Multiethnic Cohort Update

It’s been almost 5 years since we first started mailing our new Health Research Survey. All of you filled out a similar survey more than ten years ago when we first started the Multiethnic Cohort (MEC) project. This survey will enable us to see how people’s diets have changed over that ten-year period.

This new survey is being mailed to more than 180,000 study participants. We have now nearly completed the mailings. The reason it has taken us so long is that our small staff would be hard pressed to process all the questionnaires at once. Therefore, we mailed to about 40,000 study participants each year over the five-year period.

It is still not too late to return your completed surveys if you haven’t yet done so. When a survey form is returned, we record in our computer tracking system that it was received, so that we don’t have to send any further reminders to that participant. From there, it is manually reviewed for ink or stray marks and then sent through an optical scanner, which is a machine that reads the bubbled answers that you marked. Once the data are entered into our computer system, they are run through a software program that detects discrepancies, such as multiple answers to one question. Corrections are then made according to preset guidelines. Only after all surveys have gone through several layers of editing can the MEC researchers analyze the information and report any findings.

So, as you can see, the process is quite involved, but the information you provide is most valuable and we treat it very seriously. Your participation is what makes our research possible, and we truly appreciate your efforts!

SUPPLEMENT REPORTING STUDY

We would like to especially thank those of you who have participated in the Supplement Reporting (SURE) Study. Interviewers from this study have visited the homes of over 400 members of the MEC to measure the types of dietary supplements that are being used. Because there is very little information on how long people use different supplements, the interviewers have visited each home five times over a one-year period. We appreciate the willingness of these participants to let us visit them so often.

Other MEC participants have helped the SURE Study by completing and returning a one-page questionnaire about supplement use. Almost 700 people have returned at least one of these short questionnaires.

One of the goals of the study is to find out the best way to ask people about the dietary supplements that they take. For example, we have asked some people to write down which supplements they use each day for up to a month. For people who take many different supplements, this was a lot of work! We’ve also asked participants to try to remember all the supplements they’ve taken recently and tell us what they took and how often

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they took them. When the study is finished, we will be able to compare these different reporting methods to see which is the most accurate. The results will help us decide how to ask MEC participants about supplement use in the future, and will also provide much-needed information to other investigators who are studying dietary supplement use in other parts of the country.

We have almost finished the data collection for this study, and will be reporting some of our findings to you in the next newsletter.

MILITARY VETERANS’ SURVEY

It has not been determined whether military service has any long-term effects on health and longevity. It is possible that veterans have more chronic disease problems and a higher death rate (excluding combat duty) due to job stress or toxic exposures. On the other hand, military personnel are generally more physically fit than the general population (at least while on active duty), which might have long-term health benefits.

Because the MEC provides an opportunity to study these questions, we developed a collaborative project with the Military Cancer Institute in Washington, D.C. In March 2007, we mailed a one-page survey to over 77,000 male participants in the MEC. We asked for basic information on military background that will permit researchers to examine differences in disease risks between veterans and non-veterans in the cohort.

To date, we have received more than 20,000 completed surveys, and we are anxious to receive more. If you received a survey in the mail but have not yet completed it, please help us by returning it as soon as possible. Every completed survey we receive is very valuable!

We would like to extend our deepest appreciation to all of you for your continued support of the Multiethnic Cohort Study!
<SURVEY QUESTIONNAIRE>

How Your Intake of Nutrients Is Calculated from the Survey Questionnaire

I
n the last newsletter, we talked about the importance of your dietary ques-
tionnaires in our studies of diet and cancer in the Multiethnic Cohort. For
each questionnaire, we calculate your intake of many different nutrients based
on how often and how much you eat of each of the food items. We can then
evaluate whether your total intake of a nutrient like sodium (which comes from
salt) is high or low. However, to do this calculation accurately, we have to know
how much sodium is in every food item on the questionnaire. Where do we find
this information? Often, we turn to the US Department of Agriculture (USDA),
which publishes an extensive list of nutrients in foods. You can check it out

For some packaged foods, we also look at the Nutrition Facts Label. You
have probably seen this label (sample shown), which is required on almost all
packaged food products. It shows the nutrients in a serving of the food. For
example, we can find out how much sodium is in different types of vegetables
that are sold in the supermarkets by looking at the label. One cup of frozen,
unsalted green beans has almost no sodium, whereas a cup of canned green
beans has over 500 mg of sodium and a cup of vegetable soup has over 800 mg.
Most people should try to keep their total sodium intake under the Daily Value of
2400 mg, so the percent of the Daily Value is also shown on the food label.
Someone who ate three cups of vegetable soup would be over 100% of the Daily
Value for sodium, because each cup has over 33% of the Daily Value!

The Nutrition Facts Label shows both macronutrients (like fat, protein, and
dietary fiber) and micronutrients (like sodium, vitamin C, and several other
vitamins and minerals). We usually want to estimate participants’ intakes of many
different nutrients, and fiber is an example of a macronutrient of particular inter-
est in our cancer studies. Most people eat too little fiber, because they don’t choose
enough fruits, vegetables, and whole grains. The food label can be a guide to
cereals and grains that are high in fiber, such as whole grains. For example,
a cup of vegetable soup has over 800 mg.

We found that obesity was a risk factor for renal cell cancer in the MEC partic-
icipants. Obesity was assessed by computing the body mass index (BMI) value
for each member of the cohort, based on his or her height and weight. A normal
BMI is any value less than 25.0, over-

K
idney cancer is the eighth
most common cancer in the
United States. The most fre-
quently-occurring type of kidney
cancer is called renal cell cancer
and its incidence has been increasing
globally. In the U.S., there are
projected to be 51,200 new cases
and 13,000 deaths from this cancer
in 2007.

We conducted an analysis of the
Multiethnic Cohort (MEC) to identify risk
factors for renal cell cancer. Data were
available on 161,126 participants. These
participants included men and women of
different ethnic backgrounds (including
African Americans, Japanese Americans,
Latinos, Native Hawaiians, and whites)
who live in Hawai’i and California. Cases
of renal cell cancer were identified by
computer linkage of the MEC to tumor
registries in Hawai’i and California that
record all new cases of cancer in these
states.

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his or her height and weight. A normal
BMI is any value less than 25.0, over-
weight is a value from 25.0 to 29.0, and
obese is a value of 30.0 and above.
Among women, an elevated risk for renal
cell cancer was observed starting with a
BMI of 25.0, and the risk con-
tinued to increase as the BMI
went up from there. Among
men, the elevated risk started at
a BMI of 30.0 and also increased
as the BMI went up. A possible
reason why obesity increases
the risk of renal cell cancer is
that overweight raises the levels
of certain factors in the blood, such as
insulin and estrogens that promote the
growth of tissues.

The analysis also showed that
smoking increases the risk of renal cell
cancer in both sexes. Participants who
currently smoke and have a long history
of smoking are at the greatest risk. On
the other hand, the analysis showed a
decreased risk of renal cell cancer asso-
ciated with moderate alcohol consump-
tion and greater physical activity. The

[continued on page 4]
Incorporating vegetables and fruits into baked goods is another way to increase your daily servings. These delicious bars are made with whole wheat pastry flour, carrots, zucchini, fruits, and nuts.

Nutrition analysis

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<th>Calories</th>
<th>Protein (g)</th>
<th>Total Fat (g)</th>
<th>Cholesterol (mg)</th>
<th>Carbohydrate (g)</th>
<th>Total Fiber (g)</th>
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</thead>
<tbody>
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<td></td>
<td>165</td>
<td>3</td>
<td>8.5</td>
<td>23</td>
<td>21</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Ingredients:

- 3/4 cup whole wheat pastry flour
- 3/4 cup white flour
- 3/4 cup packed brown sugar
- 1 tsp baking powder
- 1/2 tsp cinnamon
- 1 tsp ground ginger
- 1/2 tsp baking soda
- 2 eggs, lightly beaten
- 1-1/2 cups packed (4 medium) carrots, shredded
- 1 cup packed (1 medium) zucchini, shredded
- 1 cup dried cranberries or blueberries
- 1/2 cup chopped walnuts
- 1/2 cup vegetable oil
- 1 tsp vanilla
- 1 8-ounce package low-fat cream cheese
- 1/2 cup powdered sugar, sifted
- 2 Tbsp orange juice
- 1 Tbsp finely shredded orange zest

Preheat the oven to 350 degrees. In a large bowl stir together the flours, brown sugar, baking powder, cinnamon, ground ginger, and baking soda. In a medium bowl combine the eggs, carrots, zucchini, cranberries, walnuts, oil, and vanilla. Add the carrot mixture to the dry ingredients and stir with a wooden spoon until just combined. Pour the batter into a greased 13 x 9 x 2-inch pan and bake for about 25 minutes, or until a small knife inserted near the center comes out clean. Cool in the pan on a wire rack.

To prepare the frosting, place the ingredients in a medium bowl and beat on medium speed until light and fluffy. Spread the frosting over the cake and cut it into bars. Store covered in the refrigerator. Makes 24 (about 2” square) bars.

Source: Cancer Research Center of Hawai‘i Cookbook (in preparation)

Kidney Cancer in the Multiethnic Cohort [continued from page 3]

protective effect from moderate alcohol intake was seen in men but not women (possibly because alcohol consumption is very low among women in the MEC), whereas the protective effect from physical activity was seen in women but not men (for unknown reasons). Clearly, additional studies are needed to confirm these protective effects and to explain the differences between findings in men and women.

One medical condition was associated with renal cell cancer risk in the cohort. This was high blood pressure, which showed an increase in risk in both men and women. The reason for this effect on kidney cancer may relate to increased production of molecules that damage cells and promote tumor development in individuals with high blood pressure.

In conclusion, obesity, smoking, and high blood pressure are all risk factors for kidney cancer in the Multiethnic Cohort. Elimination of these risk factors might have prevented more than half of the renal cell cancer cases in the study participants.
**CARROT ZUCCHINI BARS**

Incorporating vegetables and fruits into baked goods is another way to increase your daily servings. These delicious bars are made with whole wheat pastry flour, carrots, zucchini, fruits, and nuts.

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Kidney Cancer in the Multiethnic Cohort [continued from page 3]

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