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## Press Release

### Chemical Cocktail in Consumer Products Threatens Baby Boys and Men's Reproductive Health

A CHEM Trust report released today highlights the dangers of exposing pregnant women to hormone disrupting chemicals in consumer products, and focuses on the risks these pose to baby boys and the reproductive health of men.

The conclusion of this thorough analysis is that exposure to the cocktail of chemicals in our environment is likely to account for a proportion of the birth defects of the genitalia in baby boys, which are linked to under-masculinisation. CHEM Trust is calling for UK and EU action to address these chemicals.

The report, commissioned by CHEM Trust, entitled; ***Male Reproductive Health Disorders and the Potential Role of Exposure to Environmental Chemicals***, is written by one of the world's leading experts in reproductive biology, Professor Richard Sharpe of the Medical Research Council (MRC) in Edinburgh.

Male reproductive health is deteriorating:

- **Undescended testicles** are the most common congenital birth defect in male children and recent research in the UK indicates this may affect as many as 1 in 17 baby boys. Baby boys whose testicles do not descend properly are at greater risk of low sperm counts and testicular cancer in later life.
- **Malformation of the penis** where the opening is not at the end, appears to have increased in recent decades in several European countries, the US, Australia and China.
- **Young men's sperm counts appear to be lower than their fathers.'** UK and French data show a decline and alarmingly, in some EU countries, one in five young men has sperm counts so low that this is likely to affect their ability to father a child.
- **Testicular cancer** is the most common cancer of young men and has doubled in incidence in many western countries – ~every 25 years over the past 60 years.

Scientists now think that birth defects of boy's genitals, low sperm counts and testicular cancer, collectively called Testicular Dysgenesis Syndrome, or TDS, can all have their origins during development in the womb. Testosterone, the male hormone, is needed to form a normal penis and to make the testicles 'drop' whilst the baby is in the womb. Many everyday chemicals in the environment or in consumer products have the potential to block the action of testosterone and exposure to this mixture of chemicals may undermine this process and harm future male reproductive health.

The new CHEM Trust report highlights that animal studies have established beyond doubt that certain hormone disrupting chemicals, in particular testosterone disrupting chemicals, can cause TDS-like disorders. Furthermore, de-masculinisation effects due to chemical pollutants in the environment have now been reported in many species of wildlife. These findings strengthen the suggestion that chemicals are likely to be playing a role in the reported decline in men's reproductive health.

Professor Richard Sharpe of the MRC stated "Because it is the summation of effect of hormone disrupting chemicals that is critical, and 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".

The new EU chemicals legislation, called REACH (Registration, Evaluation Authorisation and restriction of CHEMicals), provides an opportunity to address Professor Sharpe's concerns and reduce overall exposures to EDCs.

Elizabeth Salter Green CHEM Trust Director stated "Chemicals that have been shown to act together to affect male reproductive health should have their risks assessed together. Currently that is not the case, and unfortunately chemicals are looked at on an individual basis. Therefore, Government assurances that exposures are too low to have any effect just do not hold water because regulators do not take into account the additive actions of hormone disrupting chemicals".

CHEM Trust has asked the UK Government to support the collective assessment of chemicals but they have yet to take a lead on this in the EU. In the meantime baby boys may be put unnecessarily at risk".

Elizabeth Salter Green added "Women are exposed to hormone disrupting chemicals via many routes including pesticides in food, chemicals leaching from plastic articles and from the use of personal care products applied directly to the skin. It is high time that public health policy is based on good science and that regulatory authorities have health protection, rather than industry protection, uppermost in mind".

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**Notes to Editors:**

**1. CHEM Trust (Chemicals, Health & Environment Monitoring Trust),**

[www.chemtrust.org.uk](http://www.chemtrust.org.uk), is a science-based charity with the aim of protecting humans and wildlife from harmful chemicals. CHEM Trust makes the links between chemicals

and disease more widely understood and seeks to improve chemicals regulation and health protection

**1. The Report: *Male Reproductive Health Disorders and the Potential Role of Exposure to Environmental Chemicals*** is available on the CHEM Trust website [www.chemtrust.org.uk](http://www.chemtrust.org.uk) and is a follow up to CHEM Trust's Dec 08 report ***Effects of Pollutants on the Reproductive Health of Male Vertebrate Wildlife – Males Under Threat.***

## **2. Addition Experts Available for Comment**

### **Professor Niels E. Skakkebaek**

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Professor Skakkebaek is one of the leading experts in the field of TDS. He has published extensively on the subject and is a clinician with many years experience of seeing babies with undescended testes and hypospadias.

### **Professor Shanna Swan**

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Professor Swan is an epidemiologist, biostatistician and an international expert on the subject. She has published on defects of babies' genitals and low sperm counts and the associations found with phthalates and pesticide exposures.

## **4. Which chemicals? - Which consumer products?**

Chemicals in consumer products and food that have been reported to disrupt testosterone or affect the sex hormones include:

**Phthalates** (certain phthalates) found in vinyl flooring, shower curtains, plastics, soft tubing

**Paraben** (certain parabens) used as a preservative in personal care products

**Triclosan**, an anti-bacterial chemical, used in soaps, toothpaste etc.

**Bisphenol A** used in babies' bottles, food can linings, mobile phone housings and computers,

**Penta-BDE, a brominated flame retardant** which was used to prevent fire taking hold, eg. in mattresses and car seats and is now banned in the EU.

**Many Pesticides** including some pyrethroids, linuron, vinclozolin, chlorpyrifos-methyl, prochloraz procymidone and fenitrothion, some of which have been banned in the EU but can still be found in imported produce

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