

Old News is Good News

The 90+ Study

JULY, 2010. VOL. 5



MEET MAR A M. CORRADA, ScD

María Corrada is an associate adjunct professor in the Department of Neurology at UC Irvine. Dr. Corrada was born and raised in Puerto Rico where she received her Bachelor's in Biology at the University of Puerto Rico. She moved to Baltimore to pursue her graduate education and in 1992 received her Master's in Biostatistics from Johns Hopkins. She began working with Dr. Claudia Kawas on an epidemiological longitudinal study of risk and protective factors for Alzheimer's disease. A few years later, she decided to pursue a more advanced degree to continue a career in aging and dementia research and in 2002 received her doctoral degree in Epidemiology, also from Johns Hopkins. Her collaboration with Dr. Kawas continued and moved across the country, when in 2002 she relocated to Southern California to help establish *The 90+ Study*. Dr. Corrada is a co-investigator with the study and oversees all data collection, management, and analyses.

Dr. Corrada's research interests include the epidemiology of dementia, in particular estimating how frequent the

THE 90+ STUDY IN THE NEWS

May 2009 - New York Times front Page

July 2009 - Louie B. Free radio program

March 2010 - Newport Beach Daily Pilot front page

April 2010 - BottomLine Health magazine



disease is and identifying risk and protective factors. Her latest publications have reported on the very high proportion of people aged 90 and older who live with dementia and on how the risk of developing dementia continues to increase after age 90. She is also interested in identifying factors that correlate with the pathologies present in the brains of our oldest-old participants.

Dr. Corrada is happily married to nature artist Ray C. Brown, Jr. and has two beautiful boys, Nicolás (age 4) and Mateo (age 2).

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The 90+ Study



WHAT IS THE 90+ STUDY?

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Principal Investigator: Claudia Kawas, MD
Co-investigators: Annlia Paganini-Hill, PhD,
 Maria Corrada, ScD, Dan Berlau, PhD

The 90+ Study was initiated in 2003 to study the oldest-old, the fastest growing age group in the United States. *The 90+ Study* is the largest study of the oldest-old in the country, enrolling more than 1,400 people. Because little is known about this age group, the remarkable increase in the number of oldest-old presents a public health challenge to promote the quality as well as the quantity of life. *The 90+ Study* is funded by a grant from the National Institute on Aging.



GOALS OF THE STUDY:

Determine Factors Associated with Longevity: What makes people live to age 90 and beyond? What types of food, activities or lifestyles are associated with living longer?

Clinical Pathological Correlations in the Oldest Old: Do the brains of people in their 90s show evidence of memory loss and dementia? Do people with dementia have differences in their brains that can be detected and treated?

Rates of Cognitive and Functional Decline in the Oldest Old: How do memory loss and disability affect those in their 90s? How can people prevent memory loss and disability at this age?

Epidemiology of Dementia in the Oldest Old: How many people aged 90 and older have dementia? How many become demented each year? What are ways to remain dementia-free into your 90s?

The 90+ Study Researchers from left to right.

Standing: Colette Ashmore, Dan Sikangwan, Sandy Pittman, Dan Berlau, Martina Panzenboeck, Maria Corrada, Carrie Peltz, Christina Wittle
Sitting: Montez Hester, Dana Greenia, Beverly Ducey, Adriana Guerra, Jaime DeMoss, Annlia Paganini-Hill, Farah Mozaffar, Claudia Kawas

The program involves brain autopsy, conducted at no cost to the family, with a written report of the findings and an optional discussion and review (in person or over the phone) with a neurologist. Many families find that the final pathological diagnosis provides closure and resolution. Join others and help future generations in understanding and preventing neurological disease.

LEGACY OF HOPE

As a 90+ Study participant, we invite you to enroll in the Brain Tissue Donation Program at the University of California, Irvine. Certain advances in medical research and disease prevention can only be made through the generosity of brain donation. Enrolling in this program does not interfere with any final plans or arrangements for burial, cremation, or the Willed Body Program.

If you are interested in enrolling in the Brain Tissue Donation Program, please call (949) 768-3635 for information.

THE AVID STUDY

We recently worked with Avid Radiopharmaceuticals to test a new tracing compound that could identify the amyloid brain plaques associated with Alzheimer's disease. The injected tracer binds to amyloid in the brain and can be detected during life via a PET scan. Currently, amyloid plaques can only be seen after death by conducting a brain autopsy. Findings from the participants' brain autopsies will be compared to their PET scans to determine the accuracy of the tracer.

Fourteen 90+ Study participants were recruited to take part in this trial. On March 5, 2010, an appreciation lunch for these participants and their families was held at Crystal Cove State Park. We would like to give a huge thank you to the people who participated and donated their valuable time!



FUNCTIONAL DISABILITY

Disability, or having difficulty with tasks such as dressing, bathing, getting in and out of a chair, walking, and feeding oneself, is very common in the elderly and continues to become more frequent with age.

IN OUR STUDY WE FOUND THAT:

- 79% of people aged 90 and over are disabled.
- Women are twice as likely as men to be disabled.
- The activity that most people find difficult is walking.
- The activity that fewest people find difficult is feeding oneself.

With the rapid growth of this age group, disability in people over 90 has major public health implications for the future. We are now trying to identify characteristics that may prevent disability in our most senior citizens.

CAN THE APOE GENE HELP PROTECT AGAINST ALZHEIMER'S DISEASE?

There are three naturally occurring variations of the APOE gene (2, 3 and 4), a gene that has been linked to Alzheimer's disease risk. We examined the relationship between the APOE gene, cognition, and plaques and tangles (the hallmark brain lesions of Alzheimer's disease) and found that APOE4 carriers were twelve times more likely to be diagnosed with dementia while

APOE2 carriers did not have an increased risk of dementia, when compared to those with an APOE3 variant. Somewhat surprisingly, both APOE4 and APOE2 carriers were much more likely to have numerous plaques and tangles. This suggests that APOE2 carriers may have some way of maintaining their memory and thinking despite having abundant Alzheimer's disease lesions in their brains.

ELECTROENCEPHALOGRAPHY (EEGs) IN THE 90+ STUDY

Electroencephalograms, or EEGs, measure the small electrical waves naturally produced by the brain. People with epilepsy and other neurological problems often have abnormal EEGs compared to healthy people.

We performed EEGs on twelve individuals with normal memory and thinking skills and no medical problems. We found that 83% of participants had brain waves that looked "abnormal", leading us to conclude that what are usually considered "abnormal" EEGs may be normal in healthy people in their nineties.

EEGs are often given to older adults after a fall or spell to determine whether it was caused by a seizure. We hope doctors will consider this study when they read an EEG for a patient who is aged 90 or older.



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HAPPY AGING!



People commonly associate youth with happiness but recent research may prove otherwise. Dr. Susan Turk Charles from the University of California, Irvine has found that people actually tend to be happier as they age. In a review of various studies on the subject, Dr. Charles found that not only do older adults seem to be happier, but they are also better at avoiding stressful or unpleasant situations and at ignoring negative memories or comments.

For more information, see the following website:

<http://tinyurl.com/HappyAging>

Old News is Good News is the newsletter of *The 90+ Study*, designed to keep you informed of progress in our research. This newsletter is sent to all participants and family of *The 90+ Study* as well as members of the Leisure World Cohort.

APPRECIATION PARTY



157 participants, family, and friends attended the 6th annual 90+ Study Appreciation Party at Clubhouse 2 in Leisure World on September 23, 2009. Attendants enjoyed lunch, music, and meeting with the researchers.