

## Society for Endocrinology - Media Release



Embargoed until 16:15 PDT (23:15 BST) Monday 22 October 2012

### **Society for Endocrinology response to “Exposure to endocrine-disrupting chemicals and earlier age of menopause”**

The below is in response to a study presented at the American Society for Reproductive Medicine conference on 22 October 2012, titled: *Endocrine disrupting chemicals lead to earlier age of menopause: a cross-sectional study using the US population-based NHANES database*. The abstract (O-101) can be downloaded from the conference website <http://www.asrm.org/annualmeeting.aspx>.

**Professor Richard Sharpe, Research Group Leader at the MRC Centre for Reproductive Health in Edinburgh and convenor of the Society for Endocrinology Special Interest Group on Endocrine Disruptors said:**

*“The menopause occurs in women because they literally run out of oocytes (eggs) in their ovaries. The age at which women enter menopause varies (usually in 40-50s) and has genetic (inherited) components (e.g. similarity between mother and daughter). But the main determining factor is the number of eggs, and this number is fixed in fetal life before the woman is even born and long before she will start menstrual cycles. It is known that adverse exposures of the female fetus whilst in the womb, for example if the mother smokes, can reduce final egg number and thus lead to an earlier menopause.*

*Extreme events after birth can also reduce egg number, for example treatment for certain cancers can have this effect. This new study raises the possibility of whether exposure to certain environmental chemicals might also have an effect, as they show that higher exposure to PCBs (polychlorinated biphenyls) or phthalates are associated with an earlier average age of menopause.*

*Demonstrating an ‘association’ between exposure to PCBs or phthalates and earlier age of menopause does not prove that the former causes the latter; indeed, it is not clear how this would occur in adult women based on the known effects of these chemicals. Moreover, the study looked at the level of chemical exposure in the women at one point in time, which may not reflect their exposure at earlier ages and certainly not before birth, which would be the most critical time (as outlined above) for determining egg number. However, if there is cause and effect between exposure to PCBs and phthalates and earlier menopause, it will be important to follow this up via studies specifically designed for this purpose and to identify when and how such effects might occur. Egg reserves in pre-menopausal women can now be determined by measuring levels of a hormone*

*(AMH; anti-müllerian hormone) in blood, and it will be important to see if this shows any association with chemical exposures.*

*Alternative explanations for the reported association also need to be considered. For example, diet is an important factor determining PCB exposure and to a lesser extent also phthalate exposure, so in theory diet could affect egg number and determine the level of chemical exposure, thus resulting in the observed association.”*

-----ENDS-----

Notes for editors:

The Society for Endocrinology is UK's largest national organisation promoting endocrinology and hormone awareness. For general information, please visit our website: [www.endocrinology.org](http://www.endocrinology.org)

**Please mention the Society for Endocrinology in any story**

**For more information:** please contact the Society for Endocrinology press office

**Toby Stead**

Public and Media Relations Executive

Tel: +44(0)1454 642 252

Email: [toby.stead@endocrinology.org](mailto:toby.stead@endocrinology.org)

**Jennie Evans**

Public and Media Relations Manager

Tel: +44 (0)1454 642 230

Mob: +44 (0)7773 797 501

Email: [jennie.evans@endocrinology.org](mailto:jennie.evans@endocrinology.org)