Dear Friends and Colleagues:

Welcome to the premiere issue of our newsletter, MindMatters. As many of you may be aware, the last 12 months have brought about significant transition and transformation. Over the last several years, as the Silberstein Alzheimer’s Institute, we have been at the forefront of discovery and have achieved significant success in understanding and treating Alzheimer’s disease. Given our history of scientific progress, numerous accolades, and world-renown recognition in the field of brain aging and dementia, in November 2008 we were designated as a Center of Excellence (COE) by NYU Langone Medical Center. As such, we are recognized as the COE on Brain Aging, having integrated the formidable community of neuroscientists investigating the clinical research and clinical service components of the Silberstein Alzheimer’s Institute, including the Pearl Barlow Center for Memory Evaluation and Treatment, with the esteemed NYU Parkinson and Movement Disorders Center. Today, we are a larger, more comprehensive and fully-integrated institution, devoted to achieving research and clinical advances in the treatment and cure of all neurodegenerative diseases affecting cognition. With a team of more than 200 dedicated scientists, clinicians, clinical social workers, geriatricians and professionals, our focus is on revolutionary research and the prevention and treatment of Alzheimer’s disease, Parkinson disease and associated clinical conditions as well as maintenance of brain health as we age.

MindMatters, published biannually, is our way of communicating with you cutting-edge research findings and clinical news emanating from the COE on Brain Aging. This first issue focuses on the unveiling of our world-class, technologically advanced facility in mid-town Manhattan. You’ll also read about our rising researchers and their breakthroughs in the area of dementia science; the COE’s unique and coveted Parkinson disease wellness programs; a clinician’s view and research focusing on the behavioral aspects of Alzheimer’s disease; and psycho-social approaches to help the many caregivers who often suffer in silence. These stories all are woven together by a common thread: researchers and clinicians working in collaborative, multidisciplinary groups, with the goal of translating research findings into novel ways of diagnosing and treating our patients. Today, as a Center of Excellence, we are poised for even greater success in preventing disease and advancing medicine through research and education. We have embarked on the next phase of our journey in pursuit of a cure — purposeful and persevering.

Ralph A. Nixon, Ph.D., M.D.
Director

The COE on Brain Aging recently inaugurated a new facility at 145 East 32nd Street. The state-of-the-art, 15,000 square foot facility promotes collaboration and teamwork unifying the COE’s existing clinical care centers with well-established clinical research programs focused on healthy brain aging, Alzheimer’s disease, Parkinson disease, and other neurodegenerative cognitive disorders. Patient services, clinical trials and clinical research are located on the second floor which is patient-focused in layout, with patient-friendly exam rooms. The Pearl Barlow Center for Memory Evaluation and Treatment (of the Silberstein Alzheimer’s Institute) and the NYU Parkinson and Movement Disorders Centers, as well as clinical research programs, are situated on the second floor. Patients benefit from the facility’s advanced technological capabilities, such as the psychometric testing labs and the Transcranial Magnetic Stimulation (TMS) lab. Also relocated to the new premises is the nationally funded NYU Alzheimer’s Disease Center (ADC), an essential component of the COE. The Center’s renowned research programs continue to exist at 550 First Avenue and at Nathan Kline Institute and other sites in the NYU Langone orbit.

The fifth floor houses the Center’s administrative offices as well as research labs for clinical research investigators. Wired and wireless, this floor brings clinicians and clinical researchers from various sites within the NYU Langone network together regularly over cross-disciplinary projects, in-person and through video-conferencing capability, whereby distant presenters and on-site participants unite in a shared dialogue. Clinical researchers and clinicians working adjacently are able to further combine efforts through closer networking, shared instrumentation, and enhanced database linkages. This aligns preclinical research more closely with clinical diagnosis and treatment, and ultimately clinical research to “translational research,” including drug discovery, and research into the cause of these different diseases. Collaboration on this level fosters creation of an unprecedented translational research capability, which allows for the accelerated delivery of innovative therapies from the lab bench to the patient’s bedside.

The Center of Excellence on Brain Aging’s new facility at 145 East 32nd St.

From the Director

Welcome to MindMatters

SPRING/SUMMER 2010

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State-of-the-Art Facility Empowers
Collaboration and Convergence

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COE Clinicians Further Investigate Behavioral Symptoms of Alzheimer’s Disease

Prevention and Management May Be Linked to Amyloid Beta

The alterations in the brain associated with Alzheimer’s disease often lead to atypical behavior and unpredictable thinking. Behavioral and psychiatric disturbances are quite common in patients with Alzheimer’s disease (AD) and other dementias and include anxiety, sleep disturbances, depression, aggressive behavior, and psychotic symptoms, such as delusions. While these behavioral disturbances are known to be more frequent in the late stage of the disease, in the case of depressive symptoms, they can actually develop decades before the clinical manifestation of AD and may actually represent a prodromal or incubative phase.

Present research indicates that depression is an early risk factor for AD. However, researchers are honing in on whether depression is an indicator of the disease or whether depression in AD patients has its own pathology and is independent of the disease. As the disease progresses, depression and behavioral symptoms become more pronounced and the patient can become violent, aggressive and agitated. These disturbances can be highly distressing for the patient, but also for family members and caregivers. In fact, caregivers of patients with Alzheimer’s disease often consider behavioral and psychiatric symptoms to be the most challenging and distressing aspect of the disease.

Nunzio Pomara, M.D.

Nunzio Pomara, M.D., clinician at the COE’s Pearl Barlow Center for Memory Evaluation and Treatment and Professor, Department of Psychiatry at NYU Langone Medical Center emphasizes, “Unfortunately, we currently do not have any effective pharmacologic treatment for these behavioral symptoms. Not only are the psychotropic medications such as SSRIs, atypical antipsychotics, mood stabilizers, and benzodiazepines presently employed in the elderly largely ineffective, but they may actually aggravate the situation.” In fact, none of these medications have an approved FDA indication for use in AD. “A significant need exists to develop different pharmacological approaches than those which currently exist,” says Dr. Pomara, who also serves as Director of the Geriatric Psychiatry Division of the Nathan S. Kline Institute for Psychiatric Research, a facility of the New York State Office of Mental Health.

Even when these psychotropic medications are combined with the so-called cognitive enhancers such as Aricept and memantine, considerable symptoms remain. In the case of the benzodiazepines (BZPs), extensive work by Dr. Pomara’s group has demonstrated that single therapeutic doses of these agents, such as lorazepam, result in profound episodic memory disturbances even in healthy elderly. “We have also shown that individuals with the APOE e4 allele (Apolipoprotein E, a risk factor gene) which has a prevalence of about 50 percent among AD patients, may be especially vulnerable,” says Dr. Pomara. Moreover and contrary to widespread belief that tolerance to these adverse effects develop after long-term use, Pomara’s team has demonstrated that the impairments produced by acute BZP doses persist in this population.

One of the most important contributions in this field of research conducted by the Pomara research team, which may provide a novel paradigm for the treatment of depression and other behavioral disturbances associated with AD, was their discovery that depressed elderly have elevations in amyloid beta 1-42 (Abeta42). Abeta42 is a protein fragment found in the brain that has long been suspected of playing a crucial role in the development and progression of Alzheimer’s disease. In the brains of persons affected by the disease, amyloid beta aggregates into large structures known as amyloid plaques, which are known to be toxic to nerve cells. These plaques are one of the hallmarks of Alzheimer’s disease. Soluble, circulating forms of the Abeta peptide, especially Abeta42, can also potentially disrupt neurotransmitters implicated in depression and other behavioral disturbances associated with AD.

Abeta lowering drugs for treatment resistant depressions associated with late-life and AD and do not respond to treatment with currently available conventional psychotic medications. To further test this hypothesis and as part of a recently awarded seed grant from NYU Langone, the Pomara research group will determine if treatment resistant depression in the elderly is accompanied by elevations in plasma and cerebral spinal fluid Abeta42. If confirmed, this will provide a rationale for the possible use of emerging Abeta lowering drugs for treatment resistant depression in the elderly and, more importantly, for the prevention and management of behavioral and psychiatric symptoms associated with AD. This work has also provided the basis for a joint patent application with NYU Langone School of Medicine.

Formation of Amyloid Plaques — The Hallmark of Alzheimer’s Disease

Abeta42 is a protein fragment found in the brain that has long been suspected of playing a crucial role in the development and progression of Alzheimer’s disease. In the brains of persons affected by the disease, amyloid beta aggregates into large structures known as amyloid plaques, which are known to be toxic to nerve cells. These plaques are one of the hallmarks of Alzheimer’s disease. Soluble, circulating forms of the Abeta peptide, especially Abeta42, can also potentially disrupt neurotransmitters implicated in depression and other behavioral disturbances associated with AD.

Clinical Trials Offer Breakthrough Treatments

For decades, NYU Langone investigators have been at the forefront of scientific discovery in the realm of Alzheimer’s disease and other neurodegenerative disorders. In just the last few years, our scientists have made significant strides in gaining a better understanding of dementia and aging-related brain disorders. Yet, laboratory research can only be fully appreciated and the potential fully realized through clinical studies. Clinical trials are the force behind the treatment, cure and prevention of any disease. These trials sometimes produce superior outcomes compared to standard treatments. Participation not only benefits the patient, but the entire medical community, as information gained is used to direct future research.

Presently, at the COE, a very active clinical trials program exists with more than 20 research programs in progress.

To participate or inquire about clinical trials at the COE, please visit our website www.aging.med.nyu.edu or call our Clinical Trials Coordinator at 212.263.5867.

www.aging.med.nyu.edu
A Community-based Model of Care: 
Wellness Programs Provide Therapeutic Benefits and Improve Quality of Life

The NYU Parkinson and Movement Disorders Center and the Jewish Community Center (JCC) in Manhattan kicked-off their third season of programming, offering wellness programs for people with Parkinson’s, their families, care partners and friends. The NYU/JCC Parkinson’s Wellness Program is nationally recognized as a unique community-based care program, founded on the principle that there lies great potential for physical, mental, social and emotional benefit through increased education, support, creative expression, exercise and improved fitness. Clinical evidence suggests that therapeutic benefits for Parkinson’s patients are achieved through a regular exercise and fitness program when incorporated into a healthy lifestyle.

The NYU/JCC fitness classes are designed for people with Parkinson’s and are geared to help improve strength and maintain balance and flexibility. The classes also help build community and support between those diagnosed with the disease. Instructors are educated through the National Parkinson Foundation’s Allied Team Training for Parkinson (ATTP) program and receive ongoing education as well. While living with a chronic illness can be very challenging, the medical team at the NYU Parkinson Center believes that the development of an environment of empowerment through wellness, support and creative expression is paramount to a patient’s health and well-being... their families after they have been diagnosed with Parkinson’s. The program also provides a social network for those with the disease to meet and interact with others — sharing experiences together and offering support and encouragement.

The seasonal fitness program includes low-cost, 10 week classes in: pilates, tai chi, yoga, water exercise, Nia: Movement and Music, and a Chair Exercise class which incorporates music and focuses on balance, strength and flexibility. Also offered are workshops in the Alexander Technique, a body alignment method and breath awareness method, and a weekly support group for Parkinson’s care partners.

The NYU Parkinson and Movement Disorders Center provides comprehensive, interdisciplinary and stage-appropriate clinical care in order to optimize function and quality of life. For families affected by Parkinson’s, offering “the right care, at the right time, over time” is paramount. This means having a continuum of programs and services, from inpatient to outpatient to community-based, geared to the needs of persons with Parkinson’s, their families and care partners at early, middle and more advanced stages of illness.

The NYU Parkinson and Movement Disorders Center was designated recently as a Center of Excellence by the National Parkinson Foundation. The Center is one of only three in Manhattan to be awarded this prestigious designation, and only one of 38 nationwide.

To learn more please visit our web site at www.med.nyu.edu/parkinson.
For more information on the NYU Parkinson’s Wellness Programs, please contact Amy Lemen at 212.263.7282 or visit www.jccmanhattan.org
Enrollment is limited; classes fill quickly.

...the development of an environment of empowerment through wellness, support and creative expression is paramount to a patient’s health and well-being...

FACTS

Did You Know?...

- Alzheimer’s and dementia triple healthcare costs for Americans age 65 and older.
- The direct and indirect costs of Alzheimer’s disease and other dementias to Medicare, Medicaid and businesses amount to more than $148 billion each year.

For more information, please visit www.alz.org

Source: Alzheimer’s Association
Finding New Pieces to the Puzzle: Rising Researchers Receive Grants from Alzheimer’s Association

A rising group of researchers at the COE’s Silberstein Alzheimer’s Institute were recently awarded grants for dementia research by the Alzheimer’s Association, Allal Boutajangout M.S., Ph.D., Lidia Glodzik M.D. Ph.D., and Lisa Mosconi Ph.D., represent a small group of 84 researchers globally, out of an extremely competitive field of 815, who earned funding for their novel, dementia-related exploratory research. The COE salutes this distinctive, younger generation of scientists who bring innovation and inspiration to research and hold the promise for future discovery.

With an award of $140,000 over three years, Allal Boutajangout’s research focuses on the influence of Presenilin mutations on tau pathology. Presenilin 1 (PS1) is a component of an enzyme that generates Ab, which is an important focus of research on Alzheimer’s disease; mutations in PS1 are the most common cause of early-onset forms of the disease. These mutations cause an increase in production of beta-amyloid, a peptide fragment that aggregates to form amyloid plaques, a characteristic feature of Alzheimer’s pathology. Brain cells with PS1 mutations also exhibit neurofibrillary tangles, the other defining feature of Alzheimer’s pathology. The biochemical pathway mediating the formation of “tangles” after mutation of PS1 is not well understood.

Dr. Boutajangout and colleagues will study the mechanisms of tangle formation using mice that have been genetically altered to express the human gene for a protein known as tau, implicated in Alzheimer’s disease. The researchers will create a mouse model of tangle formation induced by the PS1 mutation — very useful for studying the onset and progression of AD as well as for studies to identify new drugs to eliminate tangles. Presently, Dr. Boutajangout serves as Research Assistant Professor of Physiology and Neuroscience.

Receiving $80,000 over two years to work on her investigation, Lidia Glodzik will focus on changes in the brain related to blood flow. There is some evidence that early disease may be associated with changes in blood flow beginning at early stages of the disease, but the characteristics of these changes and their contribution to further disease progression are not well understood.

Dr. Glodzik, Assistant Research Professor, and colleagues have begun to study changes in brain blood flow in healthy persons at risk for Alzheimer’s disease. They have identified individuals at increased risk by measuring protein tau in the cerebrospinal fluid. In preliminary studies, Dr. Glodzik’s team used magnetic resonance imaging (MRI) to reveal that persons at increased risk for Alzheimer’s disease have reduced blood flow in a region of the brain known as the hippocampus, especially vulnerable to damage in persons with AD. Extensive studies of high-risk individuals will be conducted and may provide important information about the links between identified risk factors for the disease and the biological mechanisms of neurodegeneration.

Receiving a grant of $200,000 over three years, Lisa Mosconi’s investigation focuses on first degree relatives of patients with Alzheimer’s disease, who may be at increased risk for Alzheimer’s disease. Specifically, active projects involve identification of biological mechanisms involved in maternally transmitted Alzheimer’s disease, such as abnormalities in brain function. One of the risk factors for late-onset Alzheimer’s disease is having a first-degree relative with the disease; having a mother with Alzheimer’s disease appears to be a stronger risk factor than having a father with the disease.

Dr. Mosconi and team are studying brain function, and particularly brain glucose metabolic rates, in healthy persons with a first-degree family history of Alzheimer’s. Glucose is a sugar that is utilized by the brain for energy. Low sugar utilization reflects low brain activity. Using positron emission tomography (PET) to image brain function, they have found that brain metabolic rates are lower in healthy persons whose mother had Alzheimer’s disease, as compared to those whose father or other first-degree relative had the disease. The goal of Dr. Mosconi’s study is to explore the impact of having a maternal and/or paternal family history of Alzheimer’s disease on brain glucose metabolism in young adults. Ongoing studies will provide additional information on the genetic factors associated with late-onset Alzheimer’s, and possibly help refine models used to assess risk in later life. Dr. Mosconi is Assistant Professor of Psychiatry, and PET Imaging Research Director at the Center for Brain Health at the COE. (Excerpts from the Alzheimer’s Association website, www.alz.org)
COE’s Mary Mittelman, Dr.P.H. Receives First Global Award for Alzheimer’s Psychosocial Research

Alzheimer’s Disease International (ADI) and the Fondation Medicr Alzheimer’s presented the first global award for psychosocial research in Alzheimer’s and dementia to Mary Mittelman, Dr.P.H. of the COE’s Silberstein Alzheimer’s Institute. The award was in recognition of the best evidence-based intervention for patients with dementia and their caregivers through the NYU Caregiver Intervention program.

Dr. Mittelman’s research focuses on the importance of psychosocial and social intervention, which includes improving dementia caregiving skills, mobilizing the support of naturally existing family networks, and caregiver counseling, as part of a comprehensive medical care approach. The project is unique in that it has followed Alzheimer’s caregivers for the duration of the illness and assessed the impact of the intervention on caregivers over many years, through all stages of the disease. In this research study, Dr. Mittelman’s multi-component intervention extended the patient’s stay at home 18 months longer than those receiving usual care in the control group.

“Delaying placement was not accomplished at the expense of the caregiver’s well-being,” says Mittelman. “Caregivers in the treatment group were not only able to keep their spouses at home with them longer, but as a result of the intervention had greater tolerance for patient memory and behavior problems, improved satisfaction with the support provided by family and friends, and fewer symptoms of depression.” A notable facet of the NYU Caregiver Intervention Program is individualized counseling for caregivers and their family members, taking into account each patient and caregiver having differing needs.

Dr. Mittelman has been evaluating psychosocial interventions for family members with patients with Alzheimer’s for more than two decades. She is Director of the Psychosocial Research and Support Program at the COE on Brain Aging, and Research Professor in the Department of Psychiatry at NYU Langone Medical Center. She also leads the Education and Psychosocial Cores of the NYU Langone Alzheimer’s Disease Center. She is Principal Investigator of the NYU-Spouse Caregiver Intervention study, which has been funded by the NIH since 1987. In conjunction with her colleagues, Dr. Mittelman has authored several books for caregivers and professionals, including “Counseling the Alzheimer’s Caregiver: A Resource for Healthcare Professionals” which details the NYU Caregiver Intervention program.

Einar M. Sigurdsson, Ph.D., Recipient of Prestigious Margaret M. Cahn Research Award

The Alzheimer’s Association presented this year’s Margaret M. Cahn Research Award to Einar M. Sigurdsson, Ph.D., Associate Professor of Physiology and Neuroscience, and Psychiatry, at the Wine and Roses Gala in Poughkeepsie, NY. Each year, the award is presented to a Zenith Award Recipient, selected by the Cahn family, and recognizes an Association-funded researcher in the NY area who is doing outstanding work.

The Zenith Fellow Grant Dr. Sigurdsson received from the Alzheimer’s Association is on developing therapies to clear and prevent toxicity of pathological tau conformers, and to monitor this approach in vivo utilizing manganese enhanced magnetic resonance imaging, in collaboration with Dr. Youssif Zaim Wadghiri, Assistant Professor of Radiology. Dr. Sigurdsson has pioneered the approach to harness the immune system to clear pathological tau proteins. Tau proteins are abundant brain proteins that, under pathological conditions such as in Alzheimer’s disease, can aggregate and eventually form tangles within the neurons, which impair their function and lead to neuronal death and subsequent cognitive impairments.

The Laboratory for Dementia Research and Experimental Therapeutics at the COE on Brain Aging, headed by Dr. Sigurdsson, focuses on the pathogenesis, therapy and diagnosis for age-related degenerative diseases, in particular Alzheimer’s disease but also prion diseases and more recently type-2 diabetes. In these disorders, a normal protein is converted to a pathological form with a high β-sheet structure. The scientific theme of his work is to study this conformational alteration, its consequences at the molecular and functional level, and the factors involved in this process.

The Margaret M. Cahn Research Award acknowledges the philanthropy of local Zenith Society member Margaret M. Cahn, who, since 2004 has given more than $2.73 million to support the work of the Alzheimer’s Association.
One morning, as Paulette McLeod was on her cell phone, she noticed her right arm became profoundly weak. As weeks passed, the sensation recurred. Not knowing what was wrong she sought the help of her internist, who recommended physical therapy. She followed his advice and after a full year of therapy and no results, the therapist recommended she see a neurologist. This is when her life took a different turn.

At the age of 51, Paulette was diagnosed with early onset Parkinson disease. Fortunately, she was soon to be under the care of the world-renowned physician, Melvin Yahr, a legendary pioneer in the field of Parkinson’s. Working alongside Dr. Yahr was Dr. Alessandro Di Rocco who has since then been Paulette’s doctor for the past decade. Paulette couldn’t be more thankful for the expert care provided to her by Dr. Di Rocco and his team at the NYU Parkinson and Movement Disorders Center. As she explains, the care she receives is not confined to a prescription or medical advice. “Dr. Di Rocco provides me with hope… with positive, truthful reinforcement. He honors and respects people like me who have the disease and credits us for forging ahead.” A bit tearful, she softly says, “I am thankful for his spirit.”

For the past 13 years, Paulette has actively managed her disease, instead of the disease managing her. She continues to live a full life — professionally, and as a wife, mother and newly blessed grandmother. She works a long day as Vice President of the Creative Services division of AETN, a local cable company. And yet she makes time to participate in the NYU/JCC Parkinson’s Wellness Program. She enjoys yoga and aquatic exercise as a program participant and finds the exercise to help her with muscle movement and flexibility.

Paulette is realistic about her disease and has learned to find ways to alleviate some of the symptoms. “There are times when the fear and magnitude of the disease overwhelm me,” she says, “and I just have to cry, but then I know I have to move on. I have to live in the moment.” She enjoys dance, singing and playing the piano and has found that music plays a significant therapeutic role in her life in terms of helping her not only with her physical movement but also emotional distress. As she says, “I don’t feel the disease when I am making music.” Recently, she has taken an interest in drawing with pastels and finds it helps her release positive energy. Her advice to those who may be newly diagnosed or are challenged with the disease: “Find what works for you.” This may be spirituality, meditation, art, music or exercise. As she says, “We all have it within us to create a ‘toolbox’ of elements that can help us move on.”

Paulette has done more than just move on. She has met her challenge head-on and continues to face each day with courage and resilience. In the words of Eleanor Roosevelt, “You gain strength, courage, and confidence by each experience in which you really stop to look fear in the face. You are able to say to yourself, ‘I have lived through this horror. I can take the next thing that comes along.’ You must do the thing you think you cannot do.”

Caring for a Spouse: Top Ten Tips for Caregivers

Caregivers often suffer in silence. Frequently regarded as the “hidden patients,” many suffer as much or more than a patient with Alzheimer’s disease. Being a caregiver for a spouse diagnosed with Alzheimer’s is a physically demanding and emotionally draining experience. Often, spousal caregivers face chronic health issues due to sustained stress and hardship. Though no two situations are alike, based on results from her 20 year counseling intervention study, internationally-renowned expert, Mary S. Mitelman, Dr.P.H provides the following advice:

1. Create a window of time for yourself.
   Make the time to enjoy hobbies or activities that are of interest to you. If you enjoy reading or taking classes, try to carve out time in your schedule to continue with these hobbies.

2. Preserve your own health.
   Be sure to exercise and make appointments for regular check-ups with your doctor.

3. Take time to eat nourishing meals.
   Try to eat three balanced meals each day. Proper nutrition will help you not only stay healthy, but will provide you with the necessary energy you need throughout the day, and sometimes at night. Poor diet leads to poor health, which translates often into not being able to provide good care.

4. Give thought to activities in which you and your spouse can both be involved.
   Enjoy each other’s companionship. For some, this may be a daily walk, listening to music, or cooking dinner each night.

5. Research programs in your community for people with Alzheimer’s disease.
   These may include art or music programs.

6. Learn as much as you can about Alzheimer’s disease.
   Read books; contact your community chapter of the Alzheimer’s Association online at www.alz.org; visit our website for information and educational seminars (www.barlowcenter.org)

7. Ask for help from family and friends.
   A strong support system has been proven to be effective in reducing depression of spouse caregivers in addition to helping maintain their physical health.

8. Give yourself credit for your successes; and don’t blame yourself for your mistakes.

9. Talk about your emotions. Anger, guilt, embarrassment and remorse are often felt by spousal caregivers. These are not abnormal feelings.

10. Join a support group.
   Getting counseling and much needed support can help you be a better caregiver. It may also provide you companionship in addition to information.

For more on our counseling and support programs, please call 212.263.0731.
Ingredients:
- 12 large dried sea scallops (about 1 pound; see Note*)
- 1/4 teaspoon lemon pepper
- 1/4/4 ounces very thinly sliced prosciutto (about 3 slices), cut into 12 long strips
- 3 tablespoons extra-virgin olive oil
- 1 teaspoon freshly grated lemon zest
- 1 tablespoon lemon juice
- 1/4 teaspoon salt
- Freshly ground pepper to taste
- 12 ounces baby spinach

Nutrition Profile: Low Calorie / Low Carb / Low Cholesterol / Low Sat Fat / High Potassium / Heart Healthy / Diabetes Appropriate / Healthy Weight

Servings: Makes 4 servings

Per serving:
- 239 calories; 14 g fat (3 g sat, 8 g mono);
- 47 mg cholesterol; 6 g carbohydrate; 23 g protein;
- 2 g fiber; 620 mg sodium; 782 mg potassium.

Nutrition Information:
- Per serving: 239 calories; 14 g fat (3 g sat, 8 g mono);
- 47 mg cholesterol; 6 g carbohydrate; 23 g protein;
- 2 g fiber; 620 mg sodium; 782 mg potassium.
- Nutrition bonus: Vitamin A (100% daily value), Magnesium (31% dv), Folate & Vitamin C (30% dv), Potassium (22% dv).

Exchanges: 1 vegetable, 3 very lean meat, 2 fat, carbohydrate

* Note: Be sure to buy “dry” sea scallops (scallops that have not been treated with sodium tripolyphosphate, or STP).

Source: Eating Well Magazine (eatingwell.com)

MindMatters SPING/SUMMER 2010
Publication of NYU Langone Medical Center / Center of Excellence on Brain Aging

BOOK REVIEW

The New Executive Brain: Frontal Lobes in a Complex Brain
By Elkhonon Goldberg

In his newly released book, The New Executive Brain, author Elkhonon Goldberg provides fresh, iconoclastic ideas about the relationship between the brain and the mind. Goldberg provides readers with cutting-edge thinking in cognitive neuroscience and neuropsychology, reaching far beyond the frontal lobes. Drawing on the latest discoveries and developing complex scientific ideas and relating them to real life through many fascinating case studies and anecdotes, the author explores how the brain engages in complex decision-making; how it deals with novelty and ambiguity; and how it addresses moral choices. At every step, Goldberg challenges entrenched assumptions. For example, we know that the left hemisphere of the brain is the seat of language — but Goldberg argues that language may not be the central adaptation of the left hemisphere. Goldberg also finds that emotions are controlled by a complex interaction between the frontal lobes, a recently evolved brain region, and the amygdala, a much older part of the brain, reflecting the meeting of conscious thoughts with emotional impulses. Goldberg’s insights are refreshing challenges to both cognitive neuroscience and neuropsychological conventions. With lucid prose and bold ideas, The New Executive Brain is a provocative and creative exploration of the brain.

— Review adapted from Oxford University Press

Praise for Elkhonon Goldberg’s The Executive Brain

“It is only now... that we are beginning to get the full measure of complexity of the living body, to see how nature and culture interact, and how brain and mind produce each other. There are a handful, a small handful, of remarkable books which address these central problems with great force — those of Gerald Edelman and Antonio Damasio at once to mind— and to this select number, Elkhonon Goldberg’s book, The Executive Brain, should surely be added.”

— Oliver Sacks, The New York Review of Books

Elkhonon Goldberg, Ph.D., ABPP/ABCN, is a clinical professor of neuropsychology at NYU Langone and has recently joined the COE on Brain Aging as Program Director. Dr. Goldberg is internationally renowned for his work on executive functions and dysfunction. His other areas of expertise include memory disorders, attention deficit disorder, dementia, traumatic brain injury, and others.
Q & A With Dr. Nixon

What is the benefit of early detection if there are no treatments available to stop the progression of Alzheimer’s?

Though there are no treatments that actually prevent or impede the advancement of AD, you may benefit from a tailored treatment plan that can help relieve and treat some of the symptoms of the disease, thus enabling you to maintain your level of independence for a longer period and make certain lifestyle choices. Your doctor may also discuss with you ongoing clinical trials of new medications or other forms of therapy which you may want to consider and participate in. Additionally, you and your loved ones can benefit from the many support programs and services available.

As with any disease, AD can put an immense amount of stress on the caregiver. For some caregivers, it becomes a full time job. It is important for the person or family members taking care of you to learn the skills necessary and also receive appropriate support and care for themselves. Lastly, an early, accurate diagnosis provides you with the time you may need to plan for the future in terms of living arrangements and legal considerations.

I believe my father may have Alzheimer’s but I’m not sure of the first step in getting help for him. I’m also fearful of having him undergo testing that may be intrusive and painful.

I can well understand your apprehension and fear, but testing for AD is generally a non-intrusive process. The first place to start is with your father’s internist or general practitioner. He/she will ask a few questions, review medical history and most likely recommend that you consult with a neurologist and perhaps a psychiatrist. At the Barlow Center, a new patient consultation involves a review of past history, previous lab tests, and notes of former physical exams; second, the clinician would conduct a series of simple cognitive tests, which include verbal exercises, testing of language ability and short-term memory; third, your father would undergo some form of neurological and psychological testing which would involve brain imaging — similar to having an x-ray taken and is neither painful nor intrusive. This combination provides us with most of the information we need to make an accurate diagnosis. Your father would be seen by not only a neurologist but, if need be, a psychiatrist, geriatrician and an internal medicine specialist. Our patient care teams also include clinical social workers to assist caregivers.

Letters to the Editor: We encourage you to write to us — voice your comments and feedback on articles you have read in our newsletters. We will select a few for publication in each issue. Letters may be submitted via email to aging@nyumc.org or sent to the Editor, MindMatters / Center of Excellence on Brain Aging, NYU Langone Medical Center / 145 East 32nd Street, New York, NY 10016.

We reserve the right to edit letters for length.