

4. Conclusion and recommendations

Health effects from low doses of mercury, especially on the developing nervous system of the foetus and in young children, are causing concern among scientists and authorities. Mercury should not be in our bodies, nor our children's, even at low levels.

The existing research on levels of exposure in some European populations, while still insufficient, nevertheless gives us reason to be concerned about our vulnerable groups. The research also shows that consumption of fish is the most important source of exposure. Although the risk from low doses of mercury may be low at an individual level, this does not mean we should be reluctant to take appropriate action. Developmental effects on children today will impact on the whole population in the future.

All sources of mercury emissions need to be addressed systematically. In healthcare products, the use of mercury inevitably leads to its release into the environment and contamination of the food chain. The relative importance of the healthcare sector's contribution will only increase as other sources of mercury are addressed and phased out, unless concerted action is taken to substitute mercury with safer alternatives. The historic and continuing use of mercury in dental amalgam will be a growing source of mercury emissions through crematoria.

Regulatory measures adopted so far have begun to make a difference to the amount of mercury emitted to the environment in Europe; however, globally emissions may be rising. There is considerable scope for the reduction of the use and emission of mercury globally, as well as further scope within Europe to address remaining sources of mercury.

The proposals by the EU and the possibility of a global legal instrument on mercury are both positive steps towards reducing man-made sources of mercury into the environment. However, the action taken must be swift and ultimately phase out the use of mercury. If we keep using mercury in products and processes, it will continue to be emitted and added to the 'global pool'⁹⁹ where it can re-circulate again and again in the global environment. Even if all uses and emissions of mercury were stopped immediately it is not known how long the contamination of the food chain would continue¹⁰⁰.

It is therefore essential to take action on two levels; *first*, to phase out the use of mercury globally by substituting it with safer alternatives, and *second*, to ensure that people are better informed about how to prevent the build up of mercury in their bodies, in order to protect the health of future generations.

Specific recommendations for future EU and global action to reduce mercury use and pollution

Global and regional

Ultimately, the solution is to globally eliminate all uses of mercury, collect and safely store the remaining mercury in a permanent fashion and clean up mercury pollution.

The global community should:

- ▲ Commit to a legally binding instrument that includes a global ban on the use of mercury as soon as possible, via UNEP as a mechanism.

" As a politician, a consumer and a mother I have long been very concerned about the dangerous effects of hazardous chemicals on our children. Recent studies have once again confirmed the detrimental and irreversible effects toxic substances like mercury have during phases of a child's brain development. A brain is unique and cannot be replaced. It is highly regrettable that the new EU-chemicals legislation REACH does not adequately protect humans and the environment from dangerous chemicals.

I hope that the EU will take the lead for a global ban on mercury, not only at the UNEP conference in February 2007. This ban is long overdue. This report from the "Stay Healthy, Stop Mercury" campaign underlines these arguments."



Hg Hiltrud Breyer, Member of the European Parliament, Greens/EFA, Germany

- ▲ Establish a global mercury use reduction goal of 70% by 2017, and achieve the goal by ending the use of mercury in electronics, button cell batteries, thermometers, and other non-electronic measuring equipment; phasing out the mercury-cell chlor-alkali process; and decreasing the use of mercury in artisanal and small-scale gold mining.
- ▲ At the same time, reduce the supply of mercury by ceasing primary mining, except where mercury is produced as by-product from other ore processing; restricting mercury exports from developed nations; and managing mercury from closing mercury cell chlor-alkali facilities.
- ▲ Developed nations should provide new and additional financial resources to support these activities in developing nations.

The EU should:

- ▲ Take the lead in these global discussions.
- ▲ Enact a general restriction on all remaining uses of mercury in products, including thermometers, blood pressure devices, dental amalgam, medical electric and electronic devices and preservatives in vaccines, as soon as possible. Permit exemptions only in cases where no mercury free alternatives exist.
- ▲ Ensure a comprehensive system of collection and safe disposal of all mercury-containing products still circulating in society.
- ▲ Implement an export ban that covers all mercury, mercury compounds and mercury-containing products which are or about to be banned in the EU.
- ▲ Motivate industries to use safer technologies and products that are already available for majority of applications sooner than the legally mandated deadlines; for example, to get the chlor-alkali industry to change to membrane technology at the latest by 2010.
- ▲ Set legal limits to prevent mercury pollution from crematoria and coal fired power stations, and promote best available technologies.

" European institutions should work swiftly to adopt a ban on mercury in measuring devices including those used in healthcare such as blood pressure devices, granting exceptions only if there is a evidence that no safe and accurate alternatives are available for clinical use."**"**



Karolina Ruzickova, Health Care Without Harm Europe, Czech Republic

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- ▲ Ensure proper mercury waste collection from homes and hospitals.

In addition to restricting the use of mercury in products, addressing the mercury problem involves several other approaches. We need to raise public awareness so that vulnerable groups have the opportunity to reduce their methyl mercury intake. While it is important to recognise that eating fish provides excellent nutrition, certain kinds of fish now contain high levels of mercury. Until mercury contamination can be reduced, sensitive groups in the population, and people in general can best protect their health by avoiding certain kinds of fish and eating smaller kinds of fish from lower on the food chain and from less polluted waters.

Therefore *the EU should:*

- ▲ Ensure that EFSA obtains specific intake data of fish consumption of pregnant women and women of childbearing age.
- ▲ Formulate and agree on advice on how the public, especially vulnerable groups, can limit their exposure, and make this part of the European Commission's health web portal.
- ▲ Establish precautionary standards for dental amalgams, and vaccinations, while the use of mercury in these products is being phased out.
- ▲ More protective recommendations on fish consumption by vulnerable groups should be issued and extensively promoted by EFSA and the European Commission.
- ▲ Prioritise completing the picture about our current levels of exposure, through biomonitoring (and the compilation of Member State data on biomonitoring of mercury), so as to inform public education campaigns on the best exposure reduction measures.
- ▲ Widely publicise the results of the EU pilot human biomonitoring project to be launched in 2007 concerning children and women of childbearing age.

National

In addition to the steps outlined for the EU (above), national Governments across the globe should:

- ▲ Enact a general restriction on mercury in products, similar to EU legislation (see above).
- ▲ Issue more protective recommendations on fish consumption for women of childbearing age, pregnant women, breastfeeding women and children.
- ▲ Start, or continue, the testing of both local and imported fish for mercury.
- ▲ Begin, or continue, investigations on mercury levels in their populations, particularly women and children, through hu-

man biomonitoring activities. This will help to better assess exposure and guide the formulation of recommendations on fish consumption.

- ▲ Raise awareness about reducing our exposure to mercury.
- ▲ Support mercury-free healthcare, including financial assistance.
- ▲ Better monitor and enforce adherence to laws concerning waste from dental practices.
- ▲ Ensure that the health care system advises all women contemplating pregnancy who have a high fish/seafood intake to have a sample of hair or blood analysed, which should be free of charge, and give them subsequent dietary advice on how to avoid mercury.

Healthcare sector

Healthcare practitioners (Hospitals, General Practitioners, Dentists) should:

- ▲ Replace products containing mercury, such as thermometers, sphygmomanometers and dental amalgam, with mercury free alternatives as soon as possible. Ensure that existing products containing mercury are collected separately, disposed of or recycled safely.
- ▲ Submit annual reports on mercury reduction initiatives, including the quantities of mercury used and recycled.

Dentists should:

- ▲ Offer proven alternatives to amalgam fillings to patients, with priority for children and pregnant women.
- ▲ For existing uses of mercury, adhere to stringent best management practice; install amalgam separators in dental facilities which can reduce mercury discharge substantially; clean and replace mercury-laden pipes and plumbing fixtures in dental facilities.

What you can do

Ask your politician – Minister of Health, Parliamentarian (national and European) to:

- ▲ Encourage and legislate the phase out of mercury use as soon as possible in all products where alternatives are available (see EU above).
- ▲ For the remaining uses of mercury where safer substitutes are not available, authorise this use for restricted time periods under REACH.
- ▲ Support international actions to restrict mercury through a global agreement and ensure that Europe takes the first step and implements a mercury export ban as soon as possible.

"Even if we stopped all mercury production and spills and emissions today, our global food supply would still be contaminated for years to come. Yet we face a future of mercury-contaminated fish, a valuable source of nutrition particularly for pregnant women, with no real end in sight.



If we have to ask women to eat only certain types of fish, and we do, we must also ask how quickly we can stop using mercury and change industrial processes that contribute to mercury contamination.

We hope this campaign transmits to leaders and industry worldwide, the silent, but increasing health damage of mercury to our children, and the urgency of acting today, not next year or the year after".

Hg Genon K. Jensen, Executive Director, Health & Environment Alliance

As an individual you can protect yourself and your family from mercury exposure:

- ▲ Avoid where possible direct personal contact with all kinds of mercury.
- ▲ Inform yourself about mercury levels in seafood, follow national/international advisories (read *HCWH/HEAL Mercury and Fish Consumption Factsheet*) and learn what types of fish pregnant women, babies and young children should avoid.
- ▲ Buy fever thermometers and other products without mercury, replace any existing mercury-containing products, and dispose of the mercury-containing ones properly (see local municipal guidelines; Health Care Without Harm resources).
- ▲ Ask your dentist about non-mercury alternatives and management of mercury-containing waste.
- ▲ Encourage your hospital to use safer alternatives to mercury-containing medical devices.
- ▲ Ask your paediatrician if children's vaccines contain thimerosal with mercury and if alternative vaccines are available for your infant (read *HCWH/HEAL Mercury & Vaccines Factsheet*).