

Calcium – friend and foe?

More than 500 Health 2020 participants are taking part in a new research study investigating both the desirable and undesirable effects of high levels of calcium in the diet.

Osteoporosis is a condition that causes bones to become brittle and fragile, leading to a higher risk of fractures as we age. Current recommendations to prevent this condition include increasing calcium in the diet. However, there have been some suggestions that high levels of calcium might be associated with an increase in chronic heart and blood vessel disease.

This new study is looking to see whether a high consumption of calcium has the beneficial effect of strengthening bones, and whether it might also have less desirable effects on the heart and blood vessels.

What does the study involve?

The study will be looking at participants' long-term intake of calcium. It will be comparing two groups of people: those who have high dietary calcium intakes with those who have low amounts of calcium in their diet.

The tests being used in the study are looking for the effects of calcium intake on the health of bones, the heart and blood vessels.

The strength of bones are being examined using DXA scans which measure the density of minerals (including calcium) in participants' bones.

X-rays are also being used to look for degenerative changes in the spine, including fractures,

and for any build up of calcium in the walls of the abdominal aorta. The abdominal aorta is a major blood vessel of the body and the presence of calcium deposits in its walls is an indicator of heart disease.

Blood samples are also being collected to analyse markers of bone metabolism and other factors associated with the health of the heart and blood vessels at the biochemical level.

Researchers at Cancer Council Victoria and the Department of Medicine at Western Hospital are conducting the study. Study Coordinator, Belal Khan, said that the study is well underway, with 250 Health 2020 participants having already completed the tests.



Study participant Norman Evans having his bone mineral density measured with a DXA scan



Study Coordinator Belal Khan and participant Valerie Johnson

Who is taking part in the study?

We have randomly selected a small number of participants and can only approach participants in the order they have been selected. You may still receive an invitation to participate in this study, as it will run throughout 2011.

The importance of the study

The findings from this study will be of particular importance for the development of healthy ageing policy for the prevention of chronic diseases.

“If the study finds a link between high levels of calcium in the diet and harmful effects on heart or blood vessels, these findings may alter current public health recommendations for calcium intake,” said Belal.

All Health 2020 participants are important

The Health 2020 Program has been so successful because of the continued enthusiastic involvement of its many participants. Every participant who stays with the program is making an important contribution to efforts to improve the health and wellbeing of all. The information provided by Health 2020 participants has been used by researchers across the globe to further medical science.

One particular strength of the Health 2020 Program is the contribution being made by people from non-English speaking backgrounds. The program has enabled Greek and Italian participants to take part using their mother languages.

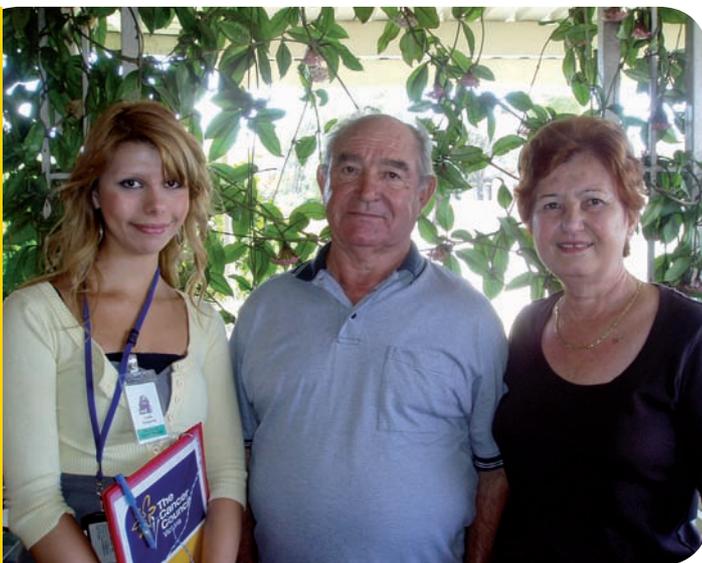
Italian speaking Health 2020 participant, Vincenzo De Fazio, thought that it was wonderful that he was able to take part in his own language. "I would not have been able to be involved without Italian speaking researchers," said Mr De Fazio.

Italian speaking Health 2020 researcher Barbara Amalberti said she has enjoyed working with the program. Barbara conducted telephone interviews with the Italian and English speaking participants. She greatly appreciated and admired the enthusiasm and generosity of the participants, who were happy to give their time for the good of the wider community.



Health 2020 participant, Vincenzo De Fazio and researcher Barbara Amalberti

Welcome back to Health 2020



Health 2020 researcher Lydia Vanikiotis with returning participants Alexandros and Lambrini Christou

Health 2020 participants, Alexandros and Lambrini Christou, moved away from Melbourne and found they were unable to participate in the Follow Up study when they were contacted in 2002.

However, they remembered the study fondly and were delighted to be involved again when Health 2020 researchers contacted them late last year.

Mr and Mrs Christou completed telephone interviews with Greek speaking Health 2020 researcher Lydia Vanikiotis.

Lydia was also able to arrange to meet with the couple at their daughter's house in Melbourne for a home visit.

Alcohol and brain tumours

Information from over 39,000 Health 2020 participants has been used to determine whether alcohol consumption increases the risk of developing a glioblastoma, the most common form of brain tumour.

As this type of tumour is very aggressive, it is important to find out what might cause them to develop. One possible cause is the consumption of alcohol, and this was investigated in a study drawing on the rich information base collected by the Health 2020 Program.

The study, lead by Dr Laura Baglietto, of the Cancer Council Victoria, followed the drinking habits of 39,766 participants for an average of 15 years.

The numbers of glioblastoma occurring during this time were tracked through the Victorian and other state cancer registries. A total of 67 Health 2020 participants were found to have been diagnosed with the tumour.

Importantly, it was revealed that the risk of developing the tumour was related to the amount of alcohol consumed.

There was a 16% increase in risk for each additional 10 grams of alcohol consumed per day. A standard drink, such as a small glass of wine or a pot of beer, contains 10 grams of alcohol. People drinking 40 grams or more of alcohol a day had up to 3-fold higher risk compared to those who didn't drink.

"This finding might have a significant impact on the prevention of this aggressive cancer," said Laura. "However, more research is necessary. For example, studies need to be conducted to see whether the effects of alcohol consumption would be affected by other factors such as cigarette smoking."



Dr Laura Baglietto
Cancer Council Victoria

Update your details

It's really important to us that you let us know if your contact details change, so we can stay in touch.

Please just tear off this strip and send it to us when you know your new details.

First name Mr/Ms/Mrs/Miss

Middle name

Last name

Phone

Email

NEW ADDRESS

Suburb

State Postcode

OLD ADDRESS

Suburb

State Postcode

Prefer to have your next newsletter emailed?

Just type into your email subject line:

"e-news please", name and Health 2020 ID number
(if you know it)

Send to: HEALTH2020@cancervic.org.au

Mail to:
Health 2020
1 Rathdowne Street
Carlton Vic 3053

OR email the details to:
HEALTH2020@cancervic.org.au

OR phone the details to:
9635 5323

Health 2020 research in brief

The information collected by the Health 2020 Program provides an invaluable resource to researchers both here, in Australia, and internationally. The following studies are a small sample of those published in medical journals in 2010 using Health 2020 information.

Understanding research results

In reading the results of research studies one needs to keep in mind that they rarely give us simple answers. The situations are often complex, with many factors, some of which may be unknown, influencing the outcome. It is always important that any research finding is checked by conducting further studies. Therefore the results reported here, although important findings, should not be seen as the last word on the matter but rather sign posts to possible solutions.

Body size and/or weight change and the risk of developing colon cancer

Information from almost 40,000 Health 2020 participants was used to see whether body size and weight changes played any role in the risk of colon cancer. The Health 2020 participants were studied over a period of 14 years, with more than 500 members being diagnosed with colon cancer during this time.

It was found that, for men, the greater their weight and the amount of body fat they had at the time they entered the program, the more likely they were to have developed colon cancer. Similarly, men who gained weight during this period were also at greater risk. Those who gained 20kg or more from the age of 18 years, were substantially more likely to be at risk.

For women, however, there was no apparent relationship between body size and weight change and their risk of colon cancer.

The findings of the study suggest that weight gain during adult life increases men's risk of colon cancer, and avoiding excessive weight gain might help reduce their colon cancer risk.

Authors: Bassett JK, Severi G, English DR, Baglietto L, Krishnan K, Hopper JL, Giles GG.

Published in: Cancer Epidemiol Biomarkers Prev. 2010 Nov;19(11):2978-86. Epub 2010 Sep 24.

Can diet reduce breast cancer risk?

The diet of over 20,000 women in the Health 2020 program was followed for a period of 14 years to see whether some foods might reduce the risk of breast cancer. During this period 815 of the women were diagnosed with breast cancer.

The study showed that women who consumed a diet rich in fruit and salad had less risk of developing breast cancer, although the level of protection depended on the type of tumour.

Authors: Baglietto L, Krishnan K, Severi G, Hodge A, Brinkman M, English DR, McLean C, Hopper JL and Giles GG

Published in: British Journal of Cancer advanced online publication Dec 2010

Animal product consumption and breast cancer

High levels of sex hormones freely circulating in the blood stream have been linked to breast cancer in postmenopausal women. To some extent, the levels of these hormones is limited by the presence of a particular protein (referred to as SHBG). Therefore higher levels of SHBG might provide some protection against the development of the cancer by lowering the levels of the potentially harmful circulating hormones.

The study looked at the effects that eating animal products have on the levels of freely circulating hormones and the protein SHBG in the blood stream.

Seven hundred and seventy-six women from the Health 2020 Program took part in the study.

It was found that high levels of red meat in the diet was associated with low levels of the potentially protective protein SHBG. High levels of dairy products in the diet were found to result in higher levels of the potentially harmful circulating sex hormones. However, processed meat, chicken, fish, eggs, dietary cholesterol, fat or protein were found to have no effects on the levels of either protein SHBG or the freely circulating sex hormones.

The results of the study suggest that a high consumption of red meat and dairy products affects the levels of substances that are known to be related to the risk of breast cancer. As this finding has implications for breast cancer prevention, it is important that further research is conducted to check the strength of these findings.

Authors: Brinkman MT, Baglietto L, Krishani K, English DR, Severi G, Morris HA, Hopper JL, Giles GG.

Published in: European Journal of Clinical Nutrition. (2010) 64, 176-183



Cancer Council Victoria
website:
cancervic.org.au