

How to Start to Stop Dioxin Exposure in Your Community

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Dioxin -- What's the Problem?

The EPA's draft "reassessment" of the health effects of dioxin estimates that the lifetime risk of getting cancer from dioxin exposure is between one in 1,000 and one in 10,000. Dioxin is also linked to severe reproductive and developmental effects. Dioxin exposure can damage the immune system, leading to increased susceptibility to infectious diseases, and can disrupt the function of regulatory hormones. Infertility, birth defects, impaired child development, diabetes, and thyroid changes are linked to dioxin exposure.

At the levels present in the bodies of most Americans, dioxin harms the immune system, decreases testis size, and alters glucose tolerance. At levels present in 1% of Americans, (2,500,000 people) dioxin causes endometriosis, decreases sperm count, and reduces testosterone levels. Dioxin affects the level of male and female hormones. Two recent scientific reports show that sperm counts are decreasing and the rates of hormonally linked cancers such as breast, testes and prostate are increasing.

What is dioxin?

Dioxin is not the desired result of any one process, but an unwanted by-product of many chemical, manufacturing, and combustion processes. Any use of chlorine in industrial processes, including incineration, results in dioxin formation.

Dioxin is the group name for many persistent, very toxic chemicals. The most toxic form of dioxin is 2,3,7,8-tetrachlorodibenzo-p-dioxin or TCDD. The toxicity of all dioxin and dioxin-like substances are measured against TCDD. There are 75 chlorinated dibenzo-dioxins. Seven have TCDD-like toxicity. There are 135 chlorinated dibenzo furans. Ten have TCDD-like toxicity. There are 209 chlorinated biphenyls (PCBs). Thirteen have TCDD-like toxicity. There are also brominated dibenzo dioxins, dibenzo furans and biphenyls that have TCDD-like toxicity.

Where does dioxin come from?

According to EPA, only 50% of dioxin sources are known. Of these, 95% comes from combustion processes. Garbage and medical waste incinerators are the largest identified sources.

Incinerators -- 95% of 50%

Dioxin is generated by the chlorine content in the waste stream burned in medical and garbage incinerators. Chlorine is present in various plastics, mostly PVCs. When these plastics are burned, chlorine is released, and quickly reacts with available phenol compounds to form dioxin. The phenol compounds are present in wood and paper products. Dioxins are released to the air, end up in the bottom ash, and in the fly ash captured by pollution control equipment.

When chemicals such as PCBs, chlorinated benzenes and chlorinated phenols are burned in hazardous waste incinerators, chlorine combines with available phenol compounds to form dioxin.

The Missing 50%

Although EPA identified chemical manufacturing/ processing and industrial/municipal processes as major sources of dioxin emissions, they had no data to measure how much dioxin is released from these sources. EPA acknowledged that the "agency lacks sufficient information about emissions from known sources" (emphasis added) and has asked industry to "call-in" with information on their dioxin emissions. Forest fires and vehicle exhaust are on the list, but known dioxin sources such as Dow Chemical in Midland, Michigan, Vertac in Jacksonville, Arkansas, and Monsanto in St. Louis, Missouri are omitted.

The Missing Chemical Industry

A major but unmeasured source of dioxin is the chemical industry -- in processes that use chlorine in the production of pesticides, pharmaceuticals, cosmetics, detergents, solvents, and dyes. Herbicides such as agent orange and 2,4-D are made by adding chlorine to phenoxy compounds. Dioxin is formed as a by-product and ends up in the formulated end-product, such as the herbicide Agent Orange or pure PVC polymer, as well as in the process waste streams.

The Unmeasured Pulp and Paper Industry

Another major source of dioxin emissions are pulp and paper mills. Dioxin is formed in the pulp and paper industry when chlorine or chlorine dioxide is used to bleach pulp and paper. Naturally occurring phenol compounds found in wood pulp react with chlorine to form dioxin. This results in dioxin in paper products, paper mill sludge, and in the wastes from these plants.

How Are People Exposed to Dioxin?

Dioxin, like DDT, does not break down easily in the environment. Instead, it bioaccumulates. This means that the body accumulates any dioxin to which you are exposed. Over time, continual low level exposures will "build up" until subtle adverse health effects begin to occur.

Until the EPA report, most people thought they would be exposed to dioxin only if they lived near an incinerator, a contaminated site, a pulp and paper mill or other direct source. Now we know this is not true.

According to EPA, 90% of human exposure occurs through diet, with foods from animals being the predominant pathway. Animals are exposed primarily from dioxin emissions that settle onto soil, water and plant surfaces. Soil deposits enter the food chain by ingestion by grazing animals. People then ingest dioxin through the meat, dairy products, fish and eggs they consume. A recent study by Dr. Arnold Schechter of the State University of New York at Binghamton found dioxin in many food products purchased in an upstate New York supermarket. Schechter estimated that the average daily intake of dioxin is "at least 50 times greater than what EPA estimates is a virtually safe dose of dioxin."

Who is likely to have the highest dioxin levels in their bodies? People that eat more than two inland fish meals a month. People who live near a dioxin source or eat food produced near a dioxin source. Children. Breast fed babies. Anyone who eats a lot of meat, dairy products, or fish. Dioxin is so pervasive that limiting further exposure of the American people cannot be accomplished through lifestyle or dietary changes. The only sensible way to limit further exposure is to shut down the sources of dioxin contamination.

How does dioxin damage us?

The EPA report is full of new information on dioxin including information on how dioxin and dioxin-like chemicals (PCBs, furans) damage the body. Scientists have identified a series of steps that are necessary for most if not all of the observed effects of dioxin and related compounds. Once dioxin is in the body, the molecules of dioxin (the more dioxin you are exposed to the more dioxin molecules present in the body) "attach" to specific receptor "sites" in cell tissue much like a ship pulling into a loading dock at a pier. This site is normally used by hormones and enzymes to regulate certain activities in the body. When dioxins and dioxin-like chemicals occupy this site instead of hormones and enzymes, select normal cell functions cannot be carried out. Hormone activity, developmental/reproductive and immune functions are especially vulnerable to disruption of receptor site activity.

We're Almost Full

One of the most striking findings of the report is the significance of what past dioxin exposures may mean for public health. The report identifies levels of dioxin in the human body referred to as the "body burden." According to EPA, some adverse effects of dioxins occur at levels slightly above average body burden levels currently found in the population and that "as body burdens increase within and above this range, the probability and severity as well as the spectrum of human non-cancer effects most likely will

increase."

This means that, as a society, we have been accumulating dioxin and dioxin-like chemicals in our body. We are very close to "full" when it comes to the amount of dioxin that is known or expected to cause adverse health effects. It will only take a small additional exposure to "push" us over the edge and trigger adverse health effects. For most people, any exposure to dioxin, no matter how small, may lead to some adverse health effects. In other words, no amount of additional exposure to dioxin is safe.

How Do We Stop Dioxin Exposure?

No amount of additional exposure is safe. So what do we do to stop dioxin exposure? Unlike some other societal problems, we know what it would take to stop emitting dioxin.

At the 2nd Citizens' Conference on Dioxin held in St. Louis, MO in July, 1994 activists created two demands:

- 1) An immediate halt to the incineration of municipal, hazardous, medical, military and radioactive waste, and any such wastes incinerated in cement and or aggregate kilns, or other devices; and
- 2) An immediate commencement of a phase-out of the industrial production and use of chlorinated organic compounds (including plastic, PVC).

Greenpeace has called for a national strategy for zero dioxin that would include these actions:

EPA should place a moratorium on new dioxin permits.

EPA should sunset existing dioxin permits.

EPA should place a moratorium on all new incinerators and phase out the burning of chlorinated wastes at existing incinerators.

The use of chlorine and chlorine based bleaches in the paper industry should be eliminated.

A timetable for the rapid phase out of PVC should be established.

So we know what must be done. We have to get industry to place public health before private gain. And if industry won't do that voluntarily we have to get government to create laws and regulations to protect the environment and the health of the American people.

Simple, right? And we have to accomplish these tasks at a time when the prevailing political winds are calling for fewer regulations, less taxes and fewer restrictions on corporate power.

We can't effectively stop dioxin exposure without taking on some basic issues:

Our political system is broken. The vision of a democracy in which the people use their power to elect

representatives to protect and advance their interest has turned into a nightmare. In this nightmare power comes from money and the ones with the most money have the most power.

Our movement is not as strong, as inclusive or as united as it needs to be. The Big 10 Environmental groups, with their ties to the President and Congress, have tended to see grassroots people as potential donors or postcard signers, not as essential players in the creation of national strategies. Grassroots activists, overwhelmed by their local battles, have not often had the time to step back and plan proactive, long-term strategies.

Organizing a group to win change is hard, harder than it used to be. People are too busy, too distrustful, or too unaccustomed to working as a group. The media adds to this trend away from community and towards rugged individualism by reporting too much bad news and not reporting about efforts to make things right. Every day we're inundated with tragic stories about things we can't do anything about. Rarely does the press cover stories about ordinary people organizing together to improve their lives.

We can't expect to win a campaign to stop dioxin exposure without overcoming the difficulties of organizing, strengthening and uniting our movement and beginning to rebuild our democracy.

But we can do it and we must do it. Not by creating a flashy 100 national organizations signed-on-but-just- on-paper-coalition where local people's involvement is limited to writing a check or sending clever postcards to their Members of Congress. This has to be hundreds of local coalitions figuring out how to work together to shut down local sources of dioxin, convince corporations to modify their production methods, and to create local, state and federal regulations and laws.

We Can Do It

Dioxin is a powerful national organizing issue. It is a serious health threat to all Americans and so it is the smokestack in everyone's backyard. Dioxin can provide the basis for building local coalitions of Viet Nam Veterans, La Leche League breast feeding advocates, farmers, indigenous people, incinerator opponents, and victims of breast cancer and endometriosis. Organizing around dioxin is a way to initiate a new dialogue with the American people on "getting government off our backs and then getting government on our side."

The EPA Reassessment of Dioxin gives us the chance to broaden and strengthen our groups and deepen our involvement in our local communities. Even if your group is deeply involved in local issues, dioxin affects everyone, and the EPA reassessment provides new, compelling information to share with Sunday school classes and PTAs. Dioxin provides grassroots activists with a way to reach new people and break through the labels that have been given us by the media and the corporations.

Dioxin can also be a powerful electoral issue. In the Times Mirror September 1994 poll, The New Political Landscape, the voting public is divided into 10 distinct political groups. Three Republican oriented groups make up 36% of registered voters. The four Democratic-oriented groups add up to 34%.

The largest block of swing voters, making up 19% of the electorate, are the New Economy Independents. This group is made up primarily of high school graduates who are underemployed and not optimistic, under 50, 60% female and strongly environmentalist. According to this poll, candidates of either party need the New Economy Independents to win a majority. If stopping dioxin exposure can be made into a stated concern of these strongly environmentalist voters, no candidate can win without jumping onto our bandwagon.

What's Already Been Done

The Campaign really began when EPA scheduled public meetings in six cities in December, 1994 to hear comments on the science of the health and exposure sections of the document. With encouraging turnout from grassroots activists in most cities, the EPA heard more from the grassroots about dioxin than they had bargained for.

EPA was also forced to hold three additional dioxin public meetings in Columbus, OH, Atlanta, GA and Seattle WA in response to the demands of the grassroots.

Over 500 grassroots activists spoke to EPA, the media and the public during the meetings and at rallies and press events outside the meetings. In Columbus, OH a crowd of over 100 packed the City Council chambers. Thirty two speakers, mostly grassroots toxics activists from throughout Ohio and several other Rust Belt states, told of dioxin contamination, and the resulting health problems, they have suffered at home. Activists also held a rally in front of City Hall, using body cut-outs, tombstones, and body bags to dramatize the severe health impacts of dioxin exposure.

Comments from grassroots and environmental activists dominated the agenda in Dallas. Over 30 people spoke, representing groups from across Texas and four neighboring states, who are fighting toxic waste-burning cement kilns, medical waste incinerators, chemical waste plants, and Agent Orange-related dioxin contamination.

Speaking for the 800,000 member Texas PTA, Kim Phillips told the EPA panel, "It is not acceptable to poison or expose any child to a hazard that can be avoided. The illness and death of a child is extremely significant to parents, family, and community."

In New York, Newark, Washington, Chicago, San Francisco, Seattle and Atlanta, activists echoed the concerns raised in Columbus and Dallas. CCHW helped in the organizing of regional efforts to give testimony and focus the media's attention at the public meetings on the dioxin report. As part of this effort, CCHW mailed an alert about the dioxin report and the public meetings to 25,000 individual activists and groups. CCHW's staff have written and distributed a series of short articles on the EPA's report.

EPA's Plans

The next step for the EPA is to review the comments submitted during the period around the public meetings. A summary of these comments will be prepared and evaluated by EPA's Science Advisory Board. That will be the final scientific review of the reassessment. EPA watchers expect a final report on the health effects of dioxin should be released in the fall of 1995.

The EPA's report should lead to new federal regulations based on the reassessment. How long that policy making process will take depends, in part, on Congress. If the Contract on America advocates are successful in prohibiting all new regulations or adding elaborate cost-benefit analysis to the regulatory process, any new federal restrictions on dioxin may take two years or longer.

EPA is considering holding "dioxin policy workshops" later this year. Whether these occur, or whether EPA or Congress acts to drastically reduce dioxin exposure, is in the hands of grassroots environmental justice groups across the country.

What is Our Plan?

The next two years provide a unique opportunity to bring together conservationists, environmental justice activists, breast cancer victims and breast feeding advocates to influence local, state and national policy on dioxin emissions and to change the way our nation makes, uses and disposes of paper products, plastics and chemicals.

The necessary platform to stop dioxin exposure has already been written and rewritten by a variety of national groups and coalitions. To turn any or all of these demands into reality, CCHW believes that a national network of local grassroots organizations must create local bottom up, coalition-driven campaigns.

A Dioxin Roundtable to Design a National Grassroots Campaign

CCHW will convene a Dioxin Roundtable of Citizen Activists from around the country on the last weekend of April in Arlington, Virginia. The goal of this Roundtable is to design the components of a national grassroots campaign to stop dioxin exposure. In 1986 a CCHW Solid Waste Roundtable came up with the McToxics Campaign, a successful four year effort to limit the use of styrofoam in the fast foods industry.

The Stop Dioxin Exposure Campaign will be focused on creating a public policy debate on dioxin in every American household that results in a clear demand for protection from further dioxin exposure in time for the 1996 electoral cycle. CCHW envisions a coordinated effort of grassroots organizations across the country all working to educate their communities and to build local coalitions of environmental and non-environmental groups to publicize the links between the paper and chemical industries, solid waste disposal practices, health problems and dioxin exposure. This network of activists can both focus on reducing local sources of dioxin and influencing the EPA and Congress to create a

national dioxin policy that will encourage recycling, stop incineration and change industrial practices to protect the American people and their environment from further exposure to dioxin.

A Campaign Handbook

CCHW will turn the results of the Roundtable into a Stop Dioxin Exposure Campaign Handbook and work with groups around the country to turn the guide into action. This Campaign Handbook will be distributed with a people's guide to the science in the EPA's 2,400 page reassessment. But you don't have to wait for the guide to be published to get started.

Getting Started: The First Nine Steps in Building a Local Stop Dioxin Exposure Coalition

1. If you're part of a local group you can skip the first step. If there is no group, or if your once active group has fallen apart, dioxin can be the reason to come together. First, get one or two people to read this kit. Then sit down with them and make up a list of other people who should be involved. Get a copy to each of them, ask them to read it and be ready to talk about it when they come to a get-together on a certain date. You've got the beginnings of a group.
2. Once you have a group, take the time to have a good discussion about dioxin. You could divide up the meeting into the same headings that are in this guide and have a different person take the lead on each heading. Your group really needs to take the time to discuss this issue in order to decide whether or not to take a leading role in building a coalition to stop dioxin exposure. This is a big commitment and needs the active endorsement of your whole group.
3. Have your group brainstorm all of the possible local organizations that have a stake in stopping dioxin exposure. The Yellow Pages or any other source book with lists of local organizations can help. If your group doesn't have enough diversity to make the best list, get other people to help with this process.
4. Everyone in your group thinks of everyone they know in any of these groups. An uncle? A member of their church?
5. Prioritize your list of possible coalition members. What groups will have to take a small step to join the coalition? What groups will have to make a major leap? Put the groups in order with the small step groups first.
6. Figure out which people in your group are best to visit the top ten possible coalition members. Get a clear commitment from your group members on who they're willing to visit. Role play what you'll say in these visits. You are going to be asking these groups to come to a meeting to discuss forming a local coalition to stop dioxin exposure. You are not asking the group to join. That will come later. Pick a date by which all first round visits will be done. It may help to plan a meeting date at which this first round of

prospective coalition members can get together. Put together a time line that allows you time to visit each group at least a few weeks before the initial coalition meeting date.

7. Hold the meeting. Have a proposed statement of principles for the coalition. Come with proposals that set up clear expectations of what will be expected of each coalition participant. How will decisions be made? Who can speak for the coalition? How will the coalition be funded? The best meetings are those with a clear set of questions to be answered and an established process that lets everyone at the meeting have a say in answering those questions. The sample coalition statement at the back of this guide will help you get started. At the end of the meeting you should have an agreed upon set of operating principles that each representative can take back to their group.

8. Find out where the sources of dioxin are in your community. This can be the first activity of your forming coalition. Look for incinerators, not only large solid waste burners, but also smaller incinerators found at hospitals, universities and laboratories. Many communities also have cement kilns and sewage sludge incinerators. In addition, there are unique sources of dioxin such as pulp and paper plants, metal refining operations (smelters) and industrial plants that manufacture plastics, dyes and pesticides made with chlorine.

9. Call CCHW for more information. We'll answer your questions, send you the Stop Dioxin Exposure Campaign Handbook and People's Guide to the EPA's Dioxin Reassessment, put you in touch with other forming coalitions, and help out in any way we can.

10. Get ready to change the country. Shutting down the sources of dioxin won't be easy. Industry will say that there just haven't been enough studies or that the existing studies are bad science. Coalition members will be in conflict over strategies or funding. The Contract with America advocates will explain that regulation isn't necessary. But look at what we stand to win with a successful national bottom-up campaign. We get less cancer, stronger immune systems, fewer birth defects, and more people who can bear healthy children when they're ready to start a family. We also get the beginnings of a rebuilt democracy based on the coalition efforts of local people who have figured out how to limit corporate influence and maximize public participation.

Sample Statement of Principles

The Happy Valley Stop Dioxin Exposure Coalition is a coalition of individuals and groups in Jefferson, Lincoln and Roosevelt Counties committed to working together to stop dioxin exposure locally, statewide and nationally. To accomplish our purpose, the Happy Valley Stop Dioxin Exposure educates our community about dioxin and advocates for policies that will reduce this serious health and environmental problem.

All organizations that belong to the Stop Dioxin Exposure Coalition agree to educate their membership on dioxin, take an active role in educating the community. pay \$50 in annual dues and participate in fundraising and strategic activities endorsed by the coalition. At least one member of each coalition

organization is expected to represent her/his organization at regularly scheduled monthly meetings. Every organizational member of the coalition has one vote.

An organization is considered a member when the coalition is presented with a letter, signed by officers of the organization, indicating that the organization voted to join the coalition and pays their dues.

Individuals are encouraged to join the coalition and participate in all events and activities. Individual dues are \$20 per family per year. Individuals who do not represent an organization may be elected to an office in the coalition. A voting delegate will be elected to represent every 50 individual members.

No activity will be undertaken by the coalition unless sixty percent (60%) of the voting delegates present at any regularly called meeting vote to endorse the activity.

The Stop Dioxin Exposure Campaign may elect officers and committee chairs at any regularly scheduled meeting. A vote by the majority of voting delegates present is necessary for election. Spokespeople for the coalition may be approved in the same manner. Nominations may be taken from the floor for all offices.

What's A Campaign Without Buttons and T-Shirts?

Three inch round white buttons with black and red campaign logo are available from CCHW for \$1.00 each. For orders of 10 to 49, the price is \$.75 a piece. For orders of 50 or more the price of a button is \$.50.

All cotton t-shirts are also available. These are high quality V-neck shirts with the logo on the front and Stop Dioxin Exposure across the back. Each t-shirt is \$12.00.

Additional copies of this start-up guide are available. If you are a group considering building a coalition, CCHW will send you as many as you need for the cost of shipping and handling. Others may receive a copy for \$5.00 postage paid.

Let us know what you're doing to stop dioxin exposure. CCHW is prepared to link together the efforts of local coalitions. But first we have to know that you want to be a part of the effort. Send us your name and address and we will put you on our Stop Dioxin Exposure mailing list. If you have questions about dioxin or coalition building or ideas on strategies to stop dioxin exposure, please contact us at:

CCHW, P.O. Box 6806, Falls Church, VA 22040 (703) 237-CCHW (2249).