



UNIVERSITY OF HAWAII
CANCER CENTER



USC University of
Southern California

A Newsletter for the Participants
of the Multiethnic Cohort Study

Multiethnic

BULLETIN

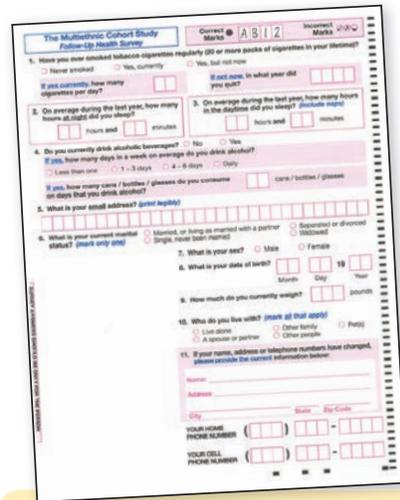
VOL 15 ISSUE 1 FALL 2015

Multiethnic Cohort Update

Scientific Collaboration – A Key to Innovation

The Multiethnic Cohort Study (MEC) was developed as a joint project in the early 1990's between researchers at the University of Hawai'i (UH) Cancer Center and University of Southern California (USC) Norris Comprehensive Cancer Center. For more than 20 years, investigators from both universities have maintained a very strong partnership, utilizing their combined expertise to investigate new ways to prevent cancer. MEC researchers have been able to take advantage of the diverse ethnic composition of the cohort in Hawai'i and Los Angeles to study a variety of diets and other lifestyle habits, as well as genetic factors. They determine which ethnic groups are at a higher risk for certain cancers and explore the reasons for these risk differences. MEC researchers are also collaborating with many research groups in North America, Europe and Asia to expand on specific projects and more fully utilize their data. Only with this high level of collaboration can the research lead to important scientific innovation that will benefit current and future generations.

You joined the MEC when you returned the first questionnaire that we sent to residents of Hawai'i or the Los Angeles



Follow-Up Health Survey

metropolitan area in 1993-1996. With your continued support over the years, the growth in productivity of the MEC has truly been exceptional. Your original participation and answers to our follow-up surveys have enabled MEC investigators to publish over 450 research articles, each sharing new findings with the scientific community. This success stems from the unique diversity of the MEC participants and their willingness to participate. Every member of the cohort provides important clues to the causes of cancer. We are very grateful for your contributions over the years! We will continue to mail the *Follow-Up Health Survey* through July 2016 to those of you who have not yet received it.

The MEC Biorepository

One of the most valuable components of the MEC is the vast biorepository or "collection" of biological specimens that we have been able to establish with your help. The blood, urine, saliva, stool and/or tissue samples that more than 75,000 of you provided have been carefully preserved at ultralow temperatures, allowing scientists to continue to use these samples for many years to come. Our main focus is on comparing how people of different ethnic backgrounds handle certain substances in their body. For example, we found that people process food components differently. The same is true for the chemicals in cigarette smoke, or for hormones either produced in the body or prescribed by a doctor. Many of these differences are due to slight variation in

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If you have recently moved or have a new phone number, please call us at one of the phone numbers listed on page 3 or visit our website to ensure that you will receive future mailings.

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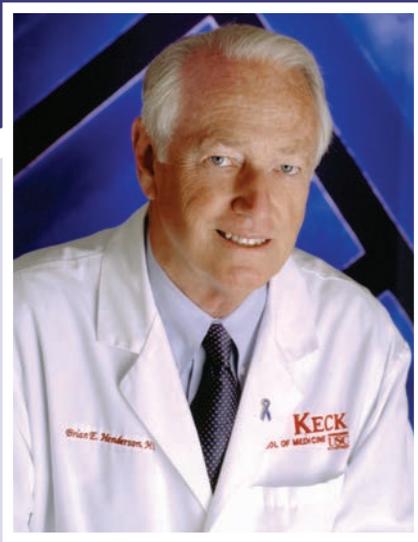
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For more information on the Multiethnic Cohort Study, please visit our website at www.uhcancercenter.org/multiethniccohort

In Memory of Brian E. Henderson, M.D.

Co-founder of the Multiethnic Cohort Study



We are very sad to share the news that Dr. Brian Henderson, the co-founder with Dr. Laurence Kolonel of the Multiethnic Cohort Study (MEC), passed away peacefully on June 20, 2015 after a long battle with lung cancer. Over the past 25 years, his leadership and scientific vision helped bring world-wide recognition of the MEC as the preeminent study for research focused on understanding cancer causation across diverse populations.

Dr. Henderson's professional career was dedicated to elucidating the environmental and genetic factors that contribute to racial and ethnic disparities in risk for a wide variety of cancers. In recognition of his stature in cancer epidemiology, in 1992 he was elected to the prestigious Institute of Medicine, one of the nation's highest scientific honors, and in 1999 was awarded the University of Southern California's (USC) Presidential Medallion, the university's highest honor. At USC, he held several institutional leadership positions, including Chair of the Department of Preventive Medicine (1978-1988), Director of the USC Norris Comprehensive Cancer Center (1983-1993), and Dean of the USC Keck School of Medicine (2004-2007).

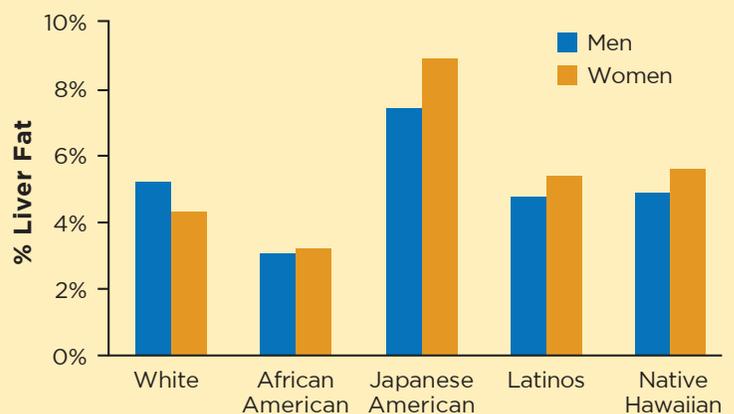
Dr. Henderson was enormously proud of the MEC and the dedication of its participants and researchers. His legacy is greatly enriched by his many research accomplishments in the MEC, which we, as MEC researchers, will strive to further in his honor.

Update on the Body Imaging Study

More than 1,400 Multiethnic Cohort Study (MEC) participants have already taken part in the *Body Imaging Study* and visited the research clinic either at the University of Hawai'i Cancer Center or University of Southern California Health Sciences campus, for body scans and other measurements. We thank each and every one of them for generously helping with our research study. The study is still ongoing and we continue to reach out to MEC participants who meet the study criteria. We hope that you will choose to join the study if you are contacted.

We have early results to share with you about differences in body fat distribution among the five ethnic groups in the MEC. We find that Latinos and Japanese Americans have a greater tendency to accumulate body fat in the trunk area, as opposed to the buttocks, legs and arms, when compared to the other ethnic groups in the MEC. Also, Japanese Americans show a higher amount of fat in the liver (see Figure below). Individuals with body fat accumulation in the trunk area or in internal organs are known to be at a greater risk for chronic diseases, such as diabetes, heart disease and certain types of cancers. As the project continues, we will explore whether modifiable behaviors associated with these body fat distribution patterns may provide new ways to reduce risk for these diseases.

**Percent of Liver that is Fat Among
Ethnic Groups in the MEC**



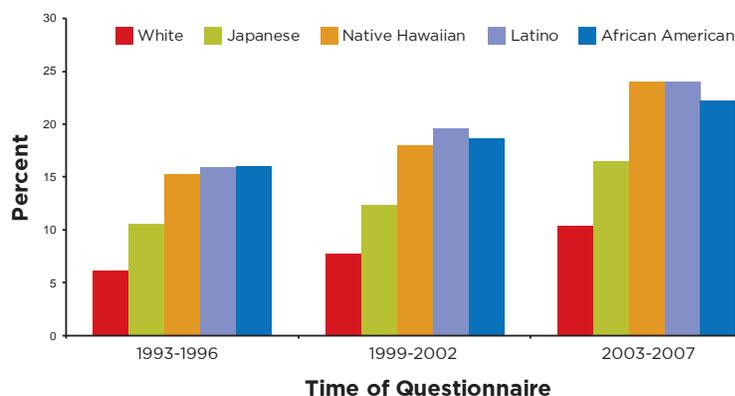
With your continued support over the years, the growth in productivity of the MEC has truly been exceptional.

Type 2 Diabetes in the Multiethnic Cohort Study

The number of adults with type 2 diabetes is rising across the world, but the prevalence differs considerably across countries. When the Multiethnic Cohort Study (MEC) was started in 1993-1996, 12% of participants reported that a health care professional had told them that they had diabetes. Ethnic background mattered (see Figure on right); the frequency of type 2 diabetes, ranged from 6% in whites to 11% in Japanese, 15% in Native Hawaiians, 16% in Latinos, and 16% in African Americans. After taking body weight and other risk factors into account, African Americans and Latinos remained twice as likely, and Japanese and Native Hawaiians three times more likely to have been diagnosed with diabetes than whites.

During the follow-up, as the MEC participants aged, more of them developed the disease. In 1999-2002, 14% of cohort members reported a diagnosis of diabetes; and by 2003-2007 this percentage had risen to 18% (see Figure). The ranking across ethnic groups remained similar. Looking at risk factors, our findings suggest that 90% of type 2 diabetes cases would be preventable if excess body weight, physical inactivity, smoking, and unfavorable diets could be eliminated. For all ethnic groups, being overweight or obese was by far the most important risk factor. We also found that exercising was protective; individuals who engaged in strenuous activity for at least four hours per week had a 20-30% lower risk than those who did not. Red meat, in particular, consumed as processed products such as sausage and Spam, appears to confer a higher risk, whereas intake of dietary fiber and coffee may have preventive effects.

Frequency of Type 2 Diabetes by Ethnicity in the MEC Over Time



Based on research within the MEC, here are some tips for reducing diabetes risk:

1. Avoid weight gain and keep body weight within a normal range.
2. Stay as physically active as you can, as recommended by your doctor.
3. Limit the intake of red and processed meat as well as sweetened drinks and consume more foods high in dietary fiber, i.e., whole grains, vegetables, legumes, and nuts.
4. If it agrees with you, drink moderate amounts of coffee.

Multiethnic Cohort Update

Continued from Page 1

our DNA, which combined with a specific exposure, may affect one's risk of cancer or other chronic diseases. If we can learn more about these individual differences, we may be able to better predict risk and recommend individualized prevention measures.

On-going projects using the biorepository include studies related to cancers of the breast, prostate, large bowel, lung and liver, as well as smoking, obesity and diabetes. As new projects develop, we strive to enhance our biorepository. We truly appreciate your continued support of the MEC.

If you have any questions about the study, please call:
1-800-786-3538 (toll free in California), (808) 586-2996 (Oahu) or 1-877-415-8323 (toll free in Hawai'i).



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CANCER CENTER

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Permit No. 278

RECIPE: QUINOA SALAD

Nutty quinoa complements the licorice flavor of the Mexican tarragon in this unique salad. The beautiful orange flowers of this herb are edible and can be added to the salad as well. (Use regular tarragon if Mexican is not available.)

Ingredients

- 2 cups water
- 1 cup quinoa, well rinsed
- 1 cup frozen or fresh corn, cooked and cooled
- 2 to 3 stalks green onion, minced
- 1/2 cup chopped cucumber
- 1 15-ounce can black beans, rinsed and drained
- 1 cup chopped tomatoes
- 1 red bell pepper, chopped
- 1/4 cup chopped fresh parsley or cilantro
- 1/4 cup chopped fresh Mexican or regular tarragon (optional)
- juice of 1 lemon (3-4 tablespoons)
- 1 tablespoon olive oil
- 1 tablespoon balsamic or rice vinegar
- salt and pepper
- 1/2 cup roasted pumpkin seeds

In a medium saucepan, bring the water to a boil. Add the quinoa and simmer covered for about 15 minutes. Remove the quinoa from the heat and fluff with a fork, then let cool to room temperature. Transfer it to a large bowl and gently combine with the remaining ingredients except the pumpkin seeds. Top with the pumpkin seeds immediately before serving.

Nutrition Information

Per 1/2 cup serving:
Calories: 150
Protein (g): 6
Fat (g): 5
Saturated Fat (g): 1
Carbohydrate (g): 21
Fiber (g): 4
Cholesterol (mg): 0
Sodium (mg): 105







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Multiethnic Cohort Study
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Los Angeles, CA 90033

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