

# Press Release –

## International Menopause Society

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### Most common type of diabetes triples risk of an early menopause in women younger than 45 years of age

Type 2 diabetes -the most common type of diabetes- triples the risk of an early menopause in women younger than 45 years of age, according to new research published in the peer-reviewed journal *Climacteric*.

Diabetes is a huge and increasing international problem. The International Diabetes Federation estimates that 366m people had diabetes in 2011 – more than the entire population of the USA. This figure is predicted to rise to 552m by 2030. 90% of those with diabetes have type 2 diabetes.

A group led by **Dr Álvaro Monterrosa-Castro**, of the **University of Cartagena, Colombia** asked 6079 women aged between 40 and 59 years from 11 Latin American countries a series of questions related to menopause, depression, and diabetes. They then associated their responses with a series of variables such as weight, blood pressure, HRT use. Using a statistical programme developed by the Centre for Disease Control in the USA, they were able to pull out a series of correlations – some expected, but some more surprising. The main finding was:

- Menopause itself does not increase the risk of diabetes. But in contrast, women under 45 who have type 2 diabetes have almost three times (Odds Ratio, 2.76) the risk of an early menopause; the average age of menopause in women with diabetes was 48.5 years, as opposed to 50.1 years in non-diabetic women (there were no other significant differences between the groups). This means that 29.5% of diabetic women aged 40 to 44 had experienced the menopause.

Other findings of the research are:

- Living at an altitude of more than 2500m is associated with a lower diabetes risk(26% )
- Women with a BMI of  $\geq 30$  were 57% more likely to have diabetes
- High blood pressure significantly increased the risk of Diabetes (87%)

In contrast to previous studies, this work found that Hormone Replacement Therapy (HRT) increased the risk of diabetes by 14%. Dr Monterrosa-Castro commented "This result is different to the majority of previous work which has shown that HRT reduces the risk for diabetes. However, it is possible that the differences may be explained by genetic differences or by the fact that nowadays women tend to use lower doses of estrogen than when most of the previous studies were carried out".

The study also found a mixed result for the association of alcohol with type 2 diabetes, with those women taking lower or moderate doses of alcohol having a reduced risk, whereas high alcohol intake was associated with a higher diabetes risk.

Dr Monterrosa-Castro said: "The study shows several things. Firstly, menopause itself does not increase the risk of diabetes, but conversely having type 2 diabetes triples the risk of an early menopause. Secondly, the associations between diabetes and menopause can be complex, which reinforces the message that women approaching the menopause need to be treated as individuals, and evaluated according to their own general health, background and risk factors. Diabetes is also associated with a generally poor quality of life, so we should encourage women to avoid risk factors for type 2 diabetes, such as being overweight or having high blood pressure".

**Commenting,** *Climacteric* editor Dr Nick Panay (London) said: "Premature ovarian insufficiency (POI) can impair health and life expectancy if poorly managed. This study reinforces the importance of early diagnosis to detect and treat associated conditions such as diabetes, thus optimising short and long term wellbeing."

ENDS

### **Notes for Editors**

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The full paper is available from the International Menopause Society press officer, Tom Parkhill, [tom@parkhill.it](mailto:tom@parkhill.it). See also the IMS website, <http://www.imsociety.org/index.php>

This article appears in the December edition of the peer-reviewed journal *Climacteric*, which is the official journal of the International Menopause Society. Reference *CLIMACTERIC* 2013;16:1–10

The World Congress on the Menopause takes place in Cancun, Mexico, from 1-4 May 2013, see: <http://www.ims Cancun 2014.com/>

## Abstract

### **Type II diabetes mellitus and menopause: a multinational study**

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**Background** Type II diabetes mellitus causes metabolic changes that may lead to early menopause and worsen climacteric symptoms.

**Objectives** To determine the risk factors for type II diabetes mellitus and assess the impact of this disease on the age of menopause and on climacteric symptoms.

**Methods** A total of 6079 women aged between 40 and 59 years from 11 Latin American countries were requested to answer the Menopause Rating Scale and Goldberg Anxiety-Depression Scale.

**Results** The prevalence of diabetes was 6.7%. Diabetes mellitus was associated with arterial hypertension (odds ratio (OR) 4.49; 95% confidence interval (CI) 3.47 – 5.31), the use of psychotropic drugs (OR 1.54; 95% CI 1.22 – 1.94), hormonal therapy (OR 1.46; 95% CI 1.11 – 1.92),  $\geq$  50 years of age (OR 1.48; 95% CI 1.17 – 1.86), overweight or obese (OR 1.47; 95% CI 1.15 – 1.89), and waist circumference  $\geq$  88 cm (OR 1.32; 95% CI 1.06 – 1.65). Factors associated with lower risk of diabetes were the use of hormonal contraceptives (OR 0.55; 95% CI 0.35 – 0.87), alcohol (OR 0.73; 95% CI 0.54 – 0.98) and living in cities  $\leq$  2500 meters above sea level (OR 0.70; 95% CI 0.53 – 0.91) or with high temperatures (OR 0.67; 95% CI 0.51 – 0.88). In turn, diabetes tripled the risk of menopause in women under 45 years of age. Diabetes did not increase the risk of deterioration of quality of life due to climacteric symptoms.

**Conclusion** Menopause does not increase the risk of type II diabetes mellitus. Diabetes is associated with early menopause in women under 45 years of age.