



BLUE RIDGE SCHOOL DISTRICT
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EST 1949

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Mike Wright
Superintendent

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Dear parents,

I am writing with an update on the closure of the gym in Blue Ridge High School. As you know, the gym has been closed since October 20, 2016 when a statewide inspection for rubber flooring revealed our gym had rubberized flooring containing mercury under the wood floor in the gym. We want to update you on the results of the additional 8-hour air monitoring testing performed in the Blue Ridge High School gym.

Air monitoring data were collected over the course of three days on 9/26, 10/17, and 10/18. The additional 8-hour sampling results showed the average mercury vapor concentration ($3.1 \mu\text{g}/\text{m}^3$) was above the goal of $1 \mu\text{g}/\text{m}^3$ determined by the task force. This value is comparable to federal health-based guidelines. Based on the available information, the Arizona Department of Health Services concluded that the mercury vapor emitted from the rubber floor could be a public health concern.

Respectfully,

Michael L. Wright

Superintendent of Schools

Frequently Asked Questions and Answers Blue Ridge High School Gym Flooring

What is mercury?

Mercury is a naturally occurring element found in rocks, soil, water, air and living things. In its pure form (often called metallic or elemental), mercury is a shiny, silver-white, odorless liquid at room temperature. In addition, it can slowly vaporize into a toxic, colorless and odorless gas at room temperature.

Because mercury has unique properties, it has been widely used in industrial processes, scientific instruments, polyurethane floors, consumer products and certain cultural practices.

How can my child be exposed to mercury from the flooring at his or her school?

Some polyurethane or rubber-like floorings manufactured from about 1960 to at least 1980 contained mercury. Some of these floors used in school gymnasiums or cafeterias may release a small amount of mercury vapor into the air when scuffed or grazed. When it is inhaled, mercury vapor is easily absorbed by the body.

Has this happened in other states?

A number of other states have studied the problem of flooring containing mercury. Assessments by other state health departments have found that the mercury vapors typically emitted from this kind of flooring during normal activities in the gym did not harm students or anyone using the gym for an extended period of time. In many schools, proper ventilation can maintain concentrations below levels of health concerns. Proper ventilation requires a room or building to be mechanically ventilated with fresh air beginning at least two hours before the area is occupied and continuing throughout the period of use.

Is there a medical test to show whether I've been exposed to mercury?

Urine and blood sample tests can help find out if you have been exposed to too much mercury. A urine test is preferred for measuring elemental mercury; however, it does not identify the source of mercury exposure. Further investigation would be needed to identify possible sources. Contact your primary care provider if you have concerns about being exposed to mercury.

How can mercury vapor enter and leave my body?

Elemental mercury vapor usually enters a person's body through breathing in contaminated air.

Once in your body, elemental mercury can stay for weeks or months. Most of the elemental mercury absorbed into the body eventually leaves in the urine and feces, while smaller amounts leave the body in the exhaled breath.



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What are the health effects of breathing mercury vapors?

The possible health effects for any person depends on how much mercury is present, how long and how that person is exposed, and how sensitive that person is to the effects of mercury, among other factors. Children and pregnant women are more sensitive to mercury health effects.

Exposure to very high levels of mercury vapor can cause brain, kidney and lung damage and can seriously harm a developing fetus. Some of the acute effects that may soon show after exposure to high concentrations of mercury are: headaches, chest tightness and coughing.

Some of the chronic effects after long-term exposure (usually more than one year) to mercury vapor are: anxiety, excessive shyness, sleeping problems, loss of appetite, irritability, fatigue, forgetfulness, tremors, changes in vision, and changes in hearing. Most of the effects of mercury resulting from prolonged lower level exposure go away, once exposure is terminated and the mercury has left the body.

What are the health effects based on the levels found in the gym at Blue Ridge High School?

Fluctuations in mercury vapor concentrations occurred during three 8-hour air sampling events inside the gym. These fluctuations make it difficult to provide a realistic estimation for the amount of mercury vapor an individual may breathe in on a daily basis.

Based on the available information, the ADHS concluded that the mercury vapor emitted from the rubber floor could be a public health concern, especially for young children and pregnant women. There is potential concern for acute and long term effects.

Should I talk to my healthcare provider if I believe my child or myself was exposed to mercury vapors?

Call your doctor if you or your child develops any unusual signs or symptoms. Treatment consists of cessation of exposure, supportive care and timely chelation therapy when warranted. Future possible adverse health effects can be prevented by eliminating or reducing the exposure.

For more information visit the Agency for Toxic Substances and Disease Registry Medical Management Guidelines for Mercury

<http://www.atsdr.cdc.gov/MMG/MMG.asp?id=106&tid=24>.



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What happened at Blue Ridge High School?

The School Facilities Board was actively surveying school districts statewide to identify schools with polyurethane flooring and performing testing to see if mercury vapor is in the air. The data were submitted to the Arizona Department of Environmental Quality and the Arizona Department of Health Services to determine health risk and provide health and safety recommendations.

The highest detected mercury vapor concentration in the Blue Ridge High School gym (1.9 $\mu\text{g}/\text{m}^3$) exceeded the task force goal of keeping mercury vapor below 1 $\mu\text{g}/\text{m}^3$. As a result, the task force recommended conducting additional 8-hr sampling to better assess the potential health impact from the exposure. The task force also recommended limiting access to the gym until further assessment is completed.

What is being done?

On October 20, 2016, the access to the gym was limited based on preliminary findings from 8-hour air monitoring results that took place on October 17-18. The 8-hour air monitoring risk assessment report indicates that there is a potential public health concern. The report also recommends exploring appropriate options to reduce exposure. The School Facilities Board will take actions to reduce mercury vapor exposure to less than the protective level of 1 $\mu\text{g}/\text{m}^3$. These steps could include modification to the mechanical ventilation, encapsulation of the flooring or a combination thereof and remediation of the floor.

Who can I contact if I have additional health questions?

For answers to questions about health effects, please contact the Arizona Department of Health Services, Office of Environmental Health by email at environmentalhealth@azdhs.gov or call 602-364-3118.

