

Fear of Chemicals is Becoming a Popular "Disease"

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The arguments of those who are against the expansion of the petrochemical industry in Alaska are designed to ride on the coattails of the "cancer scare" that seems to be popular these days. We've heard that hamburgers can cause mutations, that maraschino cherries are no good for us, that saccharin causes cancer in Canadian rats, and more recently, that some of the products being studied by the Dow-Shell Group are "known" or "suspected" carcinogens.

In recent months several local advocates have ballyhoosed some of the petrochemical products being studied by the Dow-Shell Group as being "known" or "suspected" carcinogens. The author of one article went further. "Moreover, several of the chemicals are enormously toxic to aquatic life while very little, if anything, is known about the environmental impact of some of the more exotic chemicals". And repeatedly we keep hearing about "official lists" of carcinogens published by the National Institute of Occupational Safety and Health (NIOSH) or the Occupational Safety and Health Administration.

There is one so-called "official" list published by NIOSH that includes over 2400 substances that the agency considers as "suspected carcinogens." Approximately 1,905 of these substances were selected on the basis of reported non plastic or carcinogenic effects; the remaining substances were included on the basis of expressed (tumor producing) interest.

Interestingly enough this list also includes a lot of other materials which most of us are familiar with: table salt, cellophane, silk, silver, rock salt, steric acid (used in many hand soaps, hair shampoos, etc.), ethyl alcohol (used in distilled spirits), petroleum, fertilizer, etc. One compound, selenium, is a trace element essential for human life,

Industrial Threshold Values For Petrochemical Plants

<u>Product</u>	<u>Allowable Concentration (ppm)</u>
Ethylene	F
Ethylene Glycol	50
Ethylbenzene	100
Ammonia	25
Polyethylene	N
Urea	N
Benzene*	10
Methanol	200
Styrene	50
Caustic Soda	.5
Ethylene Dichloride	10
F Flammable only	
N No limit set	
* Suspected carcinogen in man at high dose levels.	

but is deadly at high doses. Few of us are ready to buy the argument that these compounds are completely safe to human health and the environment, but few of us mismanage our exposures to them to make them harmful to our health.

The NIOSH notion that we are surrounded by more than 2400 nasty chemical carcinogens is refuted directly by the consensus opinion of most professional industrial physicians and hygienists, including the American Conference of Governmental Industrial Hygienists (ACGIH).

An ACGIH publication entitled, "Threshold Limit Values for Chemical Substances & Physical Agents in the Workroom Environment" lists threshold values for 730 chemical compounds

and dusts. On this "list" only 10 compounds are rated as confirmed carcinogens in man with an additional 20 compounds identified as suspected carcinogens. These 30 compounds identified as "high risk" by the ACGIH are a far cry from the 2400 NIOSH "hit" list.

A basic premise to the study of poison is that long term harm to human health from exposure to substances is based on the level of exposure (or dose) to that substance over a period of time. Unlike bacteria and laboratory animals such as rodents, rabbits, dogs, etc, humans have the ability to detoxify many substances they are exposed to naturally. Otherwise,

the low level exposures to naturally occurring chemical substances we routinely encounter would have snuffed out human life long ago.

As we voluntarily limit our exposures to such potentially harmful substances, such as table salt, alcohol, cellophane, etc., the petrochemical industry and government, though regulations, attempt to manage the risk of potential harm to those exposed to substances below levels which scientific data indicate little to no potential for harm. In most cases industry voluntarily limits those exposures to levels far below those imposed by governmental regulation.

One of the reasons why the petrochemical industry has become the second fastest industry monitored by the National Safety Council is the research effort expended voluntarily by industry to understand the potential to cause harm to human health and the environment of the products it manufactures, transports, handles, and consumes. The industry goes further in what is called hazard communication - informing its employees and users of its products about hazards that those products may pose and about ways to protect themselves from them. It is found that a product cannot be made or handled safely, the product will not be made. Present state-of-the-art manufacturing technology and good safety programs allow their manufacture and handling with socially accepted risk to human health and the environment.

We have to realize that right now we are living with an enormous amount of propaganda concerning petrochemicals. Fear of chemicals, not fear of cancer, is the most popular "disease" we have right now.