

NAKED binder

THE STRONGEST, GREENEST BINDER FOR THE PLANET

The Naked Binder

Strong. Sustainable. Giving back.

So what are Dioxins?

Dioxins are a family of chemicals comprising 75 different types of dioxin compounds and 135 related compounds called furans. In addition, twelve of the polychlorinated biphenyls (PCBs) display a related chemical structure and share some of the biological properties of dioxins. For our purposes the term "dioxin" includes both dioxins and furans. They are unwanted by-products of industrial processes, usually involving combustion.

Accidental fires at landfills are believed to be among the largest sources of dioxin emissions, globally. However it seems that people are exposed to dioxin mainly through animal products such as meat, dairy and fish in their diet.

From the EPA:

Why Are We Concerned?

Because dioxins are widely distributed throughout the environment in low concentrations, are persistent and bioaccumulated, most people have detectable levels of dioxins in their tissues. These levels, in the low parts per trillion, have accumulated over a lifetime and will persist for years, even if no additional exposure were to occur. This background exposure is likely to result in an increased risk of cancer and is uncomfortably close to levels that can cause subtle adverse non-cancer effects in animals and humans.

What Harmful Effects Can Dioxin Produce?

Dioxins have been characterized by EPA as likely to be human carcinogens and are anticipated to increase the risk of cancer at background levels of exposure.

In 1997 the International Agency for Research on Cancer classified 2,3,7,8, TCDD, the best studied member of the dioxin family, a known human carcinogen. 2,3,7,8 TCDD accounts for about 10% of our background dioxin risk.

At body burden levels 10 times or less above those attributed to average background exposure, adverse non-cancer health effects have been observed both in animals and, to a more limited extent, in humans. In animals these effects include changes in hormone systems, alterations in fetal development, reduced reproductive capacity, and immunosuppression. Effects specifically observed in humans include changes in markers of early development and hormone levels. At much higher doses, dioxins can cause a serious skin disease in humans called chloracne.

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Where Can Dioxin Be Found?

Dioxins can be commonly detected in air, soil, sediments and food. Dioxins are transported primarily through the air and are deposited on the surfaces of soil, buildings and pavement, water bodies, and the leaves of plants. Most dioxins are introduced to the environment through the air as trace products of combustion. The principal route by which dioxins are introduced to most rivers, streams and lakes is soil erosion and storm water runoff from urban areas. Industrial discharges can significantly elevate water concentrations near the point of discharge to rivers and streams. Major contributors of dioxin to the environment include:

- * Incineration of Municipal Solid Waste
- * Incineration of Medical Waste
- * Secondary Copper Smelting
- * Forest Fires
- * Land Application of Sewage Sludge
- * Cement Kilns
- * Coal Fired Power Plants
- * Residential Wood Burning
- * Chlorine Bleaching of Wood Pulp
- * Backyard burning of household waste may also be an important source.

How Are We Exposed to Dioxins?

Most of us receive almost all of our dioxin exposure from the food we eat: specifically from the animal fats associated with eating beef, pork, poultry, fish, milk, dairy products. Most of us get these foods through the commercial food supply. Since most of the meats and dairy products we consume are not produced locally but have been transported hundreds or thousands of miles, the majority of our dioxin exposure does not come from dioxin sources within our own community. Additionally, because we are all being exposed from the same national food supply, we are all receiving a similar exposure with the main difference between individuals being individual food preferences.

Important exceptions to this pattern of general population exposure are individuals who, over an extended period of time, eat primarily locally grown meat, fish or dairy products that have significantly greater dioxin levels than those found in the commercial food supply. Individuals in this situation receive greater exposure and are at greater risk than the general population. These elevated dioxin food levels can be the result of nearby local sources or from past contamination of soil or sediments. Another example of elevated exposure is nursing infants; however, health experts generally agree the overall benefits to infants of nursing far out weigh potential risks.

Some more Info (from Wikipedia):

The term dioxin is used in chemistry to describe a heterocyclic 6-membered ring where 2 carbon atoms have been substituted by oxygen atoms. Whilst this moiety can appear in a wide range of compounds the most important and widely known group are the polychlorinated dibenzodioxins, a group of highly toxic environmental toxins commonly referred to as simply "dioxins".

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In fact Dioxin can also be commonly used to refer to a diverse range of chemical compounds which are known to exhibit "dioxin-like" toxicity. Information on these compounds and their importance can be found at a number of sources.

There has been a controversy about the health and environmental effects of dioxins for more than 27 years.[1][2]

Dioxins are by-products of many industrial processes including waste incineration, chemical manufacturing, chlorine bleaching of pulp and paper, and smelting. Any process "in which chlorine and organic matter are brought together at high temperatures can create dioxin". Greenpeace and some other environmental groups have called for the chlorine industry to be phased out.[2][1][3] However, chlorine industry supporters say that "banning chlorine would mean that millions of people in the third world would die from want of disinfected water".[4]

One of the key players in the dioxin controversy has been the Dow Chemical Company. Dow is a large manufacturer of chlorine, producing an estimated 40 million tons of chlorine each year, much of which is used to make plastics, solvents, pesticides and other chemicals. In 1965 "a Dow researcher warned in an internal company document that dioxin 'is extremely toxic' but Dow has always publicly claimed it is not".[2]

sources For Wikipedia articles:

1. Sharon Beder. '[The dioxin controversy: spilling over into schools](#)', Australian Science Teachers' Journal, November 1998, pp. 28-34.
2. [Dioxin controversy: What are dioxins?](#)
3. Sharon Beder (2000). Global Spin: The Corporate Assault on Environmentalism, Scribe Publications, chapters 9 and 13.
4. Sharon Beder (2000). Global Spin: The Corporate Assault on Environmentalism, Scribe Publications, p. 153.
5. Ronald Christaldi. [Book Review: Dying From Dioxin by Lois Marie Gibbs](#) Journal of Land Use and Environmental Law, 1996.
6. Sharon Beder (2000). Global Spin: The Corporate Assault on Environmentalism, Scribe Publications, p. 154.