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Fact Sheet HE 3229

Lead — A Menace If In Drinking Water¹

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We have phased out leaded gasoline and banned the use of lead in house paint. Blood lead levels decline by more than a third between 1976 and 1980 and the trend has been continuing. Yet lead continues to find its way into our bodies, especially from water that passes through lead plumbing materials. Lead can come from old lead service pipes and water mains. Homes more than 80 years old may also have lead or lead-alloy pipes. More commonly, but less serious is the former use of lead solder to join copper pipes. It has been estimated that nearly one in five Americans, in all parts of the country drinks water with lead levels considered excessive by the Environmental Protection Agency.

THE PROBLEM

Elevated levels of lead, which is highly toxic, can damage the nervous system, blood-forming processes, kidneys and reproductive system. Children and fetuses are at greatest risk. Chronic exposure to low doses of lead may cause learning and behavioral disorders and stunted growth. Many of these effects have been known through the ages. Some historians claim the fall of Rome was due in part to the use of lead pots and plumbing by the ruling classes which might have been responsible for infertility and mental disorders.

WHAT IS BEING DONE?

As of June 19, 1988 federal and state governments were to start to complete several important actions designed to carry out the lead ban imposed nationwide by the June 1986 Amendments to the Safe Drinking Water Act.

1. Require that plumbing for drinking water in new residential property meet the lead-ban limits to qualify for mortgage insurance or other assistance from the U.S. Department of Housing and Urban Development (HUD) and the Veterans Administration (VA).
2. All states must enforce the lead ban through state laws or amended building codes; all public water systems that are not "lead free" must notify their customers of the health dangers of lead in drinking water; and solder used in interstate commerce must prominently display a warning label advising customers about lead limits for new and repaired plumbing.
3. The 1986 Amendments to the Safe Drinking Water Act prohibit the use of any pipe fitting that has more than eight percent lead, and any solder or flux that contains more than 0.2 percent lead.

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This ban applies to new installations and repairs of public drinking water supply systems and residences and other buildings connected to such systems. (Flux is a jelly-like substance that makes applying solder easier.) Although the lead ban applies to entire drinking water systems from reservoirs to private residences, the mortgage assistance requirement applies only to plumbing in *newly-constructed residential property*. The latter includes multi-family dwellings as well as single-family homes.

4. All states must enforce the lead ban through state laws or amended plumbing or building codes, or other appropriate means. (So far, Florida is one of fifteen states that have not done this.)
5. Water supply systems that are not “lead free” were to notify their customers of the health dangers of lead by June 19, 1988. If a state fails to enforce the system-wide lead-in-plumbing limits or the customer-notice requirement, EPA may withhold up to five percent of that state’s federal grant for administering the public water supply program.
6. Also, beginning June 19, 1988, solder used in interstate commerce and having a lead content exceeding the 0.2 percent limit must prominently display a warning label saying that its use in any private or public drinking-water system is prohibited. The U.S. Consumer Product Safety Commission has told EPA it will help states enforce this requirement.

Although Congress passed this law mandating the use of only *lead-free* solder on drinking water systems in new homes in 1986, a nationwide survey shows that most new-home buyers are unaware of the legislation. Further, only 21 percent of the survey respondents had insisted on lead-free plumbing in their new homes, though most acknowledged and understood the immanent danger of lead in water.

The Safe Drinking Water Act Amendments, enacted June 19, 1988, will help to protect consumers from the hazards of lead contamination of water supplies. However, the legislation *does not decrease the need for consumers to be knowledgeable on both the issue and the laws*. For example, the Act mandates that the Housing and Urban Development Authority

and the Veteran’s Administration may *not* insure or provide financial assistance for newly-constructed residential properties whose water systems are not lead-free.

WHAT CAN YOU DO?

If you are concerned about lead (which is odorless and usually tasteless) in your water, you should have your water tested. The sample should be taken at a tap to include lead that may come from your plumbing. You can ask your water supplier if your water is corrosive. If so, it can pick up lead from the pipes or solder more easily. Your water supplier or local health department may be willing to test your water or recommend a service that will.

If you do have lead in your water, or suspect that you may, here are some steps that will be less costly than changing your plumbing:

- Run water 3 to 5 minutes the first thing in the morning or after several hours of disuse. This will flush out water that has been in long contact with lead.
- Don’t use hot tap water for cooking or preparing baby formula. Hot water dissolves more lead than cold.
- New plumbing or repairs should make use of 0.2 percent lead solder. Although old 8 percent solder was banned in June, 1988, there may be some still around.
- Water treatment devices may not be the answer. Charcoal filters *will not* remove lead. Only reverse osmosis filters are recommended by EPA for lead removal and they are expensive, use a lot of energy and can be difficult to maintain.

REFERENCES

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