

IMAGE AWARENESS HEALTHLETTER

THE IMMUNE SYSTEM

AIR AND WATER POLLUTION

VOLUME 102 NO. 5

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Notice

This newsletter is designed for educational purposes only. Any individual suffering from health problems which are mentioned or discussed should consult a physician for proper diagnosis and treatment.

Chlorine as a Water Pollutant

Chlorine poses a health hazard in two ways. Firstly, it combines with organic material in water to form cancer causing compounds. More significantly, chlorine can apparently act directly upon the arteries causing heart disease.

In 1967 a significant book entitled *Coronaries/ Cholesterol/ Chlorine* was published. Dr. Joseph Price argued that chlorine damages the wall of the artery and leads to heart disease.

Price first began to suspect that chlorine might contribute to heart disease as a medical student on his fa-

ther's farm. He noted that when chlorine was used in the sanitizer to clean the milking machine "milkstone" formed on the inside of the metal and rubber tubes. Other means of cleansing the equipment did not produce these deposits.

The average age of American G.I's in Korea was a little over 22 years. Three-quarters of those killed had advanced heart disease. These men drank heavily chlorinated water. Korean soldiers did not chlorinate their water and did not manifest heart disease.

Dr. Price wrote up his observations, but before they could be published he was drafted and placed on the front lines in Vietnam. He

found a similar phenomena taking place there.

After returning from Vietnam, Price determined to further validate his conclusions. He conducted a study on roosters in which 50 were given water chlorinated to a level not much higher that that received by American soldiers in Korea and Vietnam. Another group of 50 roosters received pure water.

The animals receiving chlorinated water fell ill within 3 weeks and died within 3 months. The animals begin to look disheveled, lose their color and upon autopsy have advanced heart disease.



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It is of interest to note that a heart attack was first described in 1912. Heart attacks began to appear in 1920 and became common after 1956.

Since 1900 four changes have taken place in the American diet:

- Refining of grains
- High sugar consumption
- High consumption of food additives
- Chlorination of water.

Each of these changes may have contributed to the epidemic of heart disease in the United States. China with almost a billion people has virtually no heart disease!

References:

Price, Joseph, *Coronaries/Cholesterol /Chlorine*, Saginaw, Michigan, Alta Enterprises, Inc., 1969.

Stanton, George, "The Cause of Heart Disease", *American Heart Journal*, June, 1974, Vol. 87, No. 6.

Water Quality

Many people blindly assume that their drinking water is of high quality. Unfortunately, this is not always the case. We live in a day

when use of chemicals is commonplace. Many of these chemicals find their way into the drinking water.

One very powerful cancer causing substance commonly found in treated water is THM's (trihalomethane). It is formed in the chlorination process. The Environmental Protection Agency has allowed large quantities of this pollutant in average drinking water:

"The limit was set at 100ug/l. Since the one-in-a-million cancer risk level for THM is 0.19ug/l, this meant that our water supplies (as a tradeoff to economic considerations) were allowed to contain as much as 500 times more carcinogens in the form of THM's than in the otherwise acceptable one-in-a-million risk level...In other words, we're allowed to drink water containing THM's with 500 times higher carcinogenic toxicity than the water from condemned polluted ground water wells."

Reference:

Linder, Ron, "How EPA set its standards," *The Sacramento Bee*, March 8, 1987, Forum 6.

Other Pollutants

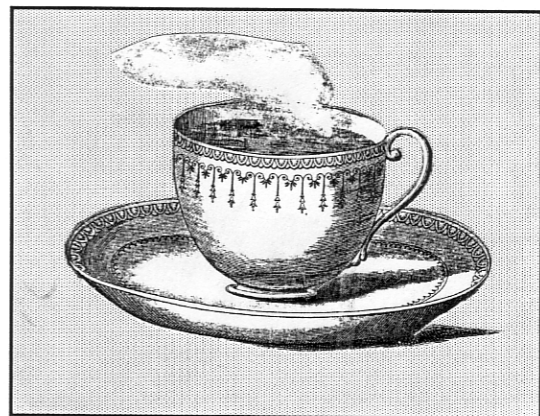
Chlorine and THM's are only two of many pollutants that find their way into drinking water. Common pollutants include asbestos, pesticides, herbicides and heavy metals like lead and mercury. Ingestion of these substances can weaken

the immune system and contribute to poor health. This writer feels that the rash of illness which seems to accompany the first rains in the fall may be contributed to by runoff of agricultural chemicals.

Bottled Water

This same article points out that 70 percent of bottled water is obtained from municipal sources and reprocessed. Unfortunately, "standards for bottled water are no more stringent or more rigorously enforced than those for drinking water delivered to the tap..." Water labeled "mountain spring water" must come from a source in the mountains. This may "increase the possibility of exposure to pesticides commonly used in rural areas where forests are cultivated for timber."

Distilled water is toxin free, however, long term use of this type of water may be injurious to health. It "...may cause deterioration of the teeth, and a loss of calcium, phosphorus, and other elements from the bones."



Reference:

Flaum, Dane, "Water Filters--Do They Work?" and "Bottled Water--Not What You Think", *Environmental Review*, March/April 1984, p. 12.

Water Purification

The following quote from this issue of *Environmental Review* provides some insights on water purification:

"One type of activated carbon filter has been shown to provide exceptionally pure water while avoiding the problems associated with granular and powdered carbon filters. It uses a compressed solid carbon block which forces the water through the pores of the carbon. This ensures the opportunity for thorough adsorption of most impurities, including asbestos. The compacted carbon is also dense enough to effectively prevent the oxygenation necessary for bacteria to multiply within the carbon unit."

Problems identified with loose carbon filters:

- Bacterial growth
- Inability to remove asbestos
- Possible toxic effects from silver
- Incomplete purification of water

This same article also explains that reverse osmosis units do not have the practicality of these carbon units. They cost more, require more maintenance, and deliver only small amounts of water to the spigot

Reference:

Flaum, Dane, "Water Filters--Do They Work?" and "Bottled

Water-- Not What You Think", *Environmental Review*, March/April 1984, p. 12

Air Pollution

The air of big cities and homes has become increasingly polluted. Air pollution contributes to diseases like asthma, inhalent allergies, bronchitis, emphysema, and heart disease. Respiratory problems are one of the most rapidly growing categories of diseases.

Dr. Leonard Girsh found that asthma was worsened by polluted air. Incidence of asthma increased two or threefold when air stagnated. When pollutants or dirt increased in the air the asthma rate rose ninefold.

Albert LaVerne, M.D., has identified a phenomenon called the Nonspecific Air Pollution Syndrome (NAPS). He describes this as a "pathological entity that afflicts the vast majority of the population and is especially prevalent in the highly industrialized urban areas."

The most frequent symptoms created by NAPS included "headache, fatigue,

irritability, lassitude, insomnia, burning of the eyes, difficulty in concentration, and impaired judgement." Laverne noted that these vague symptoms "improved in patients who were given no medical treatment other than nightly breathing of pure air."(Taub)

In 1974 Dr. LaVerne looked forward to a "consumer-designed pure air unit" which would be "purchaseable at a reasonable price and simply plugged in every night to provide pure air during sleeping hours."(Taub)

References:

Girsh, Leonard, et al., "A Study on the Epidemiology of Asthma in Children," *Journal of Allergy*, June 1967.

Taub, Herald, *Keeping Healthy in a Polluted World*, New York: Harper and Row, 1974, p.37-38.

LaVerne, Albert, "Nonspecific Air Pollution Syndrome," *Behavioral Neuropsychiatry*, Oct.-Nov. 1970, p.21.

Headache Caused by Air Pollution

The *Annals of Allergy* records an instance of a young girl 15 years of age who experienced headache when breathing polluted air. Her headaches cleared up when she left her home town. The pollutant was pulled out of the air with an air purification device and used to produce headaches at will.

Reference:

Rapp, Doris, "Double-Blind Case Report of Chronic Headache Due to Foods and Air Pollution," *Annals of Allergy*, Vol. 40, April 1978, p. 289.



Punch

House Dust

The air in a home is often filled with more pollutants than outside. This pollution includes chemicals from rugs and paints, particleboard, and insulation.

Skin can be a major source of household dust. One writer states, "...we lose ten thousand-million skin cells a day....Pools of skin collect underneath sheets and some is lost to the breeze, but much stays around home. Up to 90 percent of all household dust consists of dead skin--friendly scrapings of you, your family, your guests, waiting to be smoothed together with a soft cloth and shaken outdoors..." (Brand)

Forty-two thousand mites live on every ounce of dead skin cells--their cherished food. A double bed is usually host to 2,000,000 mites. The

average mite releases 20 fecal pellets a day. These pellets are so small that they float through the air. These are added to the 800,000 to 1,600,000 particles that circulate through every cubic inch of air in a home. Small wonder some people have difficulty breathing.

Reference:

Brand, Paul, M.D., and Yancey, Philip, *Fearfully and Wonderfully Made*, Grand Rapids: Zondervan, 1981, p. 153.

Moser, Penny Ward, "All the Real Dirt on Dust," *Discover*, November 1986, pp.106-115.

Conclusions

Very real hazards exist in the air we breathe and in the water we drink. Purification of water should include effective removal of chlorine, herbicides and pesticides, heavy metals, bacteria, miscellaneous particulate and organic matter.

Purification of the air should include effective removal of airborne dust, smoke, bacteria, fungus and pollens which assault the immune system.

Air and water are important. Man can only live about eight minutes without oxygen and little more than three days without water. Thus both are considerably more important than food--man can live without food for weeks.



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Neo-Life Water Dome

- 3 Stage filtration system with multi-layered outer filter, compressed carbon block, and microsieve.
- Handy diverter valve to allow for filtration of only cooking and drinking water.
- Save up to 90% the cost of bottled water.
- Efficient operation--operates off normal household water pressure.
- Effective removal of particulates and turbidity (98.6%), bacteria (99.9%), giardia cysts (100%), EPA priority pollutants (100%), chlorine (100%) and heavy toxic metals (100%).

* Ask for brochure #768 for more details.



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- Attractive
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* Ask for brochure #768 for more details.