

## Cancer in Animals and Fish

**I**t's not only humans. The beluga whales in Canada's St. Lawrence estuary are getting cancer, while those in the less-polluted Arctic waters are not. Fish in contaminated waters have tumors, but not those in clean water. Dogs that are exposed to herbicides from chemically treated lawns have more cancers than those that are not. In her book detailing the global reach of environmental pollution, Devra Davis reported that polar bears in the Arctic have major body burdens of carcinogens, and that 1 out of 100 of the Arctic's largest land-based mammals is reported to be a hermaphrodite.

It can't get much clearer.

The belugas have survived in the world's northern waters for millions of years, eating octopus, crabs and fish. Now one in four of the St. Lawrence whales is dying from cancer, mostly intestinal.<sup>1</sup> They are also having trouble reproducing. When scientists examined their bodies, the autopsies revealed high levels of polycyclic aromatic hydrocarbons (PAHs), which almost certainly came from an upstream aluminum smelter.

- Cancer Registry for Companion Animals: <http://envirocancer.cornell.edu/Research/AnimalReg>
- Registry of Tumors in Lower Animals: [www.pathology-registry.org](http://www.pathology-registry.org)
- Sprecher Institute for Comparative Cancer: [www.vet.cornell.edu/cancer](http://www.vet.cornell.edu/cancer)
- *Tainted Catch: Toxic Fire Retardants in San Francisco Bay Fish — and People*: [www.ewg.org/reports/taintedcatch](http://www.ewg.org/reports/taintedcatch)

Does the St. Lawrence beluga drink too much alcohol? Does the St. Lawrence beluga smoke too much? Does the St. Lawrence beluga have a bad diet? Is that why the beluga whales are ill? Do you think you are somehow immune and that it is only the beluga whale that is being affected?

— Leone Pippard, Canadian Ecology Advocates

### Cancer in Wildlife and Fish

In Washington DC, four blocks from the White House, the Registry of Tumors in Lower Animals has almost 4,000 specimens of cancer in fish, amphibians, reptiles and invertebrates collected by the Smithsonian and the National Cancer Institute. Epidemics of liver cancer have been found in 16 species of fish in 25 different polluted freshwater and saltwater locations, while in non-polluted waters, fish with cancer are almost non-existent.<sup>2</sup> The same tumors have been found in bottom-feeding fish in industrialized and urbanized areas along the Atlantic and Pacific coasts of Canada.<sup>3</sup>

### Cancer in Sea Lions

During the 1960s and 1970s, persistent organic pollutants were dumped in California's coastal waters, where they bio-accumulated through the food chain. Twenty years later, people started noticing dead and stranded California sea lions. When examined, 20% of the sea lions were found to have cancer of the urinary and genital tracts and toxic chemicals in their blubber that had accumulated through the anchovies, squid, salmon and mussels they ate.<sup>4</sup>

### Cancer in Dogs

A study of more than 8,000 dogs showed that canine bladder cancer was associated with their living in industrialized counties, mimicking the distribution of bladder cancer among humans.<sup>5</sup>

downstream of toxic industries, or on the fenceline adjacent to a petrochemical complex. People on First Nations reserves, tribal Indian lands and hardscrabble farms near highways and industrial parks often pay a high price for exposure to pollutants with poorer health and shorter life expectancy.

Some communities have “cancer clusters.” Sometimes this is a matter of perception: with rates so high, it’s not hard to find other neighbors with cancer. In other places, however, such as Fallon, Nevada, there are definite problems. There, 17 children were diagnosed with leukemia, and three died. After many studies, and frequent denial, Mark Witten, a University of Arizona professor of pediatrics, showed that exposure to tungsten and cobalt, from a local heavy metals firm and military releases, is likely to play a role in the development of these cancers.

#### Home, Toxic Home

Whether you live in the poorest city ‘hood or the wealthiest country estate, your home probably shelters numerous cancer hazards. There’s no discrimination here.

Entire books have been written about building healthy houses and “fixing” the toxic ones. As a start, we recommend *Homes That Heal (and Those That Don’t)* by Athena Thompson (New Society Publishers, 2004). We also invite you to take a virtual house tour to get a sense of the perils that may lurk in your home. The HealthHouse Tour, created by the California group, Healthy Child, Healthy World, includes information on electromagnetic fields (EMF),

- Cabinet Confidential — Toxic Products in the Home: [www.net.org/health/cabcon\\_report.vtml](http://www.net.org/health/cabcon_report.vtml)
- Disease Cluster and Hotspot Map: [www.healthyamericans.org/state/clusters](http://www.healthyamericans.org/state/clusters)
- Fallon Cancer Crisis: [www.falloncancercrisis.org](http://www.falloncancercrisis.org)
- HealthHouse Tour: [www.healthychild.org/HealthHouse](http://www.healthychild.org/HealthHouse)
- Tox Town: [www.toxtown.nlm.nih.gov](http://www.toxtown.nlm.nih.gov)

teflon-coated pans and safe alternatives to toxic arts and crafts supplies, as well as more well-known hazards.

We discuss building products in Solution 6 and household cleaning products in 7, but here’s just a quick look at three common home purchases:

- Synthetic carpeting may off-gas up to 120 volatile chemicals, especially in the first few months after installation, including the carcinogens formaldehyde, butadiene and styrene. Dyes, binders and stain-resistant treatments are also hazardous.
- Most mattresses contain more synthetic chemicals than a barrel of crude oil,<sup>6</sup> including toluene, formaldehyde, benzene and fire-retardants such as PBDEs, classified as a possible human carcinogen, neurotoxin and suspected hormone disrupter. Even bed frames and other furniture made from wood — generally thought to be “natural” and therefore safe — may contain toxic glues, and chemical stains and finishes.
- Many curtains, tablecloths and designer fabrics are finished with formaldehyde as a perma-press agent, dyed with fixing compounds that include heavy metals, and coated with brominated fire-retardants.

Your home sweet home may be a very dangerous place, unless you swap all the toxic products for healthier alternatives.