

# The Women's Health Research Program

Health Bulletin  
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## New research presented at the Endocrine Society Annual Meeting 2013

This week at the US Endocrine Society Annual Meeting, held in San Francisco, Prof Susan Davis presented results of our recent study looking at the effects of testosterone on brain function in postmenopausal women.

In this study 92 postmenopausal women, aged 55-65 years, were randomly allocated to treatment with a gel that contained testosterone or an identical placebo gel for 6 months. The women underwent comprehensive computer based testing for a range of brain functions before treatment, at 12 weeks and at 26 weeks. Our aim was to see if the women treated with testosterone performed differently on their testing as compared with women treated with placebo.

After 26 weeks of participation in the study the women who were allocated to use the testosterone gel showed significantly better verbal learning



Professor Susan Davis at the US Endocrine Society Annual Meeting 2013

and memory than the women who received placebo treatment. Use of the testosterone gel was not associated with improvement for any other aspect of brain function tested,

nor was it associated with increased psychological general wellbeing.

This is now the third study in which we have observed a specific effect of testosterone treatment on verbal learning and memory in postmenopausal women. In our first study we measured brain function using conventional paper based tests<sup>1</sup>, and our second study was a small pilot study that also included brain imaging with MRI scans<sup>2</sup>. This consistent finding across these studies provides compelling evidence for a significant beneficial effect of testosterone on memory in postmenopausal women.

1. Shah SM, Bell RJ, Savage G, Goldstat R, Papalia MA, Kulkarni J, et al. Testosterone aromatization and cognition in women: a randomized placebo controlled trial. *Menopause*. 2006;13(4):600-8.
2. Davison SL, Bell RJ, Gavrilescu M, Searle K, Maruff P, Gogos A, et al. Testosterone improves verbal learning and memory in postmenopausal women: Results from a pilot study. *Maturitas*. 2011;70(3):307-11.

## Other news snippets from the Endocrine Society Annual meeting

With the increasing concern about the global increase in obesity a number of the key lectures at this congress addressed the consequences of obesity and approaches to prevent obesity.

Professor Donald McDonnell Of Duke University School of Medicine, USA, presented new information as to how obesity drives cancer development. A link between obesity and cancer has been established. Professor McDonnell's

research has now shown that it is not simply eating too much, but what people eat that matters. He reported that consuming a high cholesterol diet substantially increases cancer risk. This is a result of the metabolism of ▶



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cholesterol to 27-hydroxycholesterol. This product of cholesterol has been found to promote the growth of oestrogen sensitive breast cancer, and to increase the risk of cancer spreading to other tissues.

In another presentation, Dr Elizabeth Thomas of the University of Colorado School of Medicine, reported that overweight women who skipped breakfast were more likely to develop insulin resistance and put themselves at increased risk of developing diabetes. This research supports other recent studies that have shown that people trying to lose weight are more likely to do so if they eat breakfast.

Dr Linda Barbour, University of Colorado Health Sciences, reviewed risk factors for childhood obesity. She advised that the 3 strongest predictors for obesity in a 4 year old child included the child's mother being obese prior to pregnancy, being born as a big baby and the amount of weight gained by the mother during pregnancy. Furthermore she pointed out that excessive weight gain during pregnancy was a powerful risk factor for the development of diabetes 20 years later.

## Get involved in research

### A New Approach to Treating Women Who Do Not Experience Orgasm

Most recently a novel approach has been developed to potentially treat women who fail to reach orgasm (anorgasmia). Researchers recognised that testosterone therapy not only improved sexual desire, but also resulted in increased vaginal blood flow and increased orgasm frequency. As a result the approach of using testosterone on an "as needs" basis is being studied in centres across Australia and North America, including the Women's Health Research Program.

Our new study will assess whether the self-administration of a single dose of testosterone as an intra-nasal gel will

result in ability to reach orgasm for women who have previously experienced orgasm but no longer do so.

To participate in this study women need to be aged between 18 and 65, be experiencing inability to reach orgasm, but have experienced orgasm in the past and be in a stable sexual relationship of at least 6 months duration.

The study is being conducted at our centre at the Alfred Centre in Melbourne as well as in Sydney, Perth and Adelaide. Women interested in participating in the trial should call 1800 998 055.

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