

Men under threat

How the decline in male reproductive health may be linked to exposure to chemicals.



The concerns

It seems that more baby boys are being born with birth defects of their sex organs.

More men are getting testicular cancer.

And studies suggest that male sperm counts are decreasing and the sperm are less healthy/mobile.

These health effects could be reduced by replacing harmful chemicals with safer ones.

A leading expert has concluded that exposure to a mixture of several chemicals in our environment probably accounts for a proportion of cases of these birth defects of baby boys' genitals.

“Because it is the summation of effects of hormone disrupting chemicals that is critical, and because the number of such chemicals that humans are exposed to is considerable, this provides the strongest possible incentive to minimise human exposure to all relevant hormone disruptors, especially women planning pregnancy, as it is obvious that the higher the exposure, the greater the risk”.

Professor Richard M Sharpe, Medical Research Council (Human Reproductive Sciences Unit), Edinburgh, UK

“In Denmark, the health authorities have produced a fact sheet for pregnant and breastfeeding mothers on how to avoid certain chemicals. Isn't it time for regulators to protect us all by simply removing hormone disrupting chemicals from the market where safer alternatives exist?”

Genon Jensen, Executive Director,
Health and Environment Alliance

Stopping the decline in male reproductive health

Men's reproductive health is deteriorating, and chemical contaminants in our environment may be a factor.

Testicular cancer and low sperm count

Testicular cancer has approximately doubled in many countries over the last forty years, with rates in industrialized countries often six times higher than those in less industrialized countries. Furthermore, the number and quality of men's sperm seem to have deteriorated rapidly over time. Young men's sperm counts are far lower than their fathers'. UK and French data show a decline, and alarmingly, studies suggest that in some European countries, around 1 in 5 boys have sperm counts so low they may find it difficult to father a child.

Undescended testicles

Undescended testicles also seem to be increasingly common. Baby boys whose testicles do not descend properly are unfortunately at greater risk of low sperm counts and testicular cancer later in life. It used to be said that this condition affected around 2-4 boys in every 100, but now it seems that in some countries, rates are much higher. For example, around 9 boys per hundred are affected in Denmark and around 6 boys per hundred in the UK.

How could hormone disrupting chemicals be contributing?

Many scientists now think male genital birth defects, low sperm counts, and testicular cancer (collectively called Testicular Dysgenesis Syndrome or TDS), can all be caused during the baby boy's development in the uterus, and that chemicals which interfere with testosterone might be to blame. Testosterone, the male hormone, is needed to make the testicles 'drop' from inside the abdomen to their final position in the scrotum, whilst the baby boy is in the uterus. Studies of women and their children have shown an association between exposure to

such 'hormone disrupting chemicals', which are contained in many consumer products, and baby boys being born with these defects. Furthermore, the rate of increase in testicular cancer is such that most cases must be caused by environmental and/or lifestyle factors, which include chemical exposures, rather than genetic factors.

Hormone disrupting chemicals are in many products, several of which are found in the home. These include, for example, pesticides, electrical goods, plastics, linings of food cans, baby bottles and toiletries/body care products. They are found in the food we eat, and the air we breathe. Everybody living in the modern world is exposed to many worrisome man-made chemicals and as a result carries them in their bodies. They are also found in the amniotic fluid which surrounds the baby in the uterus.

For more information:

- A list of chemicals that are reported to disrupt hormones, particularly testosterone, can be found in a fully referenced briefing by CHEM Trust entitled *“Men under threat: The decline in male reproductive health and the potential role of exposure to chemicals during in-utero development.”* This can be found on CHEM Trust's web-site (www.chemtrust.org.uk) and the Chemicals Health Monitor web-site (<http://www.chemicalshealthmonitor.org>).
- A longer and more technical scientific report on *“Male reproductive health disorders and the potential role of exposure to environmental chemicals”*, written by Professor Richard Sharpe of the Medical Research Council for CHEM Trust, can also be found on the websites listed on the back cover of this brochure.

Action is urgently needed

Babies in the uterus are particularly sensitive to the effects of certain chemicals. The effects can be irreversible and may not manifest themselves until after puberty. Individuals, particularly women before and during pregnancy, may want to try to minimise unnecessary exposure to chemicals (see box). But society could benefit more widely from better regulation of chemicals.

What you can do:

1. Avoid unnecessary exposure to chemicals, particularly including garden and indoor pesticides, and home maintenance products.
2. Avoid unnecessary use of personal care products, such as cosmetics and lotions.
3. Eat a healthy varied diet, with plenty of fruit and vegetables, preferably organically grown.
4. Avoid microwaving food in plastic containers or wrappings.
5. Visit or write to your government representative or Member of the European Parliament (MEP) to express your concerns about man-made chemicals and their role in adverse health trends. Ask for tighter controls, particularly for those chemicals which disrupt our hormone systems.

CHEM Trust and the Health and Environment Alliance are working together to get hormone disrupting chemicals removed from the market and replaced with safer alternatives which do not have the potential to interfere with our health and development.

This leaflet has been prepared by the Chemicals Health Monitor Project (CHM), which aims to improve public health by ensuring that key scientific evidence on the links between chemicals and ill-health are translated into policy as quickly as possible.

Please see: <http://www.chemicalshealthmonitor.org>

The Chemicals Health Monitor project was launched by the Health and Environment Alliance (HEAL) with other partner organisations.

Health and Environment Alliance (HEAL) is an international non-governmental organisation that aims to improve health through public policy that promotes a cleaner and safer environment.



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CHEM Trust is a UK charity which aims to protect humans and wildlife from harmful chemicals so that they play no part in causing impaired reproduction deformities, disease or deficits in neurological function.



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The Health and Environment Alliance gratefully acknowledge the financial support of the Sigrid Rausing Trust and the European Commission, DG Environment. The views expressed in this brochure do not necessarily reflect the official views of the funders and the EU institutions.