

Salem-Keizer Schools Gym Flooring: Not a Health Concern

Should I be concerned about mercury in Salem-Keizer Schools gym flooring?

No. Oregon State Public Health's SHINE (Superfund Health INvestigation and Education) Program has concluded in a report that the flooring in schools does not emit enough mercury to affect the students' or teachers' health. The air in school gyms were tested and the levels were well within what is considered to be safe. This fact sheet summarizes SHINE's findings.



Why have there been concerns about gym flooring lately?

In September 2005, Oregon State Public Health learned that some types of floor covering used in school gyms contain mercury. The type of flooring that is most likely to contain mercury is a solid, rubber-like polymer floor covering, sometimes called "Tartan" brand flooring. It was promoted as a substitute for and improvement over wood flooring in gymnasiums, and as a durable running surface for both indoor and outdoor track & field facilities. Upon learning about this issue, Salem-Keizer School District asked that the SHINE Program investigate whether the mercury in the floor covering could be affecting the health of students, teachers, and others spending time in the schools' gymnasiums.

How is mercury used in the flooring?

During the production of Tartan brand flooring, mercury was used as a catalyst to help the mixture maintain its soft texture resulting in a finished product typically containing 0.1-0.2% mercury. 3M Corporation was the primary manufacturer of this kind of flooring. According to 3M, several other manufacturers used the term "Tartan" in marketing similar athletic flooring materials, and notes that it may have developed as a generic term for this type of flooring.

Why does mercury pose a concern?

Mercury is unique among metals in that, not only is it typically a liquid, it also will readily vaporize at room temperature. Mercury does not pose much of a health risk when it is ingested or comes into contact with the skin because it is not readily absorbed in the liquid phase. However, mercury is almost completely absorbed by the body when it is inhaled. The primary organs most affected by mercury vapor are the brain and kidneys. Typical health effects associated with exposures to mercury vapors include irritability, shyness, nervousness, memory difficulties, and in more long term cases tremors and kidney damage.

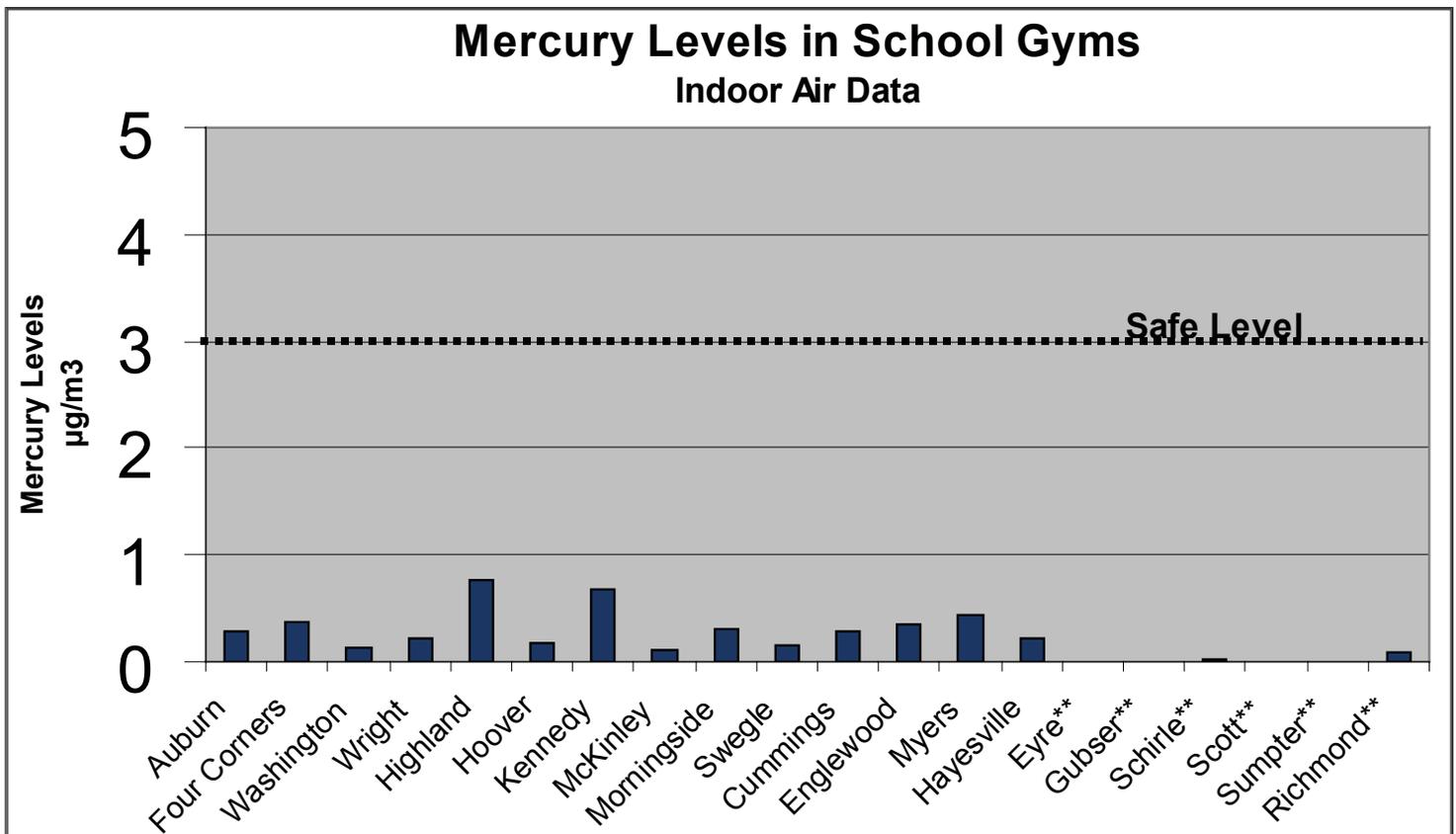
The public comment version of the report "Salem-Keizer School District 3M Flooring" will be available at the Salem-Keizer School District Communications Office, Lancaster Professional Center at 2450 Lancaster Dr. NE in Salem, or online at www.healthoregon.org/superfund.

Public comments to the consultation are requested and must be received by 5 p.m. on April 20, 2006.

Comments may be sent via FAX to (503) 872-5398, or emailed to jae.p.douglas@state.or.us or by regular mail to the SHINE Program, 800 N.E. Oregon Street, #827, Portland, OR 97232.

What did Oregon State Public Health find in its investigation?

- The levels of mercury vapor detected in the Salem-Keizer Schools are well below safe levels. The mercury in the flooring poses “no apparent health hazard” to the students attending school, faculty working in the gymnasium, or community groups who use the facility before and/or after school hours.
- Based on the relatively low levels of mercury vapor, it is unlikely that anyone exposed to the mercury vapors would suffer from adverse health effects.
- Adults and children may continue to use or to reoccupy gymnasiums that have been identified as having this type of flooring as long as the mercury vapors do not exceed 3 µg/m³, the level established as safe.



**No mercury was found in the floor material in these schools.

How did SHINE come to the conclusion that the gym floors are not currently a health concern?

All twenty schools in the Salem-Keizer School District were tested by OSHA, an independent consultant, and the EPA. A Lumex machine was used to test the level of mercury in the air inside the gymnasiums. The results of the testing were compared to the level considered to be safe (3 micrograms/square meter). The graph above shows how the results from each of the school gyms fall well below 3 µg/m³.

What is SHINE recommending to Salem-Keizer Public Schools?

- Gymnasiums with flooring identified as having mercury should be tested on an annual basis.
- If mercury vapor levels exceed 3 µg/m³, use of the gymnasium should be limited until actions to cap or remove the flooring have been completed.
- If it is determined that the flooring will be removed, SHINE recommends that health protective precautions be taken in the removal of the flooring material.