

Dirty Dozen EDCs

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|-----------------|----------------------------|
| BPA | Lead |
| Dioxin | Arsenic |
| Atrazine | Mercury |
| Phthalates | Perfluorinated chemicals |
| Perchlorate | Organophosphate pesticides |
| Fire retardants | Glycol Ethers |

A list of endocrine disrupters: 12 hormone-altering chemicals

Why did endosulfan cause serious defects?

It was dumped into rivers and caused increased DNA strand breaks.

Time periods in The Third Wave by Alvin Toffler

The Industrial Revolution (The 2nd Wave) began in the 18th century.

KNOW it was from 1820-1840. It began in **Britain** and within a few decades it spread

Information Technology (The 3rd Wave)

Environmental Impact of Industrial Revolution

- Deforestation
- Water pollution including ground aquifers
- loss of oxygenation
- resource depletion
- more CO2 in air

Air Pollution

Sulfur dioxide gets released into atmosphere

Acid rain = sulfur dioxide

Acid Rain

Acid rain is Sulfur dioxide + nitric oxide

When the emissions travel long distances secondary pollutants form

Nitrogen dioxide, nitric acid, acid vapor, sulfuric acid, sulfate, nitrate salts

Smog

large part is ground-level ozone. (**TOXIC**)

Ozone = nitrogen oxides and hydrocarbons react with oxygen. Catalyzed by sunlight.

Chromium Land Pollution

Open cast mining leaves TONS of reject minerals

Rain washes away toxic chromium

50 Year Lifespan

85% of Sukinda Valley population suffers from "pollution induced" diseases

Skin cancers occurred in Hinkley, California

Uranium Contamination in Navajo nation

Chromium and Uranium mines not cleaned up

People not notified of radiation

Some people live less than quarter mile

Pesticide: DDT

Not used in USA but USA still exports it

Most pesticides kill more than just pests

How does DDT affect birds? birds metabolize DDT to DTE. They lay soft shell eggs

Land Pollution

Leads to water pollution. Chemicals washed into bodies of water

Point Source Water Pollution

Easy to find and control & can be Reduced and Monitored

Factories

Sewage system

Power plants

Underground coal mines

oil wells

Non-point sources

Hard to find. Cannot control

Rain and Snow move through the ground and pick up pollutants

Runoff of fertilizer from farm

Storm water drainage from lawns, parking lots, streets

