpaste, sodium fluoride is a health concern. In 1997 the Food and Drug Administration toughened the warning on every tube to read, "If more than used for brushing is accidentally swallowed, get medical help or contact a poison-control center right away."

The most recent—and controversial—charge links fluoridation with bone cancer. In June the Environmental Working Group (EWG), a watchdog organization, petitioned the National Institutes of Health (NIH) to list fluoride in tap water as a carcinogen. The group cited "decades of peer-review studies" on fluoride's "ability to mutate DNA and its known deposition on the ends of growing bones, the site of osteosarcoma"—a rare, often fatal cancer that affects mainly boys.

Federal health officials view those concerns as exaggerated. Current standards rely on a 1993 review of published studies by the National Academy of Sciences, which found "no credible evidence for an association between fluoride in drinking water and the risk of cancer." The academy has launched a new review to be released in February.

The stakes were raised in July when Harvard University opened an investigation into whether a prominent dentistry professor had suppressed research by one of his doctoral students in a report to the NIH. The 2001 thesis showed a sevenfold increased risk of osteosarcoma in preadolescent boys from fluoridated water. The supervising professor, Chester Douglass, edits a newsletter funded by Colgate—which makes fluoridated toothpaste—creating "the appearance of a conflict of interest," according to the EWG, which filed a charge of "scientific misconduct" with the federal agency. Douglass was unavailable for comment, but a Harvard spokesman said the university takes the allegations "seriously."

Meanwhile, unions representing 7,000 employees at the Environmental Protection Agency (EPA) have waded into the debate. The optimal level of fluoride in water, ac-

ording to the CDC, is between 0.7 and 1.2 parts per million. In 1985 political appointees at the EPA raised the acceptable level of fluoride in drinking water to 4 p.p.m., over objections from agency scientists. The Natural Resources Defense Council sued the agency, charging that the safety margin was inadequate, but in 1987 a U.S. district court ruled that the EPA administrators had the authority to set fluoride levels. EPA union representatives reopened the issue in August, calling on EPA administrator Stephen Johnson to issue a moratorium on fluoridation and to set a goal of zero fluoride in tap water. "The EPA has an ethical duty to send an effective warning immediately about this hazard," they said.

All this makes for a potent mix, especially when filtered through the Internet, where health-safety concerns tend to get amplified. Much of the opposition to the fluoridation initiative

study found that by the time they were 12, kids in fluoridated communities averaged only 1.4 fewer cavities than those in non-fluoridated areas. And even in fluoridated cities, severe decay remains rampant among the poor—partly because some 85% of dentists, according to state surveys, reject Medicaid patients. Still, for those with little dental care, water fluoridation makes a difference, contends Bellingham's Curtis Smith. "Twenty percent of our kids account for 80% of the cavities," he says. "With fluoride in the water, they would get a blast every time they drink."

But in parsing risks, Bellingham is also weighing an undisputed side effect of ingestion. The CDC recently announced that 32% of American children now have some form of dental fluorosis, a white or brown mottling of the teeth. U.S. health officials see it as a cosmetic issue, largely caused by ill-advised swallowing of toothpaste, while fluoride critics say it shows that children are accumulating too much fluoride overall. The World Health Organization sets a fluoride-safety standard of 1.5 p.p.m.—well below the EPA's 4-p.p.m. rule—partly to prevent enamel fluorosis. And in Western Europe, where the drop in tooth decay in recent decades is as sharp as that in the U.S., 17 of 21 countries have either refused or discontinued fluoridation, contending that fluoride toothpastes offer adequate protection. (Only Ireland adds fluoride to most of its water systems, while Switzerland

fluoridates its salt.) Those facts, recycled through Web-savvy organizations like the Fluoride Action Network, are stirring up activists. While city councils and water boards tend to fluoridate when they have the power, the electorate is far more divided. Over the past five years, the practice was voted down in 38 of 79 referendums, from Modesto, Calif., to Worcester, Mass. "The Internet is making it light-years more difficult to fluoridate," says Smith. The Washington State Dental Association is backing his \$300,000 pro-fluoride campaign. Danelle Weaver and her friends, meanwhile, have raised less than \$10,000. But they are undaunted. "People think we are tinfoil hatters," says Weaver, "but we're just average families who take the time to research and want what's best for our children." That goal is the only thing both sides seem to share. ■

**SINCE THE 1950S,
TOOTH DECAY IN
U.S. CHILDREN HAS
DROPPED MORE THAN
70%, THANKS IN PART TO
FLUORIDE IN TOOTHPASTE
AND IN THE PUBLIC
WATER SUPPLY**

BETTMANN-CORBIS



in Bellingham comes from people like Lane Weaver, a fire-alarm technician, and his wife Danelle, a housewife and mother of two. When they first heard about the issue this summer, the Weavers Googled the word fluoridation. Nine of the first 10 items that came up were decidedly anti-fluoride. "I was horrified," says Danelle. "Why would I want to put a toxic industrial chemical in my children's bodies?" She joined Citizens Against Forced Fluoride, and now—with a 6-in.-high stack of scientific studies gleaned from the Web—she staffs an information booth at the local farmers' market.

If the risks of water fluoridation are hotly debated, quantifying its benefits is also tricky. In the 1950s, advocates claimed a 60% drop in cavities. But with the spread of fluoride toothpastes and the use of plastic sealants by dentists, decay has plummeted even in regions where there is little or no fluoride in the water. A 2001 CDC