

Poisoned by everyday life: Landmark study warns gender bending chemicals in your home, food and car ARE linked to a huge range of diseases

- **Phthalates is used to soften plastic and improve consistency of cosmetics**
- **Chemical commonly found in children's toys, make up, cars and PVC flooring**
- **Could cause breast cancer, asthma, infertility and birth defects, WHO says**

By Fiona Macrae



Possible danger: Chemical phthalates is used to soften plastics and can be found in children's toys

Chemicals found in every home may cause breast cancer, asthma, infertility and birth defects, global health chiefs said yesterday.

They warn the gender-bending compounds – used in toys, PVC flooring, car dashboards and credit cards – have 'serious implications' for health.

In a landmark report, the World Health Organisation suggested a ban might be needed to protect future generations.

It says it is 'reasonable to suspect' chemical substances called phthalates of harming female fertility and linked them with rising rates of childhood illnesses including leukaemia.

Also under suspicion is bisphenol A, which is found in a host of daily items including tin cans and sunglasses.

The man-made compounds are thought to interfere with the natural hormones that are key to our growth, development and overall health.

The WHO said there was 'very strong evidence' in animals they can interfere with thyroid hormones – something that can cause brain damage, stunted intelligence, attention deficit hyperactivity disorder and autism.

For prostate cancer 'significant evidence' exists of a link with agricultural pesticides. And there was some evidence linking exposure in pregnancy to weight gain in infants and children and potential links to breast cancer.

In the same report ten years ago, the UN agency said there was only 'weak evidence' that gender-bending chemicals were harming human health.

Declaring the chemicals a global threat, the new report's authors said humans and animals were exposed to hundreds of compounds, many of which have yet to be identified or properly studied.

Some are inhaled in dust, others make their way into our bodies from food or simply licking our fingers.

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- Heart attack survivors who live in polluted areas are more likely to die young
- Eating chips more than once a week raises the risk of prostate cancer by a third
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The WHO stops short of saying the chemicals actually caused the illnesses but did say that in some cases, the evidence was very strong.

The report – State of the Science of Endocrine-Disrupting Chemicals – is the most comprehensive of its kind because rather than focusing on one chemical or one illness, it evaluates all the evidence. It says: 'The diverse systems affected by endocrine-disrupting chemicals likely include all hormonal systems and range from those controlling development and function of reproductive organs to the tissues and organs regulating metabolism and satiety.

'Effects on these systems can lead to obesity, infertility or reduced fertility, learning and memory difficulties, adult-onset diabetes or cardiovascular disease, as well as a variety of other diseases.'



Report: The compounds, also found in PVC floors, can have 'serious implications' the World Health Organisation warned



Daily risks: The dangerous chemical is found in many objects we touch with our bare hand every day, such as credit cards and car dashboards

Worryingly, it warns the chemicals assessed so far by scientists may only be the 'tip of the iceberg' – and there could be many other potentially harmful compounds out there.

It cautions that the key role of hormones in the development of tissues and organs means that unborn babies and young children may be particularly vulnerable.

The report – written over two years by international experts who collated and weighted scientific studies on the topic – also states the rise in some conditions is too rapid to be blamed on genes alone. 'The prevalence of paediatric asthma has more than doubled over the past 20 years and is now the leading cause of child hospitalisations and school absenteeism,' it said. 'Certain birth defects, such as those of the male reproductive organs are on the rise. The incidence of paediatric leukaemia and brain cancer have risen, as has the incidence of testicular cancer. These are stark health statistics.'

The WHO says wildlife is also at risk and calls for much more research into the chemicals and their effects – and says that there may be a case for banning or restricting them.

THE CHEMICALS ... AND THEIR EFFECTS

Gender-bending chemicals are part of everyday life and can be found in everything from toiletries to food, the World Health Organisation warns.

PHTHALATES

Used to soften plastics and give cosmetics a silky feel, these are found in children's toys, PVC flooring, shower curtains and credit cards.

Although they are banned from cosmetics made in the EU, they may still be found in make-up produced elsewhere.

Studies have linked them to diabetes, asthma and male reproductive defects that could affect fertility. Campaigners advise choosing natural wooden flooring over PVC, giving children metal or wooden toys and switching plastic shower curtains for glass screens.

Where plastic can't be avoided, more rigid varieties should have lower levels of phthalates than softer versions.

BISPHENOL A

As a building block of many common plastics, it is in a host of everyday items, including cutlery, CD cases and sunglasses. It has recently been banned from baby bottles but can still be found in till receipts and is used to line tin cans.

It has been linked to fertility problems, breast cancer, prostate cancer and heart disease.

BROMINATED FLAME RETARDANTS

Also highlighted in the WHO report, these chemicals are linked to a host of health problems including hyperactivity, learning difficulties, low sperm counts and difficulties in becoming pregnant.

They are used in sofas and other soft furnishings, carpets and rugs and the casings of computers, DVD players and mobile phones, to slow the rate of burning.

Also of concern are PCBs, chemicals linked to liver cancer and male fertility problems. They are banned in the UK but take so long to break down they continue to contaminate soil and food.

Dr Maria Neira, the WHO's director for public health and environment, said: 'The latest science shows that communities around the globe are being exposed to endocrine-disrupting chemicals and their associated risks. We all have a responsibility to protect future generations.' Elizabeth Salter Green, of the campaign group CHEM Trust, said the EU was trying to tighten up the regulation of gender-bending chemicals but the UK was in favour of the least stringent measures. She added: 'This report bears testimony to the on-going failure of regulatory agencies to reduce exposure to hormone disrupting chemicals, which are implicated in the increased rates of hormone-related cancers and other diseases. 'Thankfully, the EU is now trying to come to agreement on how to identify such hormone disrupting chemicals, so that they can be effectively regulated, but unfortunately the UK is trying to thwart this process in a bid to limit the number of chemicals that will fall under the regulatory axe.' The Chemical Industries Association said it was important to note that naturally-occurring substances in beer, chocolate and coffee can have more powerful effects on the body's hormones than