



Debbie Raphael, toxics reduction manager for the California Department of the Environment, notes that the EU ban on phthalates, "tells us two things: It tells us that [phthalates] are problematic and it tells us that there are alternatives."

Another influential measure coming from Europe is the recently enacted Registration, Evaluation and Authorization of Chemicals Act (REACH). REACH is designed to force industries to register all chemicals, reveal health and safety data on them and replace the most hazardous chemicals with alternatives. All told, the REACH program addresses more than 30,000 toxic substances.

While it's far less comprehensive than the measures being taken in the EU, the San Francisco ban follows a telling trend in U.S. environmental action: It's happening at the local level. "Our board of supervisors feels very strongly about the importance of local action," says Raphael. "They understand that the federal government is largely silent on [the issue of hazardous chemicals in products], and they welcome the chance to point out these silences."

Within 18 months of the San Francisco ban, the city will publish a list of specific products that are no longer saleable within city limits. Debbie Raphael thinks that may be the most powerful part of the city-wide ban. "While San Francisco is only one small piece of the consumer pie, information travels quickly over the Internet. If consumers in Minneapolis want to avoid phthalates in their children's products... they can talk to their retailers about it."

As Joel Tickner, professor of environmental health at the University of Massachusetts, Lowell, explains, industry could lead the way in creating a marketplace full of safe products for children. "Phthalate manufacturers spent millions doing research on the degree to which children are at risk from exposure to these chemicals," he says. "What if they put those millions of dollars into finding alternatives to these chemicals?"

Already, the dialogue over better management of chemicals in children's toys has made its way to Michigan, California, Washington, Minnesota and New York, where initiatives similar to San Francisco's are taking shape.—ANDI McDANIEL

HEALTH

Is dirt the new Prozac?



If you're feeling down, consider digging in the dirt. British researchers have shown that "friendly" bacteria common in soil can cause brain cells to produce serotonin, a hormone that helps regulate mood. Low serotonin levels are linked to depression.

A team led by Chris Lowry of Bristol University recently reported in *Neuroscience* that administering *Mycobacterium vaccae* (*M. vaccae*) to mice triggered an immune response that led to the release of serotonin in their brains. Higher serotonin levels, in turn, can reduce stress. The mice injected with the bacteria behaved as though they had received antidepressants.

Although it's a leap from mice to men, the rodent studies were actually inspired by research on humans. Mary O'Brien, an oncologist at the Royal Marsden Hospital in London, observed surprising side effects when she gave a small group of lung-cancer patients receiving chemotherapy a dose of heat-killed *M. vaccae*. Not only did the lung-cancer patients have fewer symptoms, but their emotional and mental well-being also improved.

More research is needed to determine whether *M. vaccae* could lead to more effective antidepressants. In the meantime, it certainly wouldn't hurt to spend a little more time in the garden.—KIM RIDLEY