

2013 Annual Policy Review of Criteria and Levels of Concern for Certain Toxic Substances Used in Determining Whether to Issue a Fish Consumption Advisory

In October 2000, pursuant to § 32.1-248.01 of the *Code of Virginia*, the Virginia Department of Health (VDH) published guidelines for issuance of fish consumption advisories due to contamination of fish with polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), mercury, dioxin, and Kepone. The guidelines established the criteria and contaminant levels of concern that VDH would use for determining whether a fish consumption advisory should be issued for affected fish species in state waters. VDH revised the state guidelines for PCBs in 2004 and for PBDEs in 2010. In 2012, VDH revised the state guidelines for PCBs, PBDEs, mercury and dioxin. The changes were partly due to the release of the U.S. Environmental Protection Agency's 2011 Exposure Factor Handbook which consisted of several exposure assumption updates: average adult body weight increased to 80 kg; life exposure increased to 78 years; and length of time living at one residence was updated to 32 years. A list of fish consumption advisories currently in effect in Virginia can be found at: <http://www.vdh.virginia.gov/Epidemiology/dee/PublicHealthToxicology/Advisories/>

In June 2013, the VDH State Public Health Toxicologist reviewed the current guidelines and applicable science related to PCB, PBDE, mercury, dioxin, and Kepone and determined that an update to the current fish consumption advisory guidelines is not indicated at this time. Below is the current list of contaminants and associated action levels that should prompt a fish consumption advisory in Virginia:

PCBs – When PCBs levels in fish range from > 100 to 500 micrograms per kilogram ($\mu\text{g}/\text{kg}$), VDH recommends limiting consumption of contaminated fish species to two, 8-oz meals per month. When levels exceed 500 $\mu\text{g}/\text{kg}$ in fish, VDH recommends avoiding consumption of contaminated fish species.

PBDEs – When PBDEs levels in fish range from 0.5 to below 1.0 milligrams per kilogram (mg/kg), VDH recommends limiting consumption of contaminated fish species to two, 8-oz meals per month. When levels exceed 1.0 mg/kg in fish, VDH recommends avoiding consumption of contaminated fish species.

Mercury – When mercury levels in fish range from 0.5 to below 1.0 mg/kg , VDH recommends limiting consumption of contaminated fish species to two, 8-oz meals per month. When levels range from 1.0 to below 2.0 mg/kg , VDH recommends limiting consumption to one, 8-oz meal per month. When levels exceed 2.0 mg/kg in fish, VDH recommends avoiding consumption of contaminated fish species.

Dioxin – When dioxin levels in fish range from 2.0 to below 5 nanograms per kilogram (ng/kg), VDH recommends limiting consumption of contaminated fish species to two, 8-oz meals per month. When levels range from 5 to below 10 ng/kg , VDH recommends limiting consumption to one, 8-oz meal per month. When levels exceed 10 ng/kg , VDH recommends avoiding consumption of contaminated fish species.

Kepone – VDH is currently using the U.S. Food and Drug Administration action level of 0.3 mg/kg. When Kepone levels in fish are 0.3 mg/kg or higher, VDH recommends avoiding consumption of contaminated fish species.

The next annual review of Virginia’s guidelines for issuance of fish consumption advisories due to contamination of fish will be conducted in June 2014.

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