LEAD CRYSTALWARE AND YOUR HEALTH

The Issue

Lead crystalware may release lead into the food and beverages it comes in contact with. As well, any container you drink from, including one made of lead crystal, that has an exterior decorative pattern around the rim, such as a coating or glaze, may also release lead and cadmium from the coating or glaze. Lead and cadmium can be harmful to your health.

Background

Crystalware is made by combining molten quartz with lead compounds and is valued for its brilliance and clarity. When a food or beverage is put into crystalware, some lead may be released into the food or beverage. The quantity which is released depends on the amount of lead in the crystalware, the type of food or beverage, and the length of time they are in contact with each other.

Acidic foods and beverages such as pickles, fruit juices, soft drinks, wine and port increase the amount of lead released. With less acidic foods and beverages, such as cheese, nuts, milk, scotch and vodka, less lead is released. The risk of lead release is lower if the crystalware is only used over the course of a meal. Tests show that the amount of lead in both alcoholic and non-alcoholic beverages when consumed from a crystal glass during a meal is usually well below 0.2 parts per million, the maximum lead concentration allowed in food and beverages in Canada. However, lead concentrations of up to 20 parts per million - 100 times higher than the Canadian limit - have been found in wines kept for weeks in crystal decanters.

In Canada, any glass or cup you drink from, including one made of crystal, that has an exterior decorative pattern around the rim comes under the authority of the Hazardous Products (Glazed Ceramics and Glassware) Regulations. These products cannot be sold, advertised or imported if they release more than trace amounts of lead or cadmium from the decorative rim. However, not all countries have the same strict lead and cadmium limits. If you own glasses or cups that come from another country, or if you are planning on buying some while abroad, make sure they meet Canadian safety standards.

Possible Health Risks from Lead Crystalware

Lead that is absorbed into your body travels in the blood to soft tissues such as the brain, liver and kidneys. After several weeks, any lead that has not been eliminated from your body is stored in your bones and teeth, where it can remain for decades. During pregnancy, breastfeeding, serious illness, advancing age, or after a bone is broken, the lead may be re-released into the blood and soft tissues. In pregnancy, lead can be transferred to the developing baby.

Lead poisoning is not always easy to recognize. You may be symptom-free or have symptoms similar to the flu, including loss of appetite, headache, weakness, fatigue, joint pain, nausea, abdominal cramps and vomiting. Continued exposure to low amounts of lead can affect the brain and nervous system, causing forgetfulness, depression, memory loss and disturbances in physical and mental performance. Lead exposure can also cause anaemia (low red blood cell count). High amounts of lead can damage the brain and kidneys, affect male fertility, and increase the risk of miscarriages, stillbirths and premature deliveries in pregnant women.

The risk of lead poisoning is higher in children because their developing bodies absorb more lead, eliminate less lead, and are more sensitive to lead's damaging effects. Exposure to even low amounts of lead in the womb, during infancy or early childhood can result in lower body size, behavioural problems such as hyperactivity, learning disabilities and reduced intelligence. Very high amounts of lead can cause convulsions, reversible kidney damage, permanent brain damage, coma and death.

When cadmium is absorbed into your body, it is stored in the kidneys and liver. High amounts of cadmium can cause abdominal pain, burning sensation, nausea, vomiting, diarrhea, muscle cramps and dizziness. Continued exposure to low amounts of cadmium can cause kidney damage and fragile bones. Studies in animals show that exposure to high amounts of cadmium during pregnancy causes behavioural and learning disabilities in the young.

Minimizing Your Risk

There are steps you can take to reduce your exposure to lead and cadmium:

- Use crystalware only when serving
- Store food or beverages in lead-free containers
- Soak new crystalware in vinegar for 24 hours and rinse it thoroughly before you use it
- Wash crystalware by hand using a mild detergent; dishwasher detergents can damage the surface of the crystalware, causing more lead (and cadmium, if present) to be released the next time the crystalware is used
- Use lead-free tableware when serving children or pregnant women
- Eat a balanced diet that includes calcium, iron, protein and zinc; good nutrition will help reduce the amount of lead and cadmium your body absorbs

If you are concerned about your exposure to lead and cadmium, your doctor can do a blood test to measure how much may be in your body.

Government of Canada's Role

The Federal Government monitors food and beverages for toxic chemicals such as lead and cadmium. If unacceptable amounts of these contaminants are detected, action is taken to ensure safety. The Federal Government also sets limits on the amount of lead and cadmium in glazed ceramics and glassware used for serving food and beverages.

Need More Info?

For more information, contact your doctor or the Poison Information (or Control) Centre in your area.

Health Canada - Lead Information package
http://www.hc-sc.gc.ca/hecs-sesc/
/toxics_management/publications/
leadQandA/toc.htm

Health Canada - Information bulletin - lead and cadmium, 1998
http://www.hc-sc.gc.ca/english/
media/releases/1998/lead.htm

Call our hotline: (613) 954-5995

It's Your Health - Effects of Lead on Human Health
http://www.hc-sc.gc.ca/english/
iyh/environment/lead.html

It's Your Health - The Safe use of Cookware
http://www.hc-sc.gc.ca/
english/iyh/products/
cookware.html

For additional It's Your Health articles go to:
www.healthcanada.ca/iyh

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