

**Sent:** Friday, July 01, 2005 1:33 PM

**Subject:** INHALING MANGANESE IN SHOWERS A POTENTIAL HEALTH PROBLEM

*Dear Aquathin Dealer OnLine, Splash NewsBulletin and Allergic Reaction NewsBulletin Members;*

*As I was discussing with my friend Bob Vineyard only yesterday, manganese is not a high profile concern, and often confused with "magnesium" by lay people. Then today, well there is just a bit of change, as you will read below in this very interesting and very new discovery about manganese.*

*For Aquathin Customers, everyone knows that your Patented Aquathin RODI process readily removes manganese from drinking water. But just for review for our Aquathin Customers on well water, your Aquathin Sodialite and Soft & Clean Water Conditioners, Aquathin Rust Sentry Greensand / Pyrolox / and Birm Systems...all for Point of Entry water treatment also remove manganese associated black stains...and now, preventing inhalation during showers.*

*I LOVE MY AQUATHIN !*

*Warmest regards to all...as well, your comments are always welcome and very much appreciated.*

*FOR THE BEST TASTE IN LIFE &*

***25 Years Pure Excellence***

*Think Aquathin...AquathinK !!*

*( visit the allnew [www.aquathin.com](http://www.aquathin.com) )*

*"Alfie"*

*Alfred J. Lipshultz, President*

***P.S. "Splash NewsBulletins", "Forum Q & A" , "Allergic Reaction" , Biz Bank, Tech Bank and Quote Bank... ARE ALL FREE services to all Authorized Aquathin Dealers and their clients to keep you abreast of technology updates and industry news.***

---

***Manganese inhaled from the shower - A public health threat? Maybe***

***01 Jul 2005 from MEDICAL NEWS TODAY***

*A new analysis based on animal studies suggests that showering in manganese-contaminated water for a decade or more could have permanent effects on the nervous system. The damage may occur even at levels of manganese considered safe by the Environmental Protection Agency, according to researchers from Wake Forest University School of Medicine.*

*"If our results are confirmed, they could have profound implications for the nation and the world," said John Spangler, M.D., an associate professor of family medicine. "Nearly 9 million people in the United States are exposed to manganese levels that our study shows may cause toxic effects."*

*The study is the first to show the potential for permanent brain damage from breathing vaporized manganese during a shower. It was conducted by reviewing the medical literature and calculating, based on animal studies, the amount of manganese people would absorb by showering 10 minutes a day.*

*Because manganese is monitored in public water supplies, high levels of this naturally occurring metal are especially found in wells and private water supplies.*

*Spangler and Robert Elsner, Ph.D., published their findings in the current issue of Medical Hypotheses, a forum for ideas in medicine and related biomedical sciences.*

*The journal publishes "interesting and important theoretical papers that foster the diversity and debate upon which the scientific process thrives."*

*Everyone is exposed to small levels of manganese, which is found in food and many types of rocks and enters the air, soil and water. But, at higher levels, manganese is toxic to the central nervous system and can cause learning and coordination disabilities, behavioral changes and a condition that is similar to Parkinson's disease.*

*Children, pregnant women, the elderly, and patients with liver disease are at highest risk from manganese toxicity. Some of these groups have developed manganese poisoning even at fairly low doses in their water supplies, Spangler said.*

*The Environmental Protection Agency (EPA) has set 0.5 milligrams/liter as the upper limit of manganese advisable in water supplies. The limit, however, is based on odor and taste of the water. The potential risk of manganese accumulating in the brain through showering has not been considered by the EPA in setting this limit. In their analysis, Spangler and Elsner found that concentrations well below 0.5 milligrams might lead to brain injury.*

***"Inhaling manganese, rather than eating or drinking it, is far more efficient at delivering manganese to the brain," said Spangler. "The nerve cells involved in smell are a direct pathway for toxins to enter the brain. Once inside these small nerves, manganese can travel throughout the brain."***

*Elsner and Spangler extrapolated data from rodents to estimate human exposure to manganese during showering. They found that after 10 years of showering in manganese contaminated water, children would be exposed to doses of manganese three times higher than doses that resulted in manganese deposits in the brains of rats. Adults would be exposed to doses 50 percent higher than the rodents.*

*The researchers said that while limitations to their calculations do exist, regulatory agencies have not considered this potential pathway when setting drinking water standards.*

*"Studies should be carried out among populations that have experienced high levels of manganese in their water supplies over long periods of time," Spangler said. "Regulatory agencies may one day need to rethink existing drinking water standards for manganese."*

*The addition of manganese to gasoline as an anti-knock agent may also be a threat, the researchers said.*

*"The manganese, as it settles from car exhaust onto streets and highways, may enter the water supply, increasing manganese levels in the water we drink and bathe in," said Spangler.*

*Media Contacts: Shannon Koontz, [shkoontz@wfubmc.edu](mailto:shkoontz@wfubmc.edu); Karen Richardson, [krchrdsn@wfubmc.edu](mailto:krchrdsn@wfubmc.edu); at 336-716-4587*

*About Wake Forest University Baptist Medical Center: Wake Forest Baptist is an academic health system comprised of North Carolina Baptist Hospital and Wake Forest University Health Sciences, which operates the university's School of Medicine. The system comprises 1,187 acute care, psychiatric, rehabilitation and long-term care beds and is consistently ranked as one of "America's Best Hospitals" by U.S. News & World Report.*

Contact: Shannon Koontz

[shkoontz@wfubmc.edu](mailto:shkoontz@wfubmc.edu)

336-716-2415

Wake Forest University Baptist Medical Center

<http://www.wfubmc.edu>

---

---

Huge database of [hospitals world wide](#).

Save time! Get the latest medical news in your email every week with our [newsletter](#).

---

### **Contact Our Medical News Editors**

For any corrections of factual information, or to contact the editors please use our [feedback form](#).

Please send any medical news or health news press releases to: [pressrelease@medicalnewstoday.com](mailto:pressrelease@medicalnewstoday.com)