

New Tool for Dietary Analysis

Tomorrow Project co-investigator takes lead in developing new tool for dietary analysis

Canadian scientists will soon have an important new tool for investigating the links between nutrition and chronic diseases, thanks to work done for *The Tomorrow Project* by Dr. Ilona Csizmadi. In her role as a co-investigator with the study, Ilona has played a lead role in working with the National Cancer Institute in the USA to adapt the Diet History Questionnaire for use in Canada.



Tomorrow Project
co-investigator Ilona Csizmadi

Born in Hungary, Ilona was raised in Toronto, where she obtained a degree in Human Nutrition from Ryerson. After several years of working in clinical nutrition, Ilona went on to obtain a Master's Degree in Nutrition at the University of Montreal and a PhD in Epidemiology and Biostatistics from McGill. Her research interests include the study of women's use of female hormones as well as the role of diet in cancer prevention. Since moving to Calgary with her son in 2001, Ilona has settled into the Alberta lifestyle and now enjoys downhill skiing.

Survey 2004 Available "On-line"

Thank you to all participants who have already returned Survey 2004, the initial follow-up questionnaire for people enrolled in the Project between 2000 and 2002.

For the first time, some participants in a pilot study for Survey 2004 were offered the chance to complete the questionnaire "on-line." Internet security features ensure that data is encrypted and transferred to the highly secure database stored "off-line" at the study centre. So far, close to 300 people have chosen that option and have been very pleased with the process. As one person said, "Very easy to complete and navigate" and as another person reported, "Solves my procrastination problem. Once I sit down, it gets completed and I don't need to worry about mailing it."

To date, over 60% of people have returned either the

paper or electronic version of Survey 2004, but if you are one of those who has not, it is not too late. *Every response counts.* Please call us if you need a replacement questionnaire or would like to receive a password to answer the survey online.

Welcome to New Participants

Welcome to the 3100 new participants from Calgary and Edmonton who have joined *The Tomorrow Project* in the past year. Close to 80% of the recent enrollees have completed all three questionnaires on health, diet and physical activity, but if you still have the surveys at home, please send them along. We are always happy to hear from you.

Your next survey will arrive in 2007 but until then, watch for newsletters in the mail every six months. To view past issues, go to the study website at www.thetomorrowproject.org and click on Newsletters. And if you move, please remember to contact us so that we can keep in touch.

"When will you know the results of the study?"

We are frequently asked when the results of the study will be available. Because one of the main goals of *The Tomorrow Project* is to examine the connections between lifestyle and cancer, it will take many years before there is sufficient data to answer questions about cancer causes and prevention. However, the information you give provides today's scientists with valuable insight about current trends in people's health status and cancer prevention practices. We expect that in the next year, information on current diet patterns and physical activity among participants will be published – we will keep you posted.

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Tomorrow's News

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The Tomorrow Project® — Albertans Studying the Connection Between Lifestyle and Cancer

Who's Who In The Tomorrow Project

Meet DonaLee Smith, a 61-year-old rancher from southern Alberta, who is one of the 15,000 participants in *The Tomorrow Project*.

DonaLee lives with her husband Dennis on a ranch in the foothills between Pincher Creek and Waterton National Park where her roots run deep in Alberta ranching history. Dona Lee's grandfather moved his wife and four small children to Alberta from Montana in 1917 in order to have some open land on which to raise cattle. He died just 4 years later, leaving DonaLee's grandmother to raise her children and run the ranch on her own through difficult times. Eventually DonaLee's father took over the family ranch and it was there that she was born and raised. They were a very self-sufficient family, growing most of their food and often eating wild game. DonaLee remembers long winters when they sometimes were snowed in for three months at a time.

After attending high school in Pincher Creek and business college in Calgary, she worked in Calgary for ten months and then in 1963 moved back to Pincher Creek to marry Dennis Smith. In 1978, they bought their first small ranch. There they raised four children who now live and work in Alberta and the US. DonaLee and Dennis also have six grandchildren who are a great source of pride and enjoyment.

DonaLee tells us she "loves the cattle." Although she and Dennis sold their main herd in 2002, they still run 55 head of cows and heifers. DonaLee purchases the bulls, ensures that protocols for vaccinations on all the cattle are up to date and can often be found riding one of their saddle horses, moving the cattle to pasture. The current problems related to BSE are a part of their new reality but, along with all Albertans involved in the agricultural industry, she anxiously awaits some good news on the American border opening.



Study participant DonaLee Smith with her granddaughter Emily.

Volunteer work is an important aspect of DonaLee's life. She is the Secretary Treasurer of the 4-H Beef Committee in Pincher Creek, helps organize the annual Steer Sale for 4-H members, and leads a Heifer Club for eight up-and-coming young ranchers. A believer in a strong community, she also volunteers as the Treasurer for the Pincher Creek Community Hall Society and helps the Chamber of Commerce with judging for the annual Business Awards. During Pincher Creek's Annual Cowboy Poetry Weekend, DonaLee works with the Information Centre.

DonaLee leads an active involved life and thinks that is a key to her continuing good health. She joined *The Tomorrow Project* because she believes strongly that lifestyle is an important factor related to health. She hopes *The Tomorrow Project* can learn from her and that she can learn from *The Tomorrow Project*.

Diet and Cancer Prevention

You are what you eat

The idea that nutrition is an important risk factor for many diseases, including cancer, is not new. Doctors and scientists since 1000 AD have speculated on the connection between poor nutrition and a variety of cancers.



Interest in understanding the nutrition-cancer link has been steadily increasing since the 1970s and a wide body of research has now accumulated. The respected World Cancer Research Fund released a landmark report in 1997, which concluded that *recommended diets, together with maintenance of physical activity and appropriate body mass, can in time reduce cancer incidence by 30 – 40%.**



But *how* is our diet related to the cancer process? And what dietary recommendations can we follow with confidence?

How is diet related to cancer?

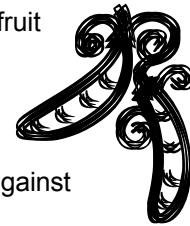
Cancer is basically a disease of cells that overgrow, destroy surrounding tissue and often spread to other parts of the body. Cell change starts with abnormalities in the structure and function of the DNA in a single cell. DNA, the material inside the cell that carries genetic information, can be damaged at any time in life by agents in the environment such as radiation or substances in our food, water and air.



Evidence shows that nutrients in the diet can increase or decrease risk at different stages of the cancer process. For example at the earliest stages in the cancer process, carcinogens (cancer-causing agents) such as heterocyclic amines, found in some well-cooked foods, may initiate the cancer process. In the intermediate stages, excess calories leading to obesity may increase the likelihood of tumor growth. On the positive side, however, antioxidants, widespread in foods of plant origin, may help protect cells from damage, thereby helping to limit changes that can lead to cancer.

Is there a diet that can reduce your risk of cancer?

The single most important dietary measure for reducing the risk of a wide variety of cancers is to eat 5 to 10 servings of vegetables and fruit a day, as part of a balanced diet. The World Cancer Research Fund has ranked the evidence linking the protective effect of vegetables and fruits against specific cancers:



There is *convincing* evidence that vegetables and fruits protect against cancers of the mouth, pharynx, esophagus, stomach and lung and that vegetables on their own protect against colon and rectal cancer.

There is *probable* evidence that vegetables and fruits protect against cancers of the larynx, pancreas, breast and bladder.

There is *possible* evidence that vegetables and fruit protect against cancers of the ovary, uterus, cervix and thyroid.

There is not one single protective factor in vegetables and fruits; rather they contain a myriad of compounds that may be significant for cancer prevention including vitamins, minerals and other compounds. In addition, vegetables and fruits are major sources of fibre, which could reduce colon cancer risk in two ways. Fibre may decrease the amount of time food waste stays in the intestine, thereby reducing the interaction between carcinogens and the lining of the intestine, and fibre may bind carcinogens, reducing their negative impact on the intestinal tissue.



Current scientific evidence supports the beneficial effects of *whole* foods in preventing cancer. Although media reports abound on the virtues of specific foods, diet plans and supplements, there is no valid evidence that any single nutrient can effectively reduce cancer risk in the absence of a well balanced diet.

Diet patterns among participants in *The Tomorrow Project*

How well are participants in *The Tomorrow Project* following Canada's Food Guide and current cancer prevention guidelines? A preliminary look at the data from the Diet History Questionnaire, completed at study entry by over 10,000 participants from across the province, compares Canadian recommendations with results from men and women in the study.



Here is what participants reported:

Canada's Food Guide Daily Recommendation	Men in <i>The Tomorrow Project</i>	Women in <i>The Tomorrow Project</i>
Vegetables and fruits: 5-10 servings	7.1 servings	7.1 servings
Dairy products: 2-3 servings	1.8 servings	1.5 servings
Grains: 5-12 servings	5.6 servings	4.2 servings
Meat and alternatives: 2-3 servings	4.4 servings	3.0 servings



As you can see, while both men and women in the study are reporting vegetable and fruit consumption in the recommended range, dairy consumption is lower than recommended among both men and women as is the consumption of grains in women. Men tend to eat more meat than recommended while women eat the maximum servings of meat per day.

Learn more about diet and cancer

To learn more about diet and cancer, visit these websites:

www.aicr.org/research/report.lasso

www.5to10aday.com



* American Institute for Cancer Research website

** Alberta Cancer Board Lifestyle Series: Healthy Eating (February 2001)

How do I know what to believe in the media about food and cancer? **

Cancer issues concerning food choices are often reported in the news. While sometimes presenting new, credible, research findings, often these reports are misleading and create unfounded fears. Some key questions to ask when examining and analyzing a news report are:

- Do these new findings come from only one study? (It usually takes many studies and years of research before definite conclusions can be drawn.)
- If there were other studies done, what did they conclude?
- Are recognized health organizations issuing statements that support the findings?
- Were the studies done on human subjects using quantities in the range people usually consume? If not, how reasonable is it to apply the findings to other people?