



## Drinking Water Facts:

# Lead in Drinking Water at Schools and Child Care Centers

### General Information

There is no safe level of lead in the body. Sources of lead exposure include ingestion of lead-based paint chips and dust, inhalation of lead dust in the air, and ingestion of lead in drinking water. Imported candies, cosmetics, toys, and other products may also contain lead.

### Lead in Drinking Water

Potential sources of lead in drinking water are lead-based solder, brass and chrome-plated faucets, and lead pipe and pipe fittings. Lead in drinking water usually comes from water distribution lines or household plumbing and fixtures rather than the water source.

The US Environmental Protection Agency (EPA) estimates that drinking water can make up 20 percent or more of a person's total exposure to lead. Formula-fed infants can receive up to 60 percent of their exposure to lead from drinking water.

### Did You Know?

Typically, drinking water alone has not been associated with elevated blood lead levels. Combined with other sources, however, the amount of lead from drinking water may be enough to increase the chances of harmful health effects.

### Health Effects of Lead

Even low levels of lead in blood may affect a child's ability to pay attention, academic achievement, behavior, and development. Most children with elevated blood lead levels do not exhibit any symptoms, however effects may appear later in age. Other health effects may include kidney damage, anemia, and reductions in birth weight. Symptoms of severely elevated blood lead levels (lead poisoning) may include stomach aches, vomiting, poor appetite, or nausea.

### Young Children at Greatest Risk

Children younger than 6 years are at greatest risk from exposures to lead. The impact of exposure to lead in drinking water depends on the child's age, source of water consumption, the potential concentration of lead in drinking water, and other sources of lead exposure.

- Children younger than 6 years, particularly toddlers, are most likely to engage in frequent hand-to-mouth activities which increases the potential for them to ingest lead-based paint chips and dust.
- Infants who drink formula mixed with water containing lead are ingesting much more lead than older children who receive most of their nourishment through food.
- Young children absorb more lead through their stomach than older children or adults.
- Young children have developing brains and nervous systems which make them the most vulnerable to lead's health effects.

### Did You Know?

New Jersey requires lead screening of all children at ages 1 and 2 years. Other states only screen children identified to be at increased risk for lead exposure, otherwise known as targeted screening. New Jersey's approach is far more protective.

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## Testing for Lead in Drinking Water

- Public water systems (PWSs) are required by federal standards to test for lead throughout the distribution system to identify system-wide problems, not to specifically sample individual buildings or taps.
- Therefore, unless a school operates its own PWS (for example, they have their own well), testing for lead is voluntary.
- EPA developed a recommendation called the 3Ts (Training, Testing, and Telling) to encourage schools and child care centers to test for lead in drinking water.

### Did You Know?

Although schools are not required to test for lead in drinking water, schools can proactively test to protect the health of school-going children.



## Lead Testing of Drinking Water in Schools and Child Care Centers

If drinking water lead sample results are above the EPA guidance of 15 ppb, then the school should take fountains or outlets where levels were elevated out of service. Lead may be detected in drinking water at some locations within a building and not others.

In addition, schools should take short- and long-term solutions that are effective and manageable for their facility. Some solutions to the problem may include providing bottled water, installing filters, or replacing lead pipes.

Schools and child care centers can take actions to reduce exposures to lead in school drinking water, but parents should take steps to reduce exposures at home as well.

### Did You Know?

All licensed child care centers in New Jersey built prior to 1978 must have a lead risk assessment completed. If lead-based paint is identified, they must be re-inspected and certified as lead hazard-free every three years by a licensed lead risk assessor.

## Tips to Reduce Potential Drinking Water Lead Exposure at Home

- If water in a particular faucet is not used for six hours or longer, "flush" the pipes by running cold water through it until the water is noticeably colder—about one minute. The more time water sits in your home's pipes, the more lead and other dissolved metals the water may contain.
- Use only cold water for drinking, cooking, and making baby formula. Hot water may contain higher levels of lead.
- Clean the screens and aerators in faucets frequently to remove captured lead particles.
- If building or remodeling, only use "lead free" piping and materials for plumbing.
- A home water filter which is NSF-certified for lead removal (NSF/ANSI Standard 53 or 58) can reduce lead levels in your water below the federal standard for lead. It is important to maintain home water filters according to the manufacturer's instructions.
- Lead is odorless, tasteless, and colorless so the only way to determine if lead is in your drinking water is to have the water tested.
- If you test your drinking water and find the levels of lead are above the federal standard of 15 ppb you should stop using this water for drinking and cooking. Use a NSF-certified filter for lead removal or drink and prepare food with bottled water.

## Other Resources

The NJ Department of Environmental Protection recommends using a certified laboratory to test your water for lead. For certified labs, visit:

<http://www.nj.gov/dep/oqa/certlabs.htm>

For information on how to reduce exposures to lead-based paint in your home and for resources regarding blood lead testing, visit:

<http://www.nj.gov/health/fhs/newborn/lead.shtml>

For information on NSF home water filters, visit:

<http://www.nsf.org/consumer-resources/health-and-safety-tips/water-quality-treatment-tips/lead-in-drinking-water/>

Abbreviations: ppb=parts per billion; NSF=National Sanitation Foundation; ANSI=American National Standards Institute