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## WHAT'S IN OUR DRINKING WATER

**4** If you throw rubbish outside your house, you think it will not harm you. But this rubbish comes back to you in bottled drinks!

# Toxins in mother's MILK

We take it for granted that water from our taps are safe for consumption. Studies, however, have shown that it isn't. And it's all down to the way we dispose of our rubbish, writes **CHAI MEI LING**

**W**ATCH what you throw, it could end up in what your child drinks. A research has found breast milk from a group of mothers in Penang to contain toxic chemicals.

Twenty-six samples collected from first-time mothers aged between 23 and 38 years old tested positive for dioxins and pesticides, among other contaminants.

Some of the chemicals, classified as persistent organic pollutants or POPs, are transferable to infants, the study said.

When accumulated, they may affect the infants' brain development and immune system, and cause health deterioration and reduction in life spans.

Toxicologist Professor Dr Mustafa Ali Mohd from University of Malaya said contaminated breast milk is not safe for consumption.

"Can you imagine how much chemicals you're exposing your babies to? You're practically giving them the chemicals through the milk."

"Anything that contains POPs is toxic."

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# Traces of DDTs still present



Prof Dr Mustafa Ali Mohd says chemicals and domestic waste eventually end up in streams and rivers



Prof Dr Ahmad Ismail says formula milk diet is one measure to protect infants from POPs risk

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However, the study said that despite the contamination, experts have considered the benefits of breastfeeding against any possible risk acquired by exposure to these chemicals, and have consistently recommended breastfeeding.

Ecologist and toxicologist Professor Dr Ahmad Ismail from Universiti Putra Malaysia said breast milk is still the best choice because it provides components essential for the infant's growth and development.

"Feeding formula milk is one measure to protect infants from POPs risk.

"But how are we to know that the milk and water used to prepare formula milk is not contaminated by POPs, infectious organisms or other environmental pollutants?"

"The best solution is to reduce the levels of POPs in breast milk."

POPs, which have been banned in Malaysia since late the 1990s, are characterised by their resistance to environmental degradation and highly accumulative nature in animal tissues.

In the study conducted by Ehime University of Japan and Japan Offspring Fund in 2003, samples were collected by the Consumers' Association of Penang through the Adventist Hospital Nursery.

The donor mothers were healthy non-smokers.

Findings recorded that residue levels of pesticides and insecticides in the milk, DDT in particular, were comparable to those of developing and former Soviet Union republics, but much higher than those in developed nations.

This indicated that pollution sources of DDT is still present

in Malaysia.

Milk from one mother contained dioxin levels as high as the average value in Japan, implying that some residents may be exposed to specific pollution sources of dioxins, such as open dump sites.

The effects of dioxins on children are related to mental and psychomotor development, said Ahmad.

The research concluded that contamination by organochlorine pesticides is a major environmental problem in the population.

The daily intake by some infants exceeded the limit set by the World Health Organisation and Health Canada.

Due to its small sample size, the research could not establish the link between consumption of foodstuffs and sources of contaminants.

However, Dr Mustafa, who has produced similar results using breast milk and umbilical cord blood taken from the University Malaya Medical Centre in his research, said mothers could have been exposed through their daily diet.

When chemicals from industrial, agriculture and domestic waste are disposed of, they will be washed by rain into the soil and eventually end up in streams and rivers, he said.

The Selangor river and dam, in a separate research, have been found to contain pesticide residues, some of which are POPs, due to intense agriculture and urban activity.

River water provides about 98 per cent of the country's water requirements.

"If you throw rubbish outside your house, you think it will not harm you. But this rubbish will just come back to you in bottled drinks," said Dr Mustafa.

Filtering tap water does not help, he said, but one will not die from drinking contaminated water because the chemicals come in very small amount.

They are smell-free, tasteless and soluble, rendering them undetectable.

However, some chemicals are more soluble in fat and tend to accumulate in body parts with a lot of fat, like the

breasts, rather than being flushed out of the system.

"When the mother is pregnant, the breasts are full of milk, which is also fatty. So the first few times when the mother feeds the baby, especially the first child, the milk might contain a lot of contaminants like pesticides."

Reducing the presence of POPs in the body system is not as easy a matter as losing fat.

There are no short-term measures, said Dr Mustafa.

"There's nothing that we can do to stop it totally and immediately. It's not a one-man job. Proper waste disposal measures should be practised.

"For example, you cannot just throw plastics out. They are supposed to be recycled and re-used. The public must be made aware of this.

"I'm not saying that you cannot be exposed (to contaminants) at all. People have survived for so long with a certain amount of exposure.

"There are certain criteria for the chemicals to exert their effects, like the time of exposure.

"But we don't know when these chemicals in the mother's body will be exposed to at which stage of the baby's development. That is where the danger lies."

