PBDE Chemical Action Plan

In January 2004, Governor Gary Locke directed the Department of Ecology, in consultation with the Department of Health, to develop a plan to reduce the threat of PBDEs in the environment.

You can find the plan online at: **www.doh.wa.gov/pbde** or phone the agency contacts listed below.

For questions on PBDEs and the environment:

Rick Manugian
Washington State Department of Ecology
Office of Communication and Education
Phone: 360-407-6928
Email: ricm461@ecy.wa.gov
Website: www.flameretardants.org

For questions on PBDEs and human health:

Joanne Bonnar Prado
Washington State Department of Health
Office of Environmental Health Assessments
Phone: 1-877-485-7316
Email: joanne.prado@doh.wa.gov
Website: www.doh.wa.gov/pbde

Washington State Department of Health

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How can you reduce your exposure to PBDEs?

The Washington State Department of Health is concerned about the health effects of exposure to contaminants in the environment, such as certain types of flame retardant chemicals called PBDEs.

What do we know about PBDEs?

Polybrominated diphenyl ethers (PBDEs) are chemicals added to consumer products so they won't catch on fire or burn so easily. These flame retardants have been used for about 30 years to meet national fire safety regulations. The United States is the world's largest producer and consumer of PBDEs.

PBDEs are found in:

- Foam pads in furniture cushions and mattresses
- Carpet pads, draperies and upholstery fabrics
- Plastics in fax machines, computers, kitchen appliances, TVs and other electronics
- Cable insulation, adhesives and rigid insulation

PBDEs are released from the items they are added to, and enter the environment. Levels of PBDEs are rising rapidly in the U.S. in air, soil and sediments. They are building up in animals and people, and are stored for a long time in body fat and other tissues.

The exact way that people are exposed to PBDEs is not fully known. Current research points to three main sources of PBDE exposures: foods, indoor air and house dust. Certain jobs may also put individuals at a higher risk of exposure.

In Europe and Japan where they have banned or reduced the use of PBDEs, levels in the environment are decreasing. California and Maine have banned some types of PBDEs, beginning in 2006.

The best, long-term way to deal with harmful chemicals like PBDEs is to support policies and programs that help reduce environmental pollution.

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What are the health effects of PBDEs?

The health effects of PBDEs have not been studied in humans. Some of the effects of PBDEs observed in laboratory studies of animals are:

- Problems with brain development that alter behavior, learning and memory
- Decreases in thyroid hormone
- Reproductive effects

The amounts of PBDEs that cause these health effects in lab animals are generally higher than what we are exposed to.

Some harmful chemicals like PBDEs stay in our bodies for a very long time. PBDEs have been measured in blood, fat and breast milk. Levels of PBDEs in people in the U.S. vary widely.

More information is available from the Department of Health at www.doh.wa.gov/pbde; or phone the Office of Environmental Health Assessments at 1-877-485-7316.

Here are some things you can do to reduce exposure to harmful chemicals like PBDEs:

Cleaning and Dusting

- Keep indoor living and working spaces free of dust.
- Avoid stirring up dust when you vacuum and clean.
- Ventilate living and working spaces, especially while you clean.
- Wash your hands after cleaning and dusting.
- Remove shoes when entering the house.

Repairing, Remodeling, Recycling

- Cover or replace exposed foam pads on sofas, chairs and car seats.
- Avoid tracking construction dust into living areas during home remodeling.
- Try to contain dust and particles when replacing foam padding beneath carpets.
- Properly recycle or dispose of foam products and electronic equipment. Call the Recycling Hotline at 1-800-732-9253 for information.

Choosing and Preparing Foods

- Prepare fish and meats in ways that reduce fat. Many harmful chemicals like PBDEs concentrate in fat.
- Follow the advice of Washington's fish advisories. The Department of Health encourages people to eat fish as part of a healthy diet, while choosing fish that are low in PCBs and mercury. Information is on the web at www.doh.wa.gov/fish.
- Wash your hands often, especially before preparing and eating food.

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What women and mothers of infants should know

It is especially important that young women limit their exposure to harmful chemicals well before they become pregnant, and throughout pregnancy and nursing. The most critical period of exposure happens during development in the womb and infancy.

Scientists study breast milk as a way to measure contaminants like PBDEs in all people. Studying breast milk does not mean that there is a greater risk to infants from breastfeeding.

The Department of Health encourages mothers to breastfeed their babies because of the many benefits. Breast milk helps infants develop their immune systems and overcome the effects of prenatal exposure to harmful chemicals. Breastfeeding is the healthiest way to feed babies.

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Washington State Department of Health

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If you have questions, contact:
Office of Health Promotion
P.O. Box 47833 Olympia, WA 98504-7833
(360) 236-3736

Sincerely,
Health Education Resource Exchange Web Team

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