

Slow poison in every sip you take

Scant respect for quality checks and ineffective purification methods result in contaminated water supply in the city

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DOCTORS TREATING a former Prime Minister at a private hospital few years ago noticed that his fever shot up every time he was put on a dialysis machine. The same patient responded favourably to dialysis done elsewhere. Medical investigations cleared the mystery- the water supplied to the hospital and being used in the dialysis machine was thick with more than 40 contaminants even after three rounds of treatment! Is not the same water being supplied to several households in the city? So is that clear water gushing out of your kitchen tap pure?

Forget about tap water, a recent survey even shattered illusions of purity about bottled drinking water that was found to contain high pesticide concentration level. Now it seems purity, or rather the impurity, of drinking water is just a matter of degrees. Some people drink more polluted water as compared to some others. But no one in the city seem to be getting anything close to pure drinking water.

DJB skips quality checks

Delhi Jal Board supplies water to the city's households. However, it only 18 out of the 33 tests prescribed by Bureau of Indian Standards (BIS) for drinking water are reportedly being carried out by DJB. Tests for the presence of mercury, cadmium, selenium, arsenic, lead, zinc, ionic detergents, mineral oil and pes-



LEFT WITH NO CHOICE: Drinking water contaminated with chemicals, pesticides and microbes is what most people are forced to consume

ticides are not conducted at all by DJB.

In fact, in 1996 an Indo-Dutch study of the Yamuna River water had found pesticides like DDT, aldrin, dieldrin, heptachlor and BHC in the river water being supplied to the city as drinking water. Then again, Indian Toxicological Research Institute in Lucknow had found pesticide residue in almost all essential commodities of life and also found that people in Delhi had the world's highest levels of DDT accumulated in their body fat.

Cancer, liver and kidney damage, neurological and reproductive disorders are just a few of the fatal and chronic health conditions you can end up with from prolonged consumption of such contaminated water. In Kerala, studies have directly linked the

use of the pesticide Endosulfan to cancer of the testicles, prostate and breast cancer.

Children most vulnerable

The most alarming fact about pesticide and effluent pollution of water is that young children are more sensitive to the effects of toxic chemicals because they eat and drink more per body weight and have faster metabolism than adults. In addition children do not have a fully developed immune system to help them fight off the effects of these toxins. Most people are said to receive up to 12 per of their lifetime dose of toxic chemicals in the first year of their life.

Two surveys conducted by the Hindustan Times in September and November last year on the quality of DJB water did not

throw up encouraging results either. Samples of drinking water collected from across the city and tested, had high counts of 'total dissolved solid' (TDS), bacterial content and hardness (due to the presence of bicarbonates). These counts were found to be high enough to cause stomach and liver disorders.

The series also pointed out how the laboratory facilities and manpower engaged in quality control of DJB water are woefully short. Only 150 out of the total 22,000 employees of DJB are engaged in water testing at the water treatment plants as well as the sewage treatment plants.

Pesticides worst pollutant

According to experts pesticides are the most difficult to remove from water. Pesticides en-

ter surface and groundwater as runoff from crops and they even pollute freshwater bodies like rivers, lakes and estuaries. Incidentally, Delhi uses as much as 62 metric tonnes of pesticide, while farmers in UP and Haryana use 7,469 metric tonnes and 5025 metric tonnes annually. The rivers Yamuna and Ganga flowing through this region are already carrying huge amounts of pesticides when they enter Delhi. The DJB, in fact, does not have the sophisticated equipment needed to remove pesticide residues from water.

"There is a tendency among farmers to use excessive pesticides even in conditions when they might not be required. A policy needs to be formulated for the rational use of pesticides and farmers need to be educated

WHAT PESTICIDES DO TO YOU

Pesticides	Used for	Health impact
DDT	Used against wide variety of insects	Chronic liver damage, cirrhosis and hepatitis, reproductive disorders, immunosuppression, cancer
Heptachlor	To control soil inhibiting pests	Reproductive disorders and blood dyscrasias
Lindane	Used against sucking and biting pests, soil pests	Chronic liver damage and hepatitis, endocrine and reproductive disorders, breast cancer, polyneuritis, cirrhosis
Malathion	Insecticide to control red spider mite, thrips etc.	Carcinogenic, ulcers, eye damage, immunosuppression, abnormal brain waves, behavioural effects, delayed neurotoxin
Aldrin	Used against wireworms and termites	Cancer of the lung and liver diseases
Dieldrin	Used against ticks, lice, moths etc.	Liver diseases, Parkinson's and Alzheimer's diseases

about the optimum and proper use of pesticides if the quality of water is to become better in the Capital," says environmentalist Sunita Narain.

The level of pesticide present in the water in an area depends on the amount of pesticide used per unit area. For instance, the level of pesticide in the water is low in Himachal Pradesh as the per unit area consumption of pesticides is low in the state compared to the consumption in Delhi Uttar Pradesh and Haryana.

Effluents add to problem

To add to the pesticide load in the water, there are industrial effluents being dumped into the river everyday. "There are paper and sugar industries and distilleries besides glass, nickel and chromium plants along the rivers, all contributing to the pollution of the river," says Water Resources Minister and member planning Commission, Sompal. He goes on to explain how the concept of water purity has been changing over the years. "Earlier, the focus was on solid residue and natural pollutants. It is now being redefined as many pesticides and industrial effluents are being found in drinking water," he says.

Ground water polluted too

If this pollution of drinking water does not paint a grim enough scenario, there is deplet-

ing ground water levels to compound the problem further. "As groundwater levels, under pressure from the growing population, goes down, the concentration of harmful toxins in water increases. Sewage pollution also increases," says chairman of Central Pollution Control Board (CPCB), DK Biswas.

What is shocking is that the entire rural belt of Delhi, unauthorised colonies, unauthorised regularised colonies, slum bastis and harijan bastis - meaning several lakhs of the city's population, predominantly the poor are being supplied with such untreated ground water.

Till today no cognisance seems to have been taken of the Central Ground Water Board (CGWB) report published in January 2000 which found harmful chemicals, high concentration of pesticides and sewage in the ground water.

"The quality of drinking water in Delhi is steadily declining. We keep testing drinking water from various parts of Delhi given to us by consumers. Samples often have high content of some pollutant or the other including residual pesticide, heavy metals, organic matter like hydrocarbons, microbial and bacterial content," says the director of the Shriram Institute for Industrial Research, Dr RK Khandal.