The Skinny on Fats

What are Omega-3 Fatty Acids?

Are some fats actually good for you? One particular kind of fat – omega-3 fatty acids – just might be. You may have heard about omega-3 fatty acids on news reports or noticed a bottle of these supplements at your local supermarket or health food store, but what is all the buzz about? What do they really do?

Omega-3 fatty acids are a group of essential fatty acids. Our bodies are unable to make these compounds, so humans must ingest them from food sources, such as fish and some plant oils. There are three types of omega-3 fatty acids commonly found in food: alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

Omega-3 fatty acids have important physiological effects, and current research is underway to discover more about the effects of these nutrients in the body. The American Heart Association provides information about the impact of omega-3 fatty acids on human health, particularly that they can be beneficial for heart health in adults, including those who are at risk of or have heart disease.

Foods Containing Omega-3 Fatty Acids

The American Heart Association recommends fatty fish, eaten in moderation, as a source of omega-3 fatty acids. Examples of fish high in DHA and EPA are mackerel, lake trout, herring, sardines, albacore tuna, and salmon. It is important to consider mercury levels before choosing fish to consume. A list of fish with lower levels of mercury can be found at http://www.cfsan.fda.gov/~frf/sea-mehg.html.

Additional good sources of omega-3 fatty acids are tofu and other soybean products, flaxseed, walnuts, and several oils (flaxseed, walnut, and canola). Supplements containing omega-3 fatty acids can also be purchased at health food stores or in some supermarkets.

For people without coronary heart disease, the American Heart Association recommends eating a variety of fatty fish at least twice a week. In addition, they recommend including flaxseed oil, canola oil, and soybean oil in the diet, as well as flaxseed and walnuts – all of these foods are rich in the omega 3 fatty acid ALA. For people with coronary heart disease, the American Heart Association recommends consuming 1 gram of EPA + DHA per day from fatty fish, or in capsule form after consultation with a physician. For people trying to lower their triglycerides, 2 to 4 grams of EPA + DHA per day in capsule form is recommended, but only under a physician’s care, as adverse effects may occur when taking more than 3 grams per day. It is important to talk with your doctor before taking omega-3 fatty acids, especially if you are currently taking blood-thinning medications, cyclosporine, topical steroids, or cholesterol-lowering medications. Omega-3 fatty acids can interact with these drugs. Your doctor can assess the safety of this supplement with each individual in mind.

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There are issues unique to individuals with memory changes and to their family members. We are trying to learn how to better address these issues by developing new services and providing support groups that meet the needs of individuals with memory problems and their families. We are involved in ongoing development of support groups to achieve these goals. Currently the following groups are available at our center:

**Caregivers Support Groups**
This small group is designed to provide answers to individual questions and concerns of caregivers as well as educational information. It also provides a network to offer support and guidance.

**Mild Cognitive Impairment Group**
This group is for individuals with a diagnosis of mild cognitive impairment (symptoms not meeting criteria for dementia) and their family members or friends. The main focus is on education, communication, management, and psychosocial concerns.

**Early-Stage Alzheimer’s Patient and Caregiver**
This group is for early-stage Alzheimer’s patients and their caregivers. It is designed to provide a forum for participants to discuss their concerns and ask questions about the illness. Sessions combine education, psychotherapeutic principles, and support to enhance understanding and coping mechanisms. Patients and caregivers meet simultaneously but separately.

**Alzheimer’s Treatment Consultation Group**
This group is designed for research participants and their caregivers. Dr. Shamala Kanchan answers questions about medical issues and medications. This is a **drop-in** group that meets the second and fourth Wednesdays of every month from 10:00am - 11:00am.

Some of our basic goals include helping participants to:
- Develop new connections with fellow participants.
- Lessen feelings of isolation and being alone.
- Gain a better understanding of Alzheimer’s Disease and Mild Cognitive Impairment.
- Keep abreast of new research and possible treatments.
- Keep current with legal, financial, long term planning issues and community resources.
- Learn about opportunities for participation in research and community activities.
- Acknowledge personal strengths and positive aspects.
- Share information about what works and what does not work.

All groups meet at the Palo Alto VA Health Care System, 3801 Miranda Ave., Bldg. 4, conference room A101 (650) 858-3915 or 493-5000, x 65051
http://arcc.stanford.edu/family.html

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**Omega 3 Fatty Acids and Alzheimer’s Disease**
In addition to connections between omega-3 fatty acids and heart health, the scientific community is also interested in their role in brain health. Some of this research focuses specifically on DHA. DHA is a safe compound which may potentially protect the brain or act against amyloid, a substance which may be involved with Alzheimer’s disease. DHA is found in abundance in the brain, and it is also found within the heart and the retina of the eye. Infants and adults benefit from getting enough DHA in the diet, but on average, the daily DHA consumption in the typical American diet is less than 100 mg. People may need to ingest higher levels of DHA before any neuroprotective effects occur, and research is being conducted to test this hypothesis.

Observational studies have indicated that DHA might protect against Alzheimer’s disease. Other research, including the Framingham Heart Study, found that those people with the highest levels of DHA in the blood were about half as likely to develop dementia as those with lower levels. However, clinical trials are needed to further explore whether DHA can play a role in reducing the risk of Alzheimer’s disease.

**Current Research on Omega 3 Fatty Acids**
The Alzheimer’s Disease Cooperative Study (ADCS) is conducting a nationwide clinical trial of DHA. The ADCS is a consortium of research sites funded by the National Institute on Aging. This controlled clinical trial is seeking 400 participants to investigate whether DHA, the key part of fish oil that protects the brain, can slow the progression of Alzheimer’s disease. The DHA study will be conducted locally by Dr. Wes Ashford at the Stanford/VA Aging Clinical Research Center. In particular, we are looking for people age 50 or older, with mild to moderate Alzheimer’s disease. All participants will need a friend or relative who can accompany them to all clinic visits.

The study will offer participants the opportunity to be clinically monitored by researchers while taking one of the purest forms of DHA available, made from algae that has no fish-related contaminants.

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Spotlight: Jamie Zeitzer, Ph.D.
Assistant Professor, Stanford University School of Medicine, Department of Psychiatry and Behavioral Sciences; Health Science Specialist, Department of Psychiatry, VA Palo Alto Health Care System

We are pleased to welcome Dr. Jamie Zeitzer to our team at the Stanford/VA Aging Clinical Research Center. Dr. Zeitzer joined us last year after having been a fellow at Stanford University for the previous five years. Before that, Dr. Zeitzer did a two-year research fellowship in Neurology at UCLA, his graduate work in Neurobiology at Harvard University, and his undergraduate work in Biology at Vassar College. Dr. Zeitzer is a leading expert in the field of human circadian rhythms and sleep. His work combines the use of animal models, laboratory human research, and clinical research in an effort to understand the neurobiological underpinnings of normal and dysfunctional sleep and wake patterns. It is his belief that by better understanding the basic physiology of the brain under both normal and pathological conditions, we will be able to more specifically treat disruptions of the sleep and circadian systems.

Although he joined us only six months ago, Dr. Zeitzer has already initiated a new research protocol. He aims to determine if improving daytime alertness will cause an improvement in nighttime sleep and cognitive functioning in individuals with Mild Cognitive Impairment (MCI) or Alzheimer’s disease (AD). This study is born from a recent study we have published showing that there is an intrinsic difference in the brain biochemistry of individuals with AD who frequently nap and those with AD who rarely nap. Based on animal work he has done, we are testing if increasing the brain protein responsible for preventing napping will allow individuals with MCI or AD to be more alert and stay awake longer during the daytime.

Dr. Zeitzer is also involved in other research projects which look at improving sleep quality in individuals with spinal cord injuries, examining sleep and circadian disruptions in women with metastatic breast cancer, and his animal work looking at the basic brain biochemistry underlying our ability to consolidate wake and sleep into single daily periods. We look forward to seeing the results of his upcoming studies and hope you will join us in welcoming him to our team!

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Martek Biosciences Corporation, which developed and patented two types of microalgae rich in DHA, is providing the DHA for this clinical trial.

The DHA study will expand our knowledge about the importance of omega-3 fatty acids and Alzheimer’s disease. To see if you are eligible to participate in this cutting-edge research, please call the Stanford/VA Aging Clinical Research Center at (650) 852-3287.

article by Kelly Landy

Sources:
Memantine and Alzheimer’s Disease Study

To sign up for the Memantine and Alzheimer’s Disease study
Contact: Aimee Stepp
(650) 849-1225

RESEARCH OPPORTUNITIES

Is memantine effective in delaying, weakening, or preventing the progression of early Alzheimer’s disease? Memantine or Namenda™, an anti-dementia drug, has been shown to be an effective treatment for some symptoms of moderate to severe Alzheimer’s disease. Study participants are randomly assigned to receive memantine or placebo (inactive pill). Participants receive two MRI scans and are regularly monitored by physicians and qualified health care professionals who specialize in dementia during the 1-year research study.

Participants should:
- be aged 50-95
- have been diagnosed with probable Alzheimer’s disease
- have someone who can be a study partner

Docosahexaenoic Acid (DHA) in Alzheimer’s Disease

To sign up for the DHA study
Contact: Emily Gere
(650) 852-3287

Our goal is to determine the effects of docosahexaenoic Acid (DHA) in slowing the progression of Alzheimer’s disease. DHA is the main omega-3 fatty acid in our brain and eyes. Previous studies suggest that DHA is the key part of fish oil that protects the brain.

The DHA study needs volunteers who:
- Are over the age of 50
- Have been diagnosed with mild to moderate Alzheimer’s disease
- Are fluent in English or Spanish
- Have a study partner – a friend or relative who can accompany them to all clinic visits
- Are willing and able to undergo the test procedures
- Are not currently a resident in a long-term care facility

You will need a study partner to accompany you to all visits.
Participants will be assessed regularly by physicians and other qualified health care professionals.

Light Study

To sign up for the Light study
Contact: Ellen Kim
(650) 496-2578

This study is testing light treatment to improve daytime alertness and nighttime sleep. It is designed to benefit both the individual with memory impairment and their caregiver. A Stanford research team will set up light equipment for the treatment in your home and assist in making your participation in the study as convenient as possible.

Participants should:
- be 55 years or older
- have memory impairment or dementia
- live at home with a caregiver/study partner
RESEARCH OPPORTUNITIES

Exercise and Alzheimer’s Disease

To sign up for the Exercise study
Contact: Christine Coughlin
(650) 858-3915

Memory Training

To sign up for the Memory Training study
Contact: Beatriz Hernandez
(650) 849-0494

Memory Screening

To sign up for the Free Memory Screening
contact: (650) 852-3287

There is evidence that physical exercise can protect and enhance cognitive functions in aging populations. This multi-site study, which is part of the Alzheimer’s Research Centers of California, will ask caregivers to fill out questionnaires about the amount of activity the individual with cognitive impairment participates in on a weekly basis. The questionnaires will be administered once a year, for two years, either in person or over the phone. Each session will take 1-3 hours. Participants should:

- Be older than 60 years
- Be English or Spanish speaking
- Have someone who has frequent contact (3-4 days per week)
- Agree to follow-up in 12 months.

We are recruiting for a pilot study that combines memory training with a medication (donepezil). Donepezil has been proven to be safe and effective in Alzheimer’s patients. This study represents a novel application of the drug in normal elderly with memory complaints and will include our well-tested memory training program. The training program teaches specific memory, organization, concentration, and attitude techniques designed to help you improve your memory performance. The classes will meet every weekday in the morning for two weeks. Study participation will last a total of 16 weeks.

You may be eligible to participate if you are:

- Aged 55 – 90 years
- Experiencing memory problems
- Free of dementia (such as Alzheimer’s disease)
- Willing to take an FDA approved medication (donepezil)

This project is developing an approach to screen for memory problems in group sessions.

Each screening session:

- begins with a brief talk on memory & aging
- involves simple memory games many enjoy
- reviews your results and concerns with staff
Psychosocial Factors in Alzheimer’s Disease Progression

Disease progression in Alzheimer’s Disease (AD) leads to increased dependence, depression, caregiver stress, and institutionalization. The emotional and financial burdens to both patients and their families are high. While there is evidence linking different support interventions to delay institutionalization, information systematically documenting how often these services are used, levels of unmet needs, and perceived barriers to the use of services and their influence on patient rate of decline and institutionalization is limited. The objective of this collaborative project is to determine: 1) The prevalence of day care and support group use among Alzheimer’s Research Center of California (ARCC) subjects diagnosed with Alzheimer’s Disease and their caregivers, 2) Factors associated with day care and support group participation among ARCC subjects and their caregivers, and 3) If regular participation in these programs slows rate of cognitive decline and delays institutionalization.

This study will follow ARCC patients diagnosed with probable or possible AD and their caregivers over a 2 1/2 year period to determine the level of participation in day care and support groups and to examine the impact of participation in these programs on the course of their illness.

Using an Activities Questionnaire caregivers will be asked a series of questions that focus on current participation in day care or support group activities. Patients and their caregivers will then be followed prospectively with their usual ARCC annual clinic reassessments and phone assessments at 6-month intervals. Questionnaires can be mailed and completed in advance of a visit, completed during a scheduled visit or by phone.

Eligible subjects are patients and caregivers currently followed at participating ARCCs. We will be looking for individuals diagnosed with Alzheimer’s disease AND their caregivers to participate. For more information, please contact our Center at (650) 858-3915.

Memory Training Study

It is well known that many older people have concerns about their memory function. For over 20 years, we have studied ways to improve the memory performance of older individuals living in the community who have such concerns. Our work is designed to improve the mental well-being and maintain the independent function of older adults. Toward this end we have run a series of studies that build on the findings of each prior study.

Our research staff has developed a two-part training program. In the first week, participants are taught ways to form images in their mind’s eye of things they wish to remember. In the second week, they apply this imagery-making ability to the use of mnemonic devices (or memory tricks). An example of a verbal mnemonic is the one people commonly use to remember how many days there are in each month: “Thirty days hath September ....” An example of a visual mnemonic for remembering a last name, such as John Baker: visualizing an image of a baker wearing his apron and big white hat.

One hundred and sixty-eight individuals (88 women/80 men with an average age of 65 years) have recently participated in a memory training study. This study combined our most comprehensive memory training program with use of a medication, Aricept™. This medication has been found to have memory enhancing effects in some people. We are currently analyzing data from this study. Preliminary results showed that both normal older adults as well as older adults with Mild Cognitive Impairment (MCI) benefited from the training.

What’s Next?

We are recruiting participants for a new pilot study designed to further enhance benefits people receive from a combined training and medication program. This builds on results of our previous work in this area. For more information, please contact Beatriz Hernandez at (650) 852-3233.
Healthy Aging & Memory Study Ends Successfully!

We are proud to announce the successful completion of the Healthy Aging & Memory Study. Over 600 people have participated in this four-year project at sites across the country, including the Stanford/VA Aging Clinical Research Center. The study began in 2002 with the aim of advancing the development of treatments to prevent Alzheimer’s disease. Prevention trials often require participants to attend many clinic visits over several years, which can be difficult for families with limited time and travel capabilities. To see if this burden could be lessened for future trials, the Healthy Aging & Memory Study examined whether memory evaluations could be done reliably from home. Local participants helped test the efficiency and accuracy of questionnaires returned by mail, completed by telephone calls with our staff, or even filled out on a home computer. The study’s initial findings are promising, and further analyses will soon begin on how well these at-home questionnaires detect changes over time.

What’s Next?

Thanks to the contributions of everyone in the Healthy Aging & Memory Study, this year the National Institute on Aging approved the start of a project investigating more high-tech methods. This national study will determine whether evaluations can be done efficiently using automated telephone questionnaires or on the computer over the Internet. For more information about this latest study on home-based memory monitoring, please call the Stanford/VA Aging Clinical Research Center at (650) 852-3287.

Make a difference: Help end Alzheimer’s Disease!

A contribution to the Aging Clinical Research Center is a gift to future generations in our quest to cure Alzheimer’s disease. Your generous support ensures that the Center continues to conduct top-quality clinical research to improve treatment options and to provide education and support for patients and families. With your help, our clinical researchers investigate the causes of memory loss and neurodegeneration, develop and test better treatments for Alzheimer’s disease, and share these discoveries with the local community and with scientists around the world.

Tax-deductible contributions can be made by check, payable to: Stanford University
Please indicate Stanford/VA Aging Clinical Research Center in the memo line.

Mail your contributions to:
Jerome Yesavage, MD, Director (151Y)
Stanford/VA Aging Clinical Research Center
3801 Miranda Avenue
Palo Alto, CA 94304

Gifts may be made in honor of someone’s special occasion or in memory of someone who has passed away. Please provide the name of the person you wish to honor, as well as the name and address of anyone whom you wish to receive an acknowledgement of the gift.
For additional information about the Stanford/VA Aging Clinical Research Center and opportunities to contribute, call (650) 852-3287. All donations are tax-deductible.
UPCOMING EVENTS

Updates on Dementia IX: Translating Research into Practice
Monday, May 21, 2007  8:00am - 4:30pm
Stanford University: Frances C. Arrillaga Alumni Center - NEW LOCATION

Join us for the ninth annual update featuring the latest research and practice in the field of Alzheimer’s and dementia. This year’s distinguished and internationally known faculty will convene the conference at an exciting new location, the Frances C. Arrillaga Alumni Center at Stanford University.

This year’s keynote speaker is Frank Longo, MD, George and Lucy Becker Professor and Chair, Department of Neurology and Neurological Sciences, Stanford University Medical School. Dr. Longo will present on the clinical manifestation of AD, developments in research of APOE4, nerve growth factor, and discuss clinical treatments in the pipeline.

Conference objectives include:

• Describe recent emerging research and medical treatments for dementia.
• Understand the prevalence of risk factors for dementia in Latino populations.
• Describe the contribution of physical exercise to delaying the onset of dementia.
• Better understand the clinical manifestation and characterization of individual differences in Alzheimer’s dementia.
• Utilize the findings of evidence-based caregiver research to reduce stress and improve quality of life.
• Be aware of cross-cultural perceptions of dementia and their impact on caregiving practices.

Seven Continuing Education Units in the following disciplines: CME Category 1 for physicians and psychologists; RN Contact hours; LCSW/LMFT; nursing home administrator; residential care facility for the elderly.

Regular registration includes all materials, continuing education, and meals: $70; VA Employee: $50; Senior/Student with ID: $25. A limited number of scholarships are available. To register, download a PDF of the form or register online at: www.alznorcal.org. To request a brochure by mail, contact Blanca vazquez@alznorcal.org or (650) 962-8111, x.1322

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Visit us on the web:
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Stanford/VA Alzheimer’s Center: http://arcc.stanford.edu
MIRECC: http://mirecc.stanford.edu
Older Adult and Family Center: http://oafc.stanford.edu

To add or remove your name from our mailing list, call (650) 852-3287 or visit the ACRC web site.

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This newsletter is supported in part by grants from the National Institute on Aging, the Sierra-Pacific Mental Illness Research, Education, and Clinical Center (MIRECC), the Alzheimer’s Disease Program of the State of California, and the Department of Veterans Affairs Medical Research Service.