Would you like your dioxins boiled, poached or scrambled?

IPEN and Toxics Link's new study reveals dioxin residues in egg samples.

The most likely source: incineration of waste

It's no more in the realm of make-believe. Dioxins, one of the most poisonous chemicals known to man, have found their way to our dining tables.

Startling new evidence reveals that chicken eggs in India carry high levels of dioxins and polychlorinated biphenyls (PCBs). The dioxin levels were 5.5 times higher than the European Union (EU) dioxin limit for eggs. The samples exceeded the limit for PCBs by 4.7 times. The test results revealed the presence of the most toxic of dioxins which form a family of 210 compounds.

The data was part of a study done by Toxics Link as part of the worldwide campaign, 'Keep The Promise, Eliminate POPs' initiated by the International POPs Elimination Network (IPEN).

Chicken eggs from 20 countries across five continents were examined for harmful chemicals. The aim of the study was to explore whether free-range chicken eggs might contain unintentional POPs (U-POPs) if collected near potential sources.

Chicken eggs were chosen for several reasons: they are a common food item; their fat content makes them appropriate for monitoring chemicals such as POPs that dissolve in fat; and eggs are a powerful symbol of new life. Free-range hens can easily access soil animals and therefore their eggs are a good tool for bio-monitoring of environmental contamination by U-POPs.

The egg samples collected from near Queen Mary's Hospital's medical waste incinerator in Lucknow, Uttar Pradesh, were tested at Avys Varilaba, a Czech labora-

A daily dose of dioxins

Dioxins are toxic in very low concentrations, as low as 0.006 picogram (or pg, one trillionth part of a gram) per kg body weight per day. If 19.8 pg/gm is found in eggs (according to the present results) and an adult weighing 60 kg eats two eggs (50 gm each) per day, he has ingested 0.0005 gm of dioxins/day. This works out to 0.019 gm/month and 0.216 gm/year. This amount keeps on accumulating each year through repeated exposure.

Over a period of time, dioxins act as powerful hormone-disrupting chemicals and literally modify the genetic mechanism of the cell. This causes a wide range of effects, from cancer to reduced immunity to nervous system disorders to miscarriages and birth deformity.

The effects can be very obvious such as in chloracne, or very subtle. Because it changes gene functions, it can cause so-called genetic diseases to appear, and can interfere with child development. There is no 'threshold' dose - the tiniest amount can trigger cells and cause damage, and our bodies have no defence against it. The effects are not limited to a single generation. ☐

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INDIA FILE

Kanpur hospitals not concerned about polluting city

Eco Friends, a Kanpur-based environmental NGO, has completed a rapid assessment of BMW and compliance status of BMW Rules in Kanpur. The Eco Friends' team visited 21 healthcare centres (which included hospitals, pathology labs and nursing homes) two CWTFs, and scrap dealers at two places.

The assessment found that safe bio-medical waste management practices were not being followed at any centre. The healthcare workers were largely ignorant of the proper ways of disposal of bio-medical waste. The team found containers, which were never used as per prescribed methods, placed at various locations in hospitals. In some centres, waste was being burnt in the open.

Commenting on the sorry state of affairs, Y. S. Garg, Manager, MPCC Centralised Facility Plant in Bhauni, says, "The MPCC plant is sufficient for the entire bio-medical waste of the city, but only 150 hospitals are registered with us. Most of them don't even remember that they have to send their waste to this plant." MPCC doesn't receive enough waste to sustain itself. Plant owners have not been able to recover the capital cost of the plant.

Even the liquid waste generated from hospitals is not chemically treated. Roughly 2.5 MLD of highly infectious and hazardous waste water from hospitals enters the Ganga through the city's sewer system.

Guwahati Medical College Hospital flouting pollution control norms

The Guwahati Medical College Hospital (GMCH) has been violating almost all bio-medical waste pollution control norms, alleged Professor Dutta, Chairman of the Pollution Control Board (PCB), after his surprise visit to the hospital.

During his visit, Professor Dutta found that segregation of waste was not being undertaken. The waste was being disposed into unprotected zones such as drains and nearby low-lying areas, creating a serious public health hazard.

Dr. P.K. Ojha, the Superintendent of GMCH, did not deny the fact that the Pollution Control Board had made certain recommendations regarding the changes that needed to be implemented in the hospital.

Dr. Ojha mentioned that several projects related to waste disposal were nearing completion. The project comprises purchasing technologies for waste treatment, buying waste disposal bags and training of hospital staff in waste disposal techniques.

Dr. Ojha went on to add that a sewage treatment plant is being installed at a cost of Rs 1.72 crore for the treatment of liquid waste from the hospital.

Supreme Court issues notice to Centre, CPCB regarding incinerators

THE SUPREME COURT has issued notices to the Union Ministry of Environment and Forests and the CPCB on a public interest petition seeking the replacement of the existing system of burning bio-medical waste in incinerators with a new pollution-free technology of disposal by chemical treatment.

Common Cause, an NGO, had earlier filed a civil writ petition in the Supreme Court of India against Union Ministry of Environment and Forests, Central Pollution Control Board and other government agencies. The petition seeks directions to the respondents to stop further installation of incinerators and stoppage of existing incinerators for the treatment of BMW under the Rules. Further, it seeks a writ of mandamus to the effect that the respondent be directed to permit the use of technologies like WRF (Waste Reduction by Waste Reduction) and other similar technologies other than incineration for treatment of BMW.

The petitioner, through its counsel, said that the world over countries have shifted to safer methods of treating waste. The NGO alleged that the mode of treating bio-medical waste through incinerators was causing dangerous pollution.

Indian Express, April 16, 2005
INFANTS IN ICU EXPOSED TO HIGH PHTHALATE LEVELS: HAVARD STUDY

A first-of-its-kind study released by Harvard University scientists has found that babies in Neonatal Intensive Care Units (NICUs) receiving intensive therapy with polyvinyl chloride (PVC) medical devices were exposed to toxic phthalate at very high levels — an average of 25 times higher than the general population and up to 50 times higher for the most exposed. As their medical treatments intensified, the sick infants were exposed to progressively higher exposures of di(2-ethylhexyl) phthalate, or DEHP.

DEHP is a reproductive toxicant that alters development of the male reproductive system in laboratory animal studies. The phthalate is used to soften PVC (vinyl) plastic medical devices such as IV bags and tubing, and it oozes out of the plastic and into patients’ bodies.

The US Food and Drug Administration (FDA) has warned health care providers to protect certain vulnerable patients — including male infants — from DEHP-containing PVC medical devices, but many hospitals still use these devices.

“There is no longer any justification for hospitals to continue using PVC/DEHP devices where alternatives exist,” said Ted Schettler, MD, Science Director of the Science and Environmental Health Network. “This new exposure information confirms the concerns of both the National Toxicology Program and FDA that sick babies in neonatal units receiving multiple kinds of medical therapy are being exposed to excessive levels of DEHP.”

The peer-reviewed study also contained some good news. The study compared infants in two Boston-area NICUs and found significantly lower phthalate levels in the babies who received care at the hospital that had switched to DEHP-free medical devices for some applications.

US HOSPITAL CHAIN AWARDED FOR MERCURY ELIMINATION

The Mercury (Hg) Elimination Leadership Program (HELP) of the Department of Toxic Substances Control (DTSC) has honoured 22 individual Kaiser Permanente California hospitals for achieving the goal of virtual elimination of mercury. The HELP programme encourages and honours hospitals that achieve virtual elimination of mercury from their operations.

Kaiser Permanente has taken the lead in its construction of three mercury-free facilities — Roseville, Fresno, and Fremont — in Northern California, and is working on building its fourth in Santa Clara.

“The elimination and proper disposal of mercury-containing products and their replacement with mercury-free products reduces the release of mercury into our environment,” said the Director of DTSC

In addition, Kaiser Permanente was presented with a Corporate Certificate of Appreciation for reducing its use of mercury and its commitment to build mercury-free hospitals in California.

Through the voluntary DTSC programme, Kaiser Permanente has reduced the

GEF — establishing best practices in healthcare waste management

In conversation with Firuzeh Mahmodi, during the national mission in New Delhi in May

Q. What is Global Environment Facility (GEF)?

The Global Environment Facility (GEF), established in 1991, helps developing countries fund projects and programmes that protect the environment. GEF grants support projects related to biodiversity, climate change, international waters, land degradation, the ozone layer and persistent organic pollutants.

Q. How will the project be implemented?

In each participating country, GEF-funded projects will be implemented under the guidance of a National Project Steering Committee (NPSC) with help and assistance from a National Working Group (NWG) and a National Project Consultant.

Q. What are the objectives of the project?

The overall objective of the project, titled ‘Demonstrating and promoting best techniques and practices for reducing healthcare waste to avoid environmental releases of dioxins and mercury’ is to reduce environmental releases of dioxins and mercury. This is done by demonstrating and promoting best techniques and practices for reducing and managing healthcare waste in a number of countries and regions.

The objectives will be met through activities like establishing model healthcare institutions with best practices in healthcare waste, establishing a country-wide or regional training programme, using the model facilities to train and certify experts in waste management.

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EU SETS 2011 DEADLINE TO BAN MERCURY EXPORTS

Environment Ministers from the European Union (EU), the world’s largest producer of mercury called – on June 24, 2005 – for exports of the toxic substance to be banned by 2011.

Europe also wants to phase out the use of mercury in thermometers and improve global efforts to stop its dumping.

Environment and health groups welcomed the conclusions of the Council of the EU Environment Ministers on the Community Strategy on Mercury and said that these were positive steps towards reducing global mercury pollution.

Of the stated annual global demand of about 3,000 tonnes of mercury, the EU supplies about one-third, approximately 1,000 tonnes. As the world’s primary mercury exporting region, the EU leadership’s steps in dealing with the global mercury problem is an economic and moral imperative. A strong EU leadership will not only encourage other countries to reduce mercury consumption, it will also encourage further global trade deliberations needed to significantly reduce the role of mercury as a global pollutant.

An EU export ban, coupled with other international actions as specified in the EU strategy document, will significantly reduce the disproportionate impacts of mercury exposure in India caused by abundant mercury supplies, inadequate resources to enforce existing regulations and virtually no incentive to upgrade technologies. India is the second largest single consumer, using approximately 250-300 tonnes annually.

The Council confirmed the need for parallel action to ensure the safe storage of mercury, including that from decommissioned chlor-alkali production facilities.

Get your training manual now!

Srishti/Toxic Link’s Training Manual on Biomedical Waste Management is now available for purchase.

This manual provides a convenient up-to-date training resource, which will allow trainers to increase awareness on waste management and related issues at every level in their organisation.

The manual has seven sections, each with slides on a particular topic. Descriptive notes have been provided with the slides to help provide trainers with a narrative structure. The manual comes with a CD containing several powerpoint presentations that can be used by trainers. The CD also contains a collection of photographs that can be used by trainers to illustrate examples of good practices in hospital waste management.

Write to ann@toxicsslink.org to order copies of the manual.

If you have suggestions or require information, please contact:

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HuMAN AFFAIRS

You or your organisation can be a part of the Health & Us – Medwaste Action Network (HuMAN) by becoming an Active Member (involved with HuMAN on a regular basis) or a Member in Principle (no active participation but endorsing HuMAN principles).

Contact us at the Delhi address given alongside, and provide us with the following information:

1. Name
2. Occupation and designation
3. Address, phone, fax and e-mail
4. Past experience of / interest in medical waste

Once we have this information, we will send you more details on membership.

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