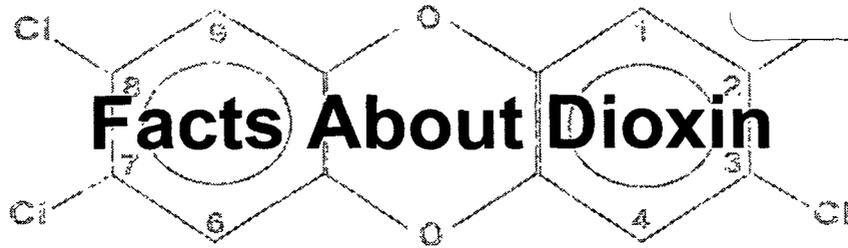


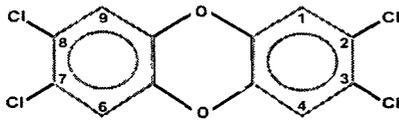
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FACTS ABOUT DIOXIN" NCBC GULFPORT MS
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Facts About Dioxin

What is dioxin?



There are 75 forms of dioxin, but only 17 forms are believed to be harmful.

Where is dioxin found?

Dioxin is found throughout the world in the air, soil, water, sediment, fish, shellfish, meat, and dairy products.

Where does dioxin come from?

Dioxin is not intentionally made; instead, it is a result of the following:

- ✓ Paper mills (amount has been lowered by 90% in the last 10 years)
- ✓ Production of chemicals to kill plants and germs (not allowed now)
- ✓ Incinerators
- ✓ Forest fires
- ✓ Recycling of automobiles

What will happen if I am exposed to dioxin?



- The answer is still being argued and depends on which studies you believe are correct, the animal research or the human research.

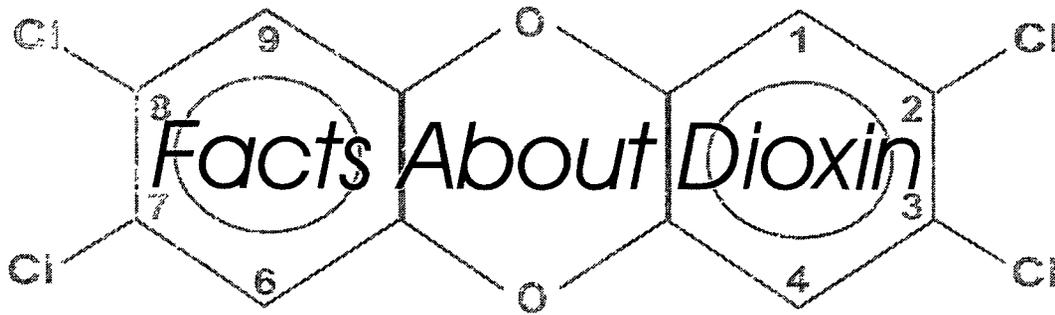
- Remember -

There are two groups of scientists:



- ✓ Those who accept the animal findings.
- ✓ Those who accept the human findings.

Both findings are the result of valid research.



Why are the animal and human dioxin results different?

Laboratory Animal Contact Studies

Advantages of using animals

- ✓ The study is well controlled.
- ✓ Results are not confused by smoking, drinking, or other factors.
- ✓ Can give high dose.
- ✓ Animals can be studied over a lifetime.

Disadvantages of using animals

- ✓ Animals and humans are not the same.
- ✓ High animal dose versus low human daily dose.
- ✓ Animals exposed to pure dioxin; humans exposed to all forms of dioxin contact.
- ✓ Animals are unable to give verbal answers.

Human Dioxin Contact Studies

Advantages of using humans

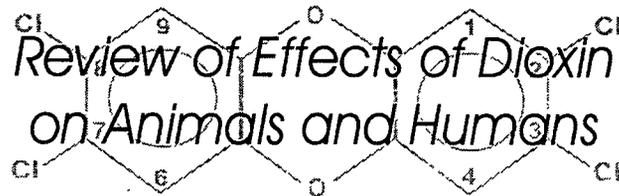
- ✓ Gives better picture of the effects of dioxin on humans.
- ✓ Humans are exposed to all forms of dioxin.
- ✓ Humans are able to give verbal answers.

Disadvantages of using humans

- ✓ In accidents, humans can be exposed to very high doses.
- ✓ Difficult to determine actual contact dose.
- ✓ Smoking and drinking can confuse results.
- ✓ Difficult to find a control group.

Difficulties in Evaluating Data

- ✓ Actual environmental doses are much lower than in the animal or human studies.
- ✓ Different animal studies have different results.



Effect on Organ System	Laboratory Animals (High Dose/Controlled Study)	Humans (High Dose/Accidental or Uncontrolled Study)
Cancer		
Skin Chloracne		
Other Skin Effects		
Liver Size		
Liver Function		with drinking
Other Liver Problems		
Triglycerides/Cholesterol		
Thyroid Changes		
Diabetes		
Immune Changes		
Brain Changes		adults - short term adults - long term children
Heart and Circulatory Damage		
Lung Irritation		short term
Lung Damage		
Kidney Damage		
Reproductive Hormones		
Birth Defects		
Chromosome Damage		

Positively Observed Not Observed Data not conclusive or not available

Based on the Draft 1994 U.S. Environmental Protection Agency Health Effects Assessment Document for 2,3,7,8-TCDD and Related Compounds