

**A chemical commonly found in plastic can affect heart cells and worsen heart attacks.**

By **MAGGIE FOX**

**H**ORMONE experts are worried by a chemical called bisphenol A, which some politicians want taken out of products and which consumers are increasingly shunning.

They said they have gathered a growing body evidence to show the compound, also known as BPA, might damage human health. The Endocrine Society issued a scientific statement last week calling for better studies into its effects.

Studies presented at the group's annual meeting show BPA can affect the hearts of women, permanently damage the DNA of mice, and appear to be pouring into the human body from a variety of unknown sources.

BPA, used to stiffen plastic bottles, line cans and make smooth paper receipts, belongs to a broad class of compounds called endocrine disruptors. The United States Food and Drug Administration is examining their safety but there

# Hidden danger

THE STAR 17/6/09 MKS 22



**Bottle blues:** Feeding bottles and other plastic products are believed to leach bisphenol A, which is a health risk.

has not been much evidence to show that they are any threat to human health.

"We present evidence that endocrine disruptors do have effects on male and female development, prostate cancer, thyroid disease, cardiovascular disease," said Dr Robert Carey of the University of Virginia, who is president of the Endocrine Society.

The society issued a lengthy scientific statement about the chemicals in general that admits the evidence is not yet overwhelming, but is worrying.

Dr Hugh Taylor of Yale University in Connecticut found evidence in mice that the compounds could affect unborn pups. "We exposed some mice to bisphenol A and then we looked at their offspring," Taylor said. "We found that even when they had a brief exposure during pregnancy, mice exposed to these chemicals as a foetus carried these changes throughout their lives."

The BPA did not directly change DNA through mutations, but rather through a process called epigenetics – when chemicals attach to the DNA and change its function.

Taylor noted studies have shown

that most people have some BPA in their blood, although the effects of these levels are not clear. Dr Frederick Vom Saal of the University of Missouri, who has long studied endocrine disruptors, said tests on monkeys showed the body quickly clears BPA – which may at first sound reassuring. But he said when tests show most people have high levels, this suggests they are being repeatedly exposed to BPA.

"We are really concerned that there is a very large amount of bisphenol A that must be coming from other sources," Vom Saal said.

Dr Scott Belcher of the University of Cincinnati in Ohio and colleagues found that BPA could affect the heart cells of female mice, sending them into an uneven beating pattern called an arrhythmia.

"These effects are specific on the female heart. The male heart does not respond in this way and we understand why," Belcher said. He said BPA interacts with estrogen and said the findings may help explain why young women are more likely to die when they have a heart attack than men of the same age.

US government toxicologists at the US National Institute of Environmental Health Sciences expressed concern last year that BPA may hurt development of the prostate and brain. A 2008 study by British researchers linked high levels of BPA to heart disease, diabetes and liver-enzyme abnormalities. – Reuters