



# NANOTECHNOLOGY

**You Wear It,  
You Breathe It, But Is It SAFE?**

Alternative Medicine  
May 2006; pgs 74-78

## How Do You Decide Whether Nanotechnology Is Safe?

You might take a cue from the insurance company Swiss Re which issued a report in May 2004 that described uncertainty about the risks of nanotoxicity and nanopollution. It urged a better safe than sorry approach and implied that until more is known, nanotechnology may not make a good insurance risk.

*“The consumer has to beware. It’s their responsibility. They can’t assume that the government’s doing the testing.”*

*Dave Rjeski, Director  
Project on Emerging Nanotechnologies*



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- “We don’t know what effects nanoparticles have on the body’s chemical and physiological processes, but without a doubt we know they pass through body tissue and cell membranes.
- We know they pass between the blood and lung tissue, they pass through the blood-brain barrier and likely pass through the placenta and into fetal circulation.
- In other words, nanoparticles penetrate the very defenses that our bodies have developed over the millennia to protect our organs and a developing fetus from potential threats.”

*Jennifer Sass, PhD, Toxicologist  
Natural Resources Defense Council*



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We need more research. The unknowns dwarf what we know. We need to answer some basic questions...

- Where do nanoparticles end up?
- How do they affect the way our bodies function?
- Will they cause cancer?
- Will they cause other kinds of health problems?

The bottom line is for the limited tests completed so far there are a number of brightly flashing yellow lights that indicate proceed with caution. To date, these tests clearly indicate that nanomaterials are certainly not uniformly innocuous."

Karen Florini, Senior Attorney  
Environmental Defense Fund



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While few completed studies on nanotechnology exist, those that have been published contain some troubling results.

Dr. Oberdorster placed carbon-based nanoparticles into an aquarium with juvenile fish and after just 48 hours of exposure she documented significant evidence of oxidative stress in the brains and gills of the fish.

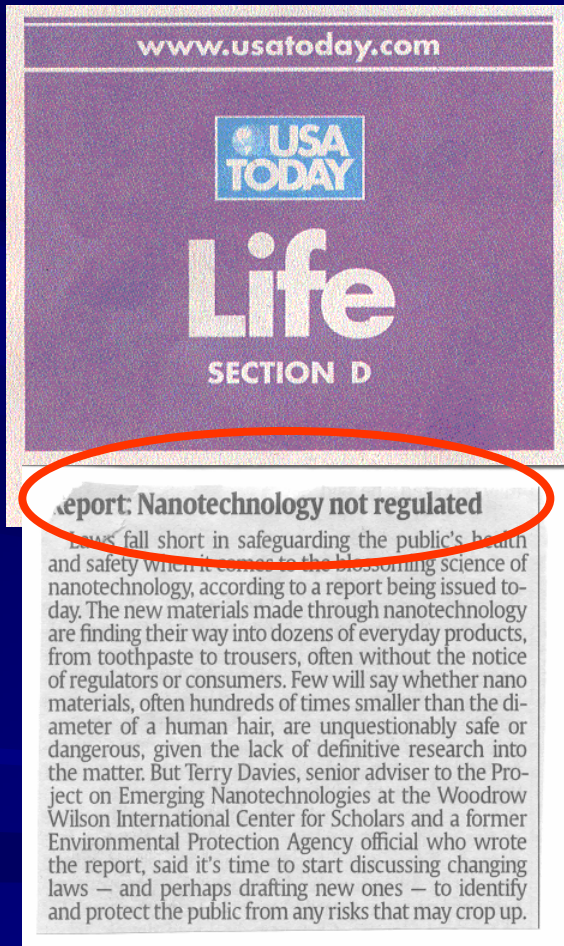
*Eva Oberdorster, PhD  
Southern Methodist Univ.  
Dept of Biological Sciences*



# Report: Nanotechnology Not Regulated

**Terry Davies, Senior Advisor, Former EPA Official**

Project on Emerging Nanotechnologies; Woodrow Wilson International Center for Scholars



“Laws fall short in safeguarding the public’s health and safety when it comes to the blossoming science of nanotechnology.

Few will say whether nanomaterials are safe or dangerous given the lack of definitive research into the matter.

It’s time to start discussing changing laws and perhaps drafting new ones to identify and protect the public from any risks that may crop up.”

USA TODAY Jan 19, 2006