Older Houses and Lead Poisoning Risks

Warm, sunny, longer days are here. Time to get out your tools and tackle that home improvement project! Before you pick out floor tiles and wallpaper, however, ask yourself these two important questions:

1. Was my home built before 1978?
2. Do any children under age 6 live in, or routinely visit, my home?

If you answered ‘yes’ to both of those questions, you must take steps to prevent a child from being poisoned by lead. Prior to 1978, lead was added to household paint because it made the paint more durable, more water-resistant, and enhanced certain colors. Once experts realized the danger it posed to young children, lead in household paint was banned, and cases of childhood lead poisoning dropped significantly. But a home older than 1978 might still have lead paint on its surfaces. It might be a problem even if the home has been repainted since 1978.

How can a home renovation project cause lead poisoning?

Anytime you scrape, sand, or cut into surfaces painted with lead paint—even if the paint is covered by layers of newer paint—you create invisible lead dust. The dust drifts and settles on places where babies and young children crawl and play. They swallow lead when they put dust-covered surfaces, like their hands and toys, in their mouths. Lead is reportedly sweet-tasting, which may encourage young children to eat it.

Vitamins: Too Much of a Good Thing?

Vitamins are nutrients found in food that our bodies need in trace amounts in order to function properly. Most health experts agree that a varied, balanced diet is the best way for healthy adults to get all the vitamins they need. Nevertheless, more than 4 out of 5 adults (86%) take vitamins or supplements regularly, according to a recent survey conducted by The Harris Poll on behalf of the American Osteopathic Association. Many people think vitamins are safe, and cannot cause harm. In general, this is true. But a few could cause harmful effects if taken in an

POISON TRIVIA

Throughout arctic history, the polar bear has served as food for native people. However, one part of the polar bear is extremely poisonous and should not be eaten. What part?

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amount higher than recommended.

Some vitamins are water-soluble. The body uses what it needs and removes what is leftover through the urine. Examples of water-soluble vitamins include vitamin C, thiamine, riboflavin, niacin, vitamins B6 and B12, folate, biotin, and pantothenic acid. While large doses of water-soluble vitamins may or may not provide any extra benefit to the body, they aren’t likely to cause any harm.

Vitamins A, D, E, and K are fat-soluble. The body uses what it needs, and any excess is stored for later. When there is a lot of excess over time, high levels of these fat-soluble vitamins can accumulate in the body. This condition is called hypervitaminosis, or vitamin overdose.

Hypervitaminosis is extremely rare. The most common reason for this condition is megadosing, or taking an amount much higher than the daily recommended amount of a vitamin supplement every day over a long period of time. This may happen because the person believes that megadoses will provide some health benefit.

“When it comes to taking any medicine or supplement, including vitamins, more is not necessarily better,” explains Dr. Christopher Holstege, Blue Ridge Poison Center Medical Director. “Unless a person has a diagnosed deficiency, or some other health condition, and a medical health professional has advised the extra supplement and is monitoring their care, taking doses of vitamins greater than the recommended daily amount can be harmful.”

Overdosing on vitamins A, D, and E is particularly risky:
- Symptoms of having too much Vitamin A in the body include: itchy, dry skin; vision problems; nausea and vomiting; hair loss; headaches; confusion; and liver problems.
- Megadoses of Vitamin D over a long period of time can lead to a buildup of calcium in the blood, which is called hypercalcemia. Symptoms of hypercalcemia include nausea and vomiting, weakness, frequent urination, joint pain, and kidney problems such as the formation of calcium stones.
children to eat paint chips, or chew on painted surfaces such as a windowsill.

**HOW DOES LEAD MAKE CHILDREN SICK?**

Though lead is unsafe for people of any age, young children are particularly at risk because their nervous system, brain, and organs are still growing and developing. Their bodies absorb lead more readily than adults. Lead interferes with their growth and development. This can lead to lowered IQ, learning disabilities, behavior problems, and hearing problems. *This damage is permanent.*

Lead can be a sneaky poison. Children who are exposed to low or moderate levels of lead may not look or feel sick, even though the damage to their bodies is occurring. The effects of long-term exposure to lead may not be seen until a child starts school and begins to show signs of behavior and learning problems. At very high levels, lead exposure can cause seizures, coma, and even death.

**HOW CAN I PROTECT MY FAMILY?**

By law, anyone who is paid to perform work that disturbs paint in homes or child-occupied facilities built before 1978 must be certified through a U.S. Environmental Protection Agency (EPA) approved lead-safe work practice program. This law is called the **Renovation, Repair and Painting Rule.** Do not hesitate to ask anyone you hire to demonstrate that they are an official Certified Lead-Safe Renovator.

If you plan to do the work yourself, read the EPA guide *Steps to Lead-Safe Renovation, Repair, and Painting.* The guide is available online at [www.epa.gov/lead](http://www.epa.gov/lead) or call 1-800-424-LEAD. It will explain the correct way to:

- Prepare a work site using plastic sheeting and other tools.
- Control the dust during the project.
- Safely clean up a job site.

The guide also explains how to protect your children from the lead dust which may settle on your clothes, hair, and hands while you are working on your home. It is important to clean yourself properly before you have any contact with children.

**CAN ADULTS BE POISONED BY LEAD?**

Yes, although this occurs less often than in children. Adults’ brains and bodies are no longer growing and developing, so they are at less risk for the learning and behavior problems associated with lead poisoning. But being exposed to a large amount of lead can still cause health effects in adults, including problems with blood pressure, kidney function, muscle weakness, joint problems, or reproductive problems. It is important to take steps to limit your exposure to lead while renovating an old home. The EPA guide *Steps to Lead-Safe Renovation, Repair, and Painting* (mentioned above) also covers these steps, which include:

- Wearing the proper protective gear.
- Using respiratory protection
- Avoiding risky behaviors such as eating, drinking, or smoking in the work area.
- Cleaning your hands and body properly after working.

If you have any concerns that someone may have been exposed to lead, whether or not they are experiencing any health effects, contact the Blue Ridge Poison Center for advice: 1-800-222-1222. The call is free and confidential.

If you need more information about lead poisoning dangers and how to protect your family, visit LeadSafe Virginia at [http://www.vdh.virginia.gov/leadsafe/](http://www.vdh.virginia.gov/leadsafe/).
• High doses of vitamin E might increase the risk of bleeding by reducing the blood’s ability to form clots after a cut or injury. It might also increase the risk of stroke due to bleeding in the brain. These risks could be greater in people taking prescription anticoagulant or antiplatelet medicines, such as warfarin (brand name = Coumadin®).

Are children at risk of vitamin overdose?
Vitamins may look, smell and taste like candy to children. The Blue Ridge Poison Center receives many calls each year about a child who discovered a bottle of vitamins and ate them all at once. This is a frightening situation for parents, but it rarely results in any serious health effects. Unless an adult is routinely giving a child megadoses of a vitamin supplement, vitamin overdose is unlikely. One notable exception is iron. A one-time ingestion of too much iron can cause nausea, vomiting, abdominal pain, diarrhea which may be bloody, and damage to the liver or other organs. (Iron is technically a mineral, not a vitamin, but it is a common ingredient in multivitamins--particularly prenatal multivitamins--so it has been included in this article.)

Here are some vitamin safety tips from our experts:
• Keep all vitamins and supplements up high, out of the sight and reach of young children. This may mean giving guests a safe place to store their belongings in your home.
• If you choose to take vitamins or other supplements, keep your dose within the recommended daily amount. A great resource to determine the best dose for you is The National Institutes of Health Vitamins and Minerals webpage: https://nccih.nih.gov/health/vitamins
• Make sure your health care providers know about all the vitamins and supplements you take so that they can help you avoid dangerous interactions or doses.

Congratulations to Blue Ridge Poison Center nurse Jenni Goodwin, BSN, RN, who recently aced the national certification exam for Specialists in Poison Information. The exam requires months of study and years of preparation, and is notoriously difficult. We are proud to have you on our team, Jenni!