

# The Women's Health Research Program

Health Bulletin  
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## What's new on the supplement front, an update and, predicting menopause

Thousands of Australians take a vast range of over-the-counter supplements in order to improve their health. For the most part, evidence that nutritional supplements improve the health of nonpregnant adults is lacking. This bulletin takes a look at some of the recent medical literature that has evaluated the use of a range of supplements.

### Selenium to prevent heart disease

A Cochrane Review published in January 2013 has rigorously reviewed the studies of selenium supplementation for the prevention of heart disease<sup>(1)</sup>. The study reviewed the findings from 12 studies that together involved a total of 19715 participants. The authors concluded that there was no evidence that selenium supplements prevented any form of heart disease. The authors did express concern that the use of selenium supplements by people who already had adequate levels might be associated with a small increase in risk of type 2 diabetes. They also pointed out that they could not exclude a beneficial effect of selenium in some countries where the soil content of selenium is low and selenium deficiency is more likely to occur.



### Antioxidants to prevent cancer

Some nutritional supplements that exhibit antioxidant actions in cells are promoted for the prevention of cancer. Examples include  $\beta$ -carotene, vitamin A, vitamin C, vitamin E and selenium.

Professor Jim Watson, well known for the discovery of the structure of DNA, has recently suggested that the widespread ingestion of large amounts of antioxidants as nutritional supplements is doing more harm than good<sup>(2)</sup>. He argues that oxygen

radicals kill cancer cells, and that the consumption of large amounts of antioxidants may counteract both the body's natural defense against cancer cells, and the anti-cancer effects of a range of cancer therapies. In his recent paper, published in Open Biology on line<sup>(2)</sup>, Watson states "Future data may, in fact, show that antioxidant use, particularly that of vitamin E, leads to a small number of cancers that would not have come into existence but for antioxidant supplementation. Blueberries best be eaten because they taste good, not because their



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consumption will lead to less cancer.” This is certainly a provocative but important hypothesis proposed by a highly respected scientist.

Some, but not all studies, that have investigated the relationship between the consumption of carotenoid-rich vegetables, have shown a reduction in cancer risk. There have been inconsistent findings regarding the relationship between diet and breast cancer. A healthy diet (high in fruit and salads) has been associated with a lower rate of breast cancer in the Melbourne Collaborative Cohort Study (MCCS)<sup>(9)</sup>. This study followed 20967 women on average for 14 years.

How should this all be interpreted? Nothing beats a healthy diet. People are unlikely to benefit from nutritional supplements, unless they have a specific nutritional deficiency and/or have a defined health condition for which supplements have been shown

to have beneficial effects. In general, the money spent on over-the-counter nutritional supplements would be better spent on good quality vegetables, fruit and lean protein sources.

## References

1. Rees K, Hartley L, Day C, et al. Selenium supplementation for the primary prevention of cardiovascular disease. *Cochrane Database Syst Rev* 2013; DOI:10.1002/14651858.CD009671. pub2. Available at: <http://www.thecochranelibrary.com/view/0/index.html>
2. Watson J Oxidants, antioxidants and the current incurability of metastatic cancers *Open Biol.* January 9, 2013 doi: 10.1098/rsob.120144
3. Baglietto L, Krishnan K, Severi G, et al. Dietary patterns and risk of breast cancer. *Br J Cancer* 2011;104:524-31

## Can we predict menopause?

Many women ask if there is any way they can determine when they will go through the menopause. The measurement of a protein anti-mullerian hormone (AMH) may help in some instances.

AMH is produced in the ovaries by the cells surrounding developing eggs (ova).

Blood levels of AMH reflect the number of healthy eggs as well as growing eggs. A high level mean lots of eggs, a low level indicates few healthy eggs left. Hence AMH is a measure of “ovarian reserve”.

AMH levels in the blood decline with age, and become undetectable as a woman approaches menopause. But the AMH test cannot be used to predict if menopause is going to occur within months or a couple of years. AMH testing

is routinely being used to assess whether a woman is likely to have a poor response to IVF and guide the kind of treatment that is used for her IVF cycle. It is also being increasingly used to diagnose premature ovarian failure (POF). Women with POF have few/no eggs left, therefore have low levels of AMH.

We are not routinely measuring AMH for the diagnosis of menopause, as this is still considered a diagnosis based on symptoms and the cessation of menstrual cycles.

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## 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 over 18 years of age and premenopausal, 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.