

## **Nanotech Gamble**

Part 4 of 4

# Why Nanotech Hasn't (Yet) Triggered 'the Yuck Factor'

**Andrew Schneider**

Senior Public Health Correspondent  
AOL News

(March 22) -- The term nanotechnology means different things to different people.

"To some it represents the miracle cure for all that ails us. To others, it could be the end of the world as we know it," says Andrew Maynard, chief science adviser for the Woodrow Wilson Center's Project on Emerging Nanotechnology.

Earlier this decade, the creativity of novelists like "Prey" author Michael Crichton, Star Trek writers and supermarket tabloid reporters brought attention to nanotechnology with tales of gray-goo-spewing nanobots running amok and humanity being taken over by autonomous self-replicating nano devices.

Many in the risk assessment research community -- the scientists, physicians and hazard specialists in government,

university and private laboratories who determine the danger of new substances -- were quietly telling one another that there would likely be health problems in wonderland.

Not so quiet were some well-established but vocal environmental activists such as Friends of the Earth in Australia, the U.S. and Europe and the Canadian-based ETC Group. All have since come out saying that nanotechnology is dangerous and there should be an instant, international moratorium on nanotech research until the hazards are known and the necessary safeguards established. Knowing that's unlikely to happen, the organizations have also called for nano-containing products to at least be kept off the market until possible health risks have been proven or dispelled.

Upon hearing those demands for caution, there was a collective gasp from many of those involved with the creation of nanoparticles and the makers of products that incorporate them. Their fear was that the public might at any moment react as it did when genetically modified crops and products were unveiled to the world.

That may not be the case, however.

"Public-perception research makes it clear that people are less concerned with nanotechnology than they were with genetically modified foods," says Professor Jennifer Kuzma of the Humphrey Institute of Public Affairs at the University of Minnesota. "They don't see nano as having quite the same

yuck factor."

But Kuzma and others says that could change instantly and dramatically with one highly publicized incident or exposé.

Two years ago, a poll by Hart Research said that 75 percent of adults polled in the U.S. had heard "little or nothing" about nanotechnology. But two-thirds of the participants that were up on the emerging technology said they "think this research should be regulated by the federal government," Hart Research President Geoff Garin said when the poll was released.

In January, protesters in France stomped, screamed, blew air horns and waved banners in a sometimes successful effort to disrupt a series of traveling presentations on nanotechnology held by the country's Special Commission for Public Debate.

In the U.S., there have been very few anti-nano protests. The one of note was in 2005 and involved an activist group called Topless Humans Organized for Natural Genetics, or THONG, assembling in front of an Eddie Bauer store in Chicago to rail against the chains' selling of nanotextiles in its stain-resistant pants.

People who know even the basics about nanomaterials realize that safety is a consideration, says Pat Mooney, executive director of the international environmental and safety advocates the [ETC Group](#). His organization ran a

contest two years ago asking people to design a warning symbol, like poison's skull and crossbones, but for nanomaterial. More than 400 designs came from 24 countries. There was a three-way tie for first place; the winners were an atom symbol surrounding a skull, a magnifying glass with a dot in its center and a nano circle surrounded by dots.

Some health specialists argue that the growing list of peer-reviewed studies showing possible negative health effects of the few nanoparticles that have been tested is not a reason to panic.

Marketing consultants and some of the scientists and investors in nano products interviewed by AOL News for these articles clearly thought that "out-of-sight, out-of-mind" was the way it should be for nanotechnology until enough can't-live-without-it products were on store shelves.

But David Eaton, professor and director of the Center for Ecogenetics and Environmental Health at the University of Washington, feels that approach could ultimately boomerang on the industry and its supporters. "It is actually to the advantage of those promoting the development of these products to support cautious regulation and enhanced product safety evaluation," he says.

Eaton believes that nano safety data is needed to maintain the public confidence that will be required to facilitate the widespread distribution of materials into commerce.

"Such advances may be hindered by public fear," he says, "because we failed to adequately demonstrate the relative safety of the materials before potential exposures become widespread."

History, he adds, shows how easily such a turn of fortune can happen. "If applications of nanomaterials into consumer products greatly outpaces research that allows us to understand the potential human health and environmental implications of these new technologies," he predicts, "there will be a public backlash against all forms of nanotechnology, similar to what occurred a number of years ago with genetically modified foods."