A-Rockin’ and A-Rollin’: In Search of Longevity

Numerous species are more long-lived than humans. Bristlecone pines have been known to live as long as 4,900 years. Clams live at least 400 years. The oldest giant tortoise lived 185 years. In comparison, the longest-lived human, Madame Calment from Arles in France, lived only 122 years.

Human lifespan has increased from a median lifespan of 22 years in ancient Roman times to nearly 50 years in the USA at the beginning of the 20th Century. At present, life expectancy for females in the United States is 80 years and for males is 77 years. Japanese females live 84 years on average. The longevity of the Japanese has been attributed to their high daily activity level and their high intake of fish (6.8% of their diet compared to 0.8% in the USA).

The reasons for men having a shorter lifespan than females include the Lonely X chromosome, hormonal differences, smoking and alcohol use, higher risk-taking in males, immune system differences, and males having a lower level of health compliance. Despite the longer lives that women have, they also have more illnesses and spend more time in a state of disability.

(continued on page 3)
Geriatrics In China

Three 4th year medical students, Randall Morse, Tod Mattis, and Daniel Johnson, did an elective entitled “Geriatrics in China.” Their elective included inpatient rounds and outpatient clinics in the Geriatrics Department at West China Hospital associated with Sichuan University in Chengdu, China. The hospital has over 4,000 beds and does over 2 million outpatient visits per year. They also visited a nearby centenarian population in Dujianyan and Qingcheng Mountain with Dr. Joseph Flaherty who is doing collaborative research in this area with the West China Geriatrics Department.

Dr. Paniagua Receives Fellowship Status

Miguel Arturo Paniagua, MD, FACP, received his Fellowship in The American College of Physicians in April. Fellowship is an honor achieved by those recognized by their peers for personal integrity, superior competence in internal medicine, professional accomplishment, and demonstrated scholarship. Congratulations to Dr. Paniagua!

Dr. Flaherty Promoted

Joseph H. Flaherty, MD, was promoted on July 1, 2009 to Tenured Professor in the Division of Geriatric Medicine, Department of Internal Medicine, at Saint Louis University School of Medicine.

Awards Given

The Saint Louis University Presidential Service Awards were celebrated earlier this year. The University honored 94 faculty and staff who have been with the University for 25, 30, 35, 40, 45, and more than 45 years. Dr. Horace M. Perry, and Valerie A. Tanner, both from the Division of Geriatric Medicine, were recognized for 25 years of service.

Best Docs Named

From more than three dozen specialties, 148 SLUCare doctors have been selected for St. Louis Magazine’s 2009 “Best Doctors” list. The list is based on the annual “Best Doctors in America” database, which considers more than one million peer evaluations to create a directory of approximately 30,000 doctors. The Best Doctors for 2009 from the Division of Geriatric Medicine are Joseph H. Flaherty, MD, Julie K. Gammack, MD, John E. Morley, MB, BCh, Miguel A. Paniagua, MD, and David R. Thomas, MD.
Aging Successfully, Vol. XIX, No. 2

The oldest population in the world is Italy, with 20% of the population over 65 years of age compared to only 13% in the USA. In Italy, the ratio of the over 65 population to working age population is 45% to a mere 20% in the United States.

About 20 to 30% of aging is due to genes. Most of the genetic effect is seen in persons over 60 years of age. There is also evidence that in utero effects may modulate aging.

Physiologically, humans peak between 20 and 30 years of age. After the age of 30, muscle strength declines at 1% per year. Memory peaks at 24 to 26 years of age. Productivity peaks between 40 and 50 years of age, though there is some evidence that persons are now remaining productive for a longer period of time.

It is clear that a number of modifiable environmental factors can prolong life (Table 1). These include not smoking, not being sedentary, eating adequate fruit and vegetables, controlling hypertension and diabetes mellitus, managing crises well, and having moderate alcohol intake (1 to 14 servings per week). Poverty plays a major role in decreasing longevity. Persons living in the affluent suburb of Lenzie in the city of Glasgow, Scotland have a lifespan of 82 years compared to those living in the inner city area of Calton who live only 54 years. Persons living in Calton have a lifespan of 82 years compared to those living in the inner city area of Calton who live only 54 years. Persons in St. Louis City live six years shorter than persons living in the surrounding county. Poor neighborhood conditions in St. Louis City independently predict mobility problems. Problems with walking at a slow speed are associated with increased mortality.

Stressful life events such as earthquakes and social events such as economic crises (see the graph on page 4 to view the effect of economic and political turmoil on the lives of the oldest-old men in Hong Kong) increase mortality. Improvement in the environment can decrease mortality as was seen after the fall of the Berlin Wall when East Germans rapidly developed a survival equivalent to West Germans.

Numerous studies have found that food rich in antioxidants decreases mortality. However, antioxidant vitamin supplements have no effect on mortality. This suggests that it is food rather than specific components that provides protection.

The one exception to this generalization is vitamin D. Low levels of vitamin D are associated with increased mortality. Vitamin D levels in blood are often low in older persons due to lack of sunlight exposure, and lack of absorption of a vitamin D rich food such as fatty fish. There is evidence that vitamin D supplements increase bone density and decrease mortality. The one exception to this generalization is vitamin D. Low levels of vitamin D are associated with increased mortality. Vitamin D levels in blood are often low in older persons due to lack of sunlight exposure, and lack of absorption of a vitamin D rich food such as fatty fish. There is evidence that vitamin D supplements increase bone density and decrease mortality.

Table 1. The Top 10 Longevity Treatments for Older Persons

<table>
<thead>
<tr>
<th>Rank</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exercise</td>
</tr>
<tr>
<td>2</td>
<td>Do not smoke.</td>
</tr>
<tr>
<td>3</td>
<td>Five servings of fruit and vegetables daily.</td>
</tr>
<tr>
<td>4</td>
<td>Vaccinations (influenza, pneumonia, tetanus).</td>
</tr>
<tr>
<td>5</td>
<td>Drink 1-2 glasses of alcohol daily.</td>
</tr>
<tr>
<td>6</td>
<td>Replace vitamin D to greater than 30 ng/ml.</td>
</tr>
<tr>
<td>7</td>
<td>Maintain systolic blood pressure between 130 to 160 mmHg.</td>
</tr>
<tr>
<td>8</td>
<td>Avoid polypharmacy and use cheap drugs.</td>
</tr>
<tr>
<td>9</td>
<td>Eat fatty fish at least twice per week.</td>
</tr>
<tr>
<td>10</td>
<td>Fish oil or statins for secondary prevention of cardiovascular disease</td>
</tr>
</tbody>
</table>

(continued on page 4)
25(OH) vitamin D levels are associated with declines in muscular strength, reported disability, sarcopenia, falls, and hip fractures. When vitamin D levels are below 30 ng/ml, supplementation with vitamin D reverses these changes and is associated with decreased mortality.

Caloric restriction has been shown to enhance lifespan in worms, flies, and rodents. A recent study suggested that caloric restriction reduces age-related deaths but not all deaths. In all these cases, caloric restriction is defined as a 30% reduction over ad lib food intake in sedentary animals with free access to food.

In the sixteenth century, Louis Coranno suggested that “To eat only enough to sustain life” would prolong life. While caloric restriction in humans improves glucose metabolism, lipids, and high blood pressure, there is no evidence that it extends lifespan. In fact, in persons over 60 years of age, weight loss leads to almost a doubling of the death rate. Weight loss in particular is associated with loss of bone mass and hip fracture.

High total energy expenditure leads to increased longevity. In the 1950s, a study of London bus conductors compared to the drivers of those same buses showed that the conductors were much less likely to develop cardiovascular disease. Persons who exercise three times a week are less likely to develop dementia than those who exercise less often.

Multiple studies have shown that church attendance (social support) and spirituality (coping skills) enhance function and decrease mortality (see article on page 21).

(continued on page 5)
The lessons for improving longevity are currently being applied throughout the United States. As shown in the figures of the United States (left), with the exception of Alaska, by the year 2025 the proportion of citizens over the age of 65 will increase significantly in every state. This increase has important implications for properly training an eldercare workforce, for recruiting enough workers to meet the growing demand for their services, and for containing healthcare costs without decreasing the quality of care.

Longevity in America is increasing as a result of our past successes with providing improved medical treatments. For older persons, this improved care has meant an increased lifespan and, eventually, greater amounts of time living with one or more disabling chronic diseases. This has led to an increased demand for rehabilitation services. Families and caregivers are becoming more entrepreneurial. Day care programs abound. Nursing homes are now sites of respite care and sub-acute rehabilitative services. Older persons are demanding to be allowed to stay at home, even with much higher levels of disability. Geriatric care must continue to change to meet these new demands that arise from an ever-older clientele.

It will be interesting to watch as mankind goes on “a-rockin’ and a-rollin’” in search of longevity, reaching for immortality.
Terry Zenser, PhD, Research Director of the St Louis VA GRECC, has recently retired after 33 years of service to the St Louis VAMC. For 38 years he has done research on renal disease, bladder cancer and liver metabolism. Shortly before retiring he published his 174th peer-reviewed paper. As is typical of dedicated researchers, Dr Zenser has not truly retired. He maintains a WOC appointment with the GRECC because there are more papers still being written.

Do you have a question about the St Louis VA GRECC? Do you want to know what GRECC stands for? Do you need to know the e-mail address of one of the GRECC staff? Now the answers to those questions can be found on-line.

Thanks to the hard work of Florentino Raya, a junior at California State Polytechnic Institute at Pomona and a participant in a Hispanic Association of Colleges and Universities National Internship Program at Jefferson Barracks VA this summer, the St. Louis VA GRECC now has a website. Visit us now at http://www.stlouis.va.gov/GRECC/homepage.asp. If there are questions that are not answered, contact nina.tumosa@va.gov and she will try to get the information posted.

Saint Louis University SLUCARE Sleep Disorders Center

A multidisciplinary team of physicians, led by Co-Directors Joseph R. Espiritu, M.D., F.A.A.S.M., and Raman Malhotra, M.D., DABSM from Saint Louis University, have collaborated to create the one-of-a-kind Sleep Disorders Center, a state-of-the-art clinic designed to diagnose and treat sleep problems.

The center utilizes sleep experts from a variety of specialties (pulmonary medicine, neurology, psychiatry, and otolaryngology) to deliver a comprehensive sleep evaluation for patients. Drs. Espiritu and Malhotra, who are both fellowship trained and board certified in sleep medicine, diagnose and manage a variety of sleep disorders, such as sleep apnea, restless legs syndrome, insomnia, narcolepsy, circadian rhythm disorders, and abnormal motor behaviors during sleep. Sleep studies are performed to monitor a variety of functions including sleep state, eye movement, muscle activity, heart rate, respiratory effort, airflow, and blood oxygen levels. The Sleep Center has specialized equipment and the expertise for diagnosing seizures or other abnormal behaviors at night. The Sleep Center also offers an Insomnia Clinic, led by Dr. Suma Chand, that focuses on cognitive-behavioral therapy for insomnia. For more information, contact the Sleep Disorders Center at 314-97-SLEEP.
While most physicians assume that their patients understand the medical instructions that they give to them, 90 million Americans have difficulty in comprehending complex texts and instructions. The lack of health literacy in the United States represents a major obstacle to older persons obtaining adequate health care. The term health literacy was first used in 1974 by Scott Simonds. In its original basic sense, health literacy referred to the ability of a person to understand basic health care instructions. Over time, the definition was extended to “…the currency patients need to negotiate a complex health system.” At its highest level, health care literacy implies the ability to critically interact with his/her health care provider and to process the different health care information that is available in multiple forms. Full health care literacy implies that the patient is empowered to deal as an equal with his/her professional care providers in making his/her health care decisions.

Navigating the health care system is challenging for everyone. For persons with basic literacy problems, it can become impossible. Many people with literacy problems hide their problems very well, often even from close family members. As a result, health care providers often fail to recognize that their patients have problems with understanding their medical care. Poor health literacy leads to poor health care outcomes. Surgeon General Carmona stated in 2003 that “health literacy can save lives, save money, and improve the health and well being of millions of Americans…health literacy is the currency of success for everything I am doing as the Surgeon General.” A person whose primary language is not English or who comes from a different cultural background than the provider is particularly vulnerable to having health literacy problems.

Older adults may be particularly vulnerable to having health literacy problems. They often have visual and hearing problems as well as cognitive challenges. Other factors that reduce health literacy include stress, depression, fatigue, pain, and medication effects. These impair executive function making it difficult for the person to make appropriate decisions in response to the information presented to them. A study in the *Journal of the American Medical Association* found that one-third of older persons has inadequate or marginal health literacy. The highest rates of functional illiteracy were in persons over 85 years of age.

The level of health care literacy can be assessed using the REALM (Rapid Estimate of Adult Literacy in Medicine). All patients need to have this assessed and the results made available to their health care providers. Many patients have a reading level at the sixth grade or less.

For the interactions of patients with their health care providers, there are five basic principles of health literacy:

- Communication is clear and in basic, everyday language.
- There is adequate time for discussion.
- Patients are encouraged to ask questions.
- Patients are aware of their rights and responsibilities.
- The patient’s cultural and language backgrounds are integrated into the provision of health information.

Eleanor Roosevelt pointed out that “under-
standing is a two-way street.” A clear component of health literacy is to have the patient repeat back instructions. Equally, health care providers need to recognize if they are understandable to their patients. Always ask, “Am I clear?”

With older persons, communication should take place in a quiet area with limited noises in the background. The person should be able to clearly see your mouth to facilitate lip reading. Always try to speak clearly and slightly louder, but do not shout. Pocket talkers should be available to enhance hearing.

Most patients have limited memories of instructions given to them by their physician. Using medical students as physician-providers, we found that the average older diabetic patient remembered less than half of the key points the physician had made. Thus, all instructions should be written down to facilitate health literacy. I have found writing them on a prescription pad often reinforces their importance. For example:

**Rx Exercise for 30 minutes each day.**

- Lift 5 pound weights.
- Take a brisk walk.
- Do balance exercises.
- Stand on one leg. Shut eyes. Remember to hold on to something while doing this.

All written materials should have good contrast between text and background. Bold black on white is better than colors. Font size should be 18-point. Use clear margins (1 inch) and 1½ blank spaces between lines. Remember some persons will need instructions on audio tape or in Braille.

For persons with early cognitive dysfunction, repeat the information. Make instructions simple. Do not give contradictory instructions. Focus on the main points. Do not make extraneous comments. Give direction as a positive, not a negative, concept. For example, “Do not take this pill with food” may be misremembered as “Take this pill with food.” It would be better to say “Take this pill between meals.” Provide only essential information in simple words. Provide information at a slower pace than usual. Have the person bring a friend or relative with him/her. Write the information down and go over it with him/her in the written form after you have given it verbally. Have the person repeat the most important structures at the end of the consultation. Always recognize that different persons learn differently and be sensitive to those differing needs. Where possible, pictures should be used to reinforce verbal and written instructions.

Finally, empower the patient. The “Ask Me 3” program tells patients that they should ask three questions each time they see a health professional:

1. What is my main problem?
2. What do I need to do?
3. Why is it important for me to do this?

Always encourage patients to bring a list of their questions and the medications they are taking every time they come to see a health care professional.

We all need to work together to enhance health literacy among our patients. This will markedly improve health care outcomes.
Elder individuals are the fastest growing demographic group in America. As this group grows ever larger, so too must healthcare’s ability to care for the aged. For more geriatric patients, we must provide more geriatricians. But short of mandating a pathway to geriatric medicine for some medical students, we are left with the dilemma of how to produce more geriatricians while maintaining medical students’ autonomy to choose their own career paths. Researchers recently concluded that an innovative intergenerational art program entitled “Vital Visionaries” may successfully deal with this conundrum. This program, the creation of researchers at the Brown School of Social Work at Washington University in Saint Louis, speculated that if given the opportunity to interact with healthy elders in a fun and casual setting, medical students would let go of negative stereotypes, improve their opinions of elders, and have a higher likelihood of considering the field of geriatric medicine as a future career. Vital Visionaries was conducted at eight medical schools across the country, including Saint Louis University, Indiana University, and the University of Rochester. Most programs paired 15 medical students with 15 older adults for four meetings of two hours duration. Activities varied between individual programs, but most met at local museums to discuss and create art in small groups or pairs. In total, 112 medical students and 120 older adults volunteered in the program. Vital Visionaries in Saint Louis was conducted at the Contemporary Art Museum. There, modern art formed a bond between older adults from the community and future physicians from the Saint Louis University School of Medicine (SLUSOM). During the first session, the group was given a private tour of the museum’s exhibit that explored art as a form of visual, oral, aural, and personal expression. The loud, colorful exhibit prompted a lively debate over the “meaning” behind the works. One piece was especially interesting as the artist, Lutz Bacher, blew up images taken from old newspapers and attached new, often comic captions and quotations. The older members regaled the students with memories of these iconic figures and events that ranged from JFK to the falling of the Berlin Wall. The younger students contributed their thoughts of how the work relates to today’s society. After a lively first session, it was quickly apparent that this would be a meaningful and exciting experience. Many students saw the program as a fun and social event outside the work environment, while others found it to be a bonding experience that helped them to see the world in a different light. Regardless of our age, gender, or race, we were collectively able to combine our creativities to design wonderful masterpieces.” Preethi Rangachari, Medical Student

“Just as life has no beginning or end... art itself is boundless. Regardless of our age, gender, or race, we were collectively able to combine our creativities to design wonderful masterpieces.”

Preethi Rangachari, Medical Student
Diabetes Mellitus

50% of all diabetics are over age 60
25% to 41% are undiagnosed

Special Features of Diabetes in Older Persons
- Elevated glucose levels increase pain perception
- Diabetics have a two-fold increase in cognitive impairment
- Diabetics have a decreased functional status
- Diabetes Mellitus is associated with an increased rate of pressure ulcers
- Diabetics have decreased compliance
- Diabetics have increased infection
- Diabetes Mellitus increases trace mineral deficiency (Mg, Zn)
- Depression is associated with increased hospitalizations
- Alpha-lipoic acid and topiramate treat peripheral neuropathy
- Lowering blood pressure is more effective than lowering glucose in decreasing mortality
- HbA1C below 7 associated with increased falls and possibly increased mortality (VA, ACCORD, ADVANCE)

Management

DIET: Weight loss in older patients is associated with increased mortality. Diabetic diets do not improve glucose control.

EXERCISE: Exercise prevents diabetes mellitus. Exercise reduces HbA1C independent of body mass.

DRUGS:

<table>
<thead>
<tr>
<th>Type</th>
<th>Daily Routine</th>
<th>Sugar Testing</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metformin</td>
<td>Twice</td>
<td>3 x/week</td>
<td>Anorexia, nausea, diarrhea, weight loss.</td>
</tr>
<tr>
<td>Sulfonylureas</td>
<td>Once or twice</td>
<td>3-7x/week</td>
<td>Severe hypoglycemia.</td>
</tr>
<tr>
<td>Glitazones</td>
<td>Once</td>
<td>3 x/week</td>
<td>Edema, heart failure, weight gain, osteoporosis, hip fracture, heart attack.</td>
</tr>
<tr>
<td>α-1 glucosidase inhibitors</td>
<td>Three times</td>
<td>3 x/week</td>
<td>Weight loss, nausea, abdominal pain. (Increase GLP-1)</td>
</tr>
<tr>
<td>Insulin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long acting (Glargine)</td>
<td>Once</td>
<td>4 x/day</td>
<td>Hypoglycemia, weight gain.</td>
</tr>
<tr>
<td>Intermediate acting</td>
<td>Twice</td>
<td>4 x/day</td>
<td></td>
</tr>
<tr>
<td>(NPH, detemir)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short acting (regular)</td>
<td>Three times</td>
<td>4 x/day</td>
<td></td>
</tr>
<tr>
<td>Rapid acting (Lispro, aspart, glulisine)</td>
<td>Three times</td>
<td>4 x/day</td>
<td></td>
</tr>
</tbody>
</table>
The Causes of Everything

A complete list of possible causes needs to be developed. The following list of causes applies to all geriatric syndromes.

**CONGENITAL**
Even in older persons, genetics and congenital malformations can still play a role in disease, *e.g.*, Thalassemia in anemia; Atrial septal defect; The majority of genetic effects playing a role in longevity exert their effects after 60; Small babies are more likely to be sarcopenic at 70 years.

**ACQUIRED**

(AEI[5]OV)

- Autoimmune
- Endocrine
- Infection
  - Bacterial
  - Viral
  - Fungal
  - Parasitic
- Inflammatory
- Injury
  - Trauma
- Iatrogenic
  - Drugs
  - Radiation
  - Surgery
- Idiopathic
- Oncologic
  - Benign
  - Malignant
  - Metastatic
- Vascular
Introduction

While the functions of sleep remain largely unknown, one exciting hypothesis is that sleep contributes importantly to processes of memory (encoding and consolidation) and brain plasticity (ability of the brain to change with experience). We will discuss recent research indicating importance of sleep across our lifespan in maintaining cognitive health as we age.

Sleep changes with aging

As one ages, sleep architecture and quality can change, though older adults do not have a change in the amount of sleep they need as compared to younger adults. In general, older adults have more night time arousals and lower sleep efficiency (time asleep as compared to time in bed). This problem is complicated by the fact that as people age, they are more apt to have more physical and psychiatric conditions and be on medications that can adversely affect their sleep. Having excessive daytime sleepiness or feeling unrefreshed upon awakening is not due to normal aging. These symptoms are likely due to sleep disorders, such as sleep apnea, insomnia, and restless leg syndrome, which have a higher prevalence in older adults.

Sleep and memory

Research in the last decade has shown that sleep appears to have a dramatic impact on the way the brain functions the next day by strengthening connections between nerve cells in the brain - a process key to both learning new things and memory. Research has indicated the critical importance of adequate daily sleep (in quality and quantity) in making our memories resistant to interference from other information so that we can recall events and information more effectively. Functional imaging (e.g., functional Magnetic Resonance Imaging [fMRI]) studies contrasting sleep-deprived and well-rested brains provide substantial evidence that sleep is very important for optimal cognitive function and learning. A recent study by Dr. Sophie Schwartz from the University of Geneva was presented to the Federation of European Neuroscience Societies conference. This study found that a period of sleep following a new experience can consolidate and improve subsequent effects of learning from the experience. Our brain reactivates brain maps that were activated during the previous day and these unconscious rehearsals strengthen our memory. Research has also indicated that our brain may be selectively rehearsing the more difficult aspects of a task. Our brain may even sift through the memories regarding events and identify what is worth keeping and what is not. Memories with emotional components are preferentially stored compared to memories of unemotional events. During sleep, our brain also engages in solving problems. During sleep, our brain may also replay collections of memories to discover patterns and thus help find meaning in what we have learned.

How exactly does our brain achieve all this is currently being vigorously studied. Sleep may have a crucial role in molecular, cellular, and systems-level processes that convert initial, labile memory representations into more permanent ones, available for continued reactivation and recall over extended periods of time. One explanation is that the brain moves the memory of the events or skills learned the day before to different brain regions utilizing different brain maps. Also, research has indicated that both types of sleep (REM [where we dream] and NREM [also called slow wave/deep sleep]) are important for maintaining our minds (thinking and memory functions and ability to solve problems). Also, research has shown that after successful learning, REM sleep increases. Modification and pruning of memories may also occur during REM sleep. Through time, the less important aspects of a memory are pruned while the core of what we really need to know is consolidated. The NREM sleep changes have been seen after learning motor procedural tasks. Thus, different phases of sleep are important in memory, for different but complimentary reasons.

Sleep and physical health problems

A recent study found calcified arteries (“hardening of the arteries”) in nearly a third of people who sleep fewer than five hours a night. Several studies have also linked sleep apnea, a common sleep disorder characterized by breathing difficulties during sleep, to higher rates of hypertension, heart failure, cardiac arrhythmias, stroke, and
Aging Successfully, Vol. XIX, No. 2  
email: aging@slu.edu  
Questions? FAX: 314-771-8575

Remember To Sleep To Remember

By Abhilash K. Desai M.D., and Raman Malhotra, M.D.

myocardial infarctions. Obstructive sleep apnea has been found to aggravate cognitive dysfunction in dementia and thus may be a reversible cause of cognitive loss in patients with Alzheimer’s disease. Another recent study by Dr. Lisa Rafalon and colleagues from the University of Buffalo, New York presented at the American Heart Association conference found that people who slept for fewer than six hours a night during the working week were 4.56 times more likely to develop impaired fasting glucose (a condition that precedes diabetes) than those sleeping six to eight hours a night. Three conditions linked to obesity (insulin resistance, the progression of liver disease, living a less-than-active life) have also been tied independently to sleep apnea. All these conditions (“hardening of the arteries” or atherosclerosis, sleep apnea, obesity) are risk factors for future dementia and Alzheimer’s disease.

Sleep and psychiatric disorders

Robert Stickgold, Ph.D., psychiatry professor at Harvard University, has argued that sleep deprivation is not just linked to, but actually causes, major psychiatric disorders in people. For example, many children have sleep apnea caused by enlarged tonsils. These children have severely disrupted sleep and are five times more likely to have attention deficit hyperactivity disorder (ADHD). When their tonsils are removed, their ADHD dramatically improves. New research has also found that adolescents who have insomnia are more likely to drink alcohol, smoke, and use illicit drugs, and have double the risk of developing mental health problems as they get older. Another recent study found that insomnia can precipitate another bout of depression in persons with history of depressive illness. Impaired sleep can induce and predict manic episodes in people with Bipolar disorder. Many psychiatric medications as well as commonly used over-the-counter and prescription medications routinely cause insomnia or excessive sleepiness. These medications also often suppress REM and or NREM sleep, thereby interfering with the memory consolidation described earlier.

What is adequate sleep?

What constitutes adequate sleep varies from person to person and for each person, it can vary over their lifetime. In general, 7-8 hours of sleep are needed for most adults. The best gauge of adequate sleep is how a person feels after waking up. If the person feels refreshed, the sleep is probably adequate. If the person feels tired and slow, perhaps the sleep was inadequate. It is also important to get adequate sleep on a regular basis. Trying to make up sleep just on days off or on a weekend is not as helpful as getting regular sleep every night.

Why bother?

In the U.S., it is estimated that at least one in ten adults struggles with chronic insomnia (insomnia lasting more than one month), not to mention those who suffer from other sleep disorders. Insomnia symptoms — that is, the complaint in the absence of specific duration or distress criteria — occur in some 30%-40% of adults. These statistics are not restricted to the U.S. A recent poll of 4,000 adults in the UK found only one in five slept for eight hours a night. Most people have no idea what is keeping them up at night. Also, people may unknowingly learn behaviors that perpetuate insomnia (e.g., daytime napping, sleeping in front of the TV), or come up with solutions (e.g., taking “Tylenol PM” or other over-the-counter sleep aids containing diphenhydramine, a drug known to impair sleep AND memory) that hurt more than help. Worrying about financial problems, health problems, marital strife and work stress are other common reasons why so many people have chronic insomnia.

Conclusion

Assessing quality of a person’s sleep is frequently overlooked during routine doctor visits. It is time for all health care providers to wake up and routinely assess sleep. This is especially important in assessing adults who complain of new onset memory and thinking problems. College students who think all-night study sessions will help them remember facts might want to get some sleep instead. It is time for all of us to reclaim the night for sleep!

References on page 14
Saint Louis University Opens Division of Neuropsychology

The department of Neurology & Psychiatry has opened a new clinical and educational Neuropsychology Service directed by Lauren Schwarz, Ph.D. The service provides comprehensive neuropsychological evaluations for patients with known or suspected cognitive or neuropsychiatric dysfunction. Assessments involve a systematic evaluation of higher cognitive abilities with the goal of assisting with: differential diagnosis; prognosis and dispositional planning; defining strengths and weaknesses; rehabilitation issues; ability to return to work; and tracking of changes in functioning over time. The Neuropsychology Service will be able to assist with a wide range of presenting problems such as suspected memory problems or dementia, neurologic conditions (including stroke, Parkinson’s disease), and medical conditions (liver disease, Lupus, HIV infection, cardiac conditions). Evaluations will be tailored to meet the individual needs of patients and address physicians’ specific referral questions.

Lauren R. Schwarz, Ph.D. is an Assistant Professor of Neurology and is the Director of the Division of Neuropsychology in the Department of Neurology & Psychiatry at Saint Louis University School of Medicine. After completing her doctorate degree in Clinical Psychology at Saint Louis University, she completed an APA approved internship at the University of Alabama at Birmingham Department of Psychiatry providing neuropsychological consultation services in a variety of settings including surgery, neurology, psychiatry, and a VA medical center. Dr. Schwarz completed an Association of Postdoctoral Programs in Clinical Neuropsychology (APPCN) sponsored fellowship in Clinical Neuropsychology at the University of Illinois at Chicago in the department of Psychiatry.

If you are interested in learning more about Saint Louis University Neuropsychology Service, please call 314-977-4850.

REFERENCES
“If a job’s worth doing, it’s worth doing right.”
It’s been 25 years, but those words still echo in my mind. That sentence was usually followed by “If it’s not right, it’s wrong.”

Her name was Zola, and she was one of the first patients I cared for as a young and “eager to please” Home Health nurse. Zola was a large old-fashioned woman with thinning gray hair that was always pulled neatly into a bun. She didn’t own a TV and had no modern appliances. Her cotton homemade dress was mostly covered by a tattered apron that had no doubt been used to make hundreds of cookies for hungry, now grown, grandchildren. Being raised on a farm and cooking everything from scratch was what she was most proud of. That’s what women did 100 years ago. They stayed on the farm, raised their family, and taught and instilled values that would be handed down for generations. I was to learn quickly that I was no different.

The first time I met Zola, she had been in the hospital and was in failing health. She would sit in her creaky rocker, a piece of furniture that had been in her family for generations. Her husband of 60 years remained steadfast by her side. She was depressed and the thought of allowing paid caregivers into her home to perform the duties that were solely her responsibility was nearly more than she could bear. She could no longer cook for her man, do his laundry, or see that his every need was provided for, as she had done for many years. As I listened to her answer my never-ending questions regarding her health status, I looked around the room, eagerly searching for something, anything that might spark some enthusiasm and bring some light into her once beautiful but now dulled eyes. It was then I noticed that nearly every single table, lamp, book, vase, or what-not had some-

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thing in common. They each were placed very neatly on top of a hand crocheted doily. They were everywhere. Every size. Every color.

It was then that I realized I may have found the catalyst that may put Zola back on track. I asked her if she was the creator of such beautiful handiwork and she said that indeed she was. We talked briefly about how handmade crafts such as crocheting are becoming lost arts. “Women today,” she remarked, “take on more and more responsibility. This prevents them from finding the time necessary to devote to something as time consuming, delicate and tedious as crocheting.” I explained to her I had a bud vase in my home and that I picked roses frequently from my rose garden and placed them on the coffee table. I told her I felt a very small doily would look beautiful underneath the vase, helping to show off the roses. She agreed that was just the thing I needed. So I asked, “Zola, if I brought you some thread and paid for your time, would you make me one?” She stated that even though she was flattered to think that I thought her crocheting was worthy, she had lost her “hook” and would be unable to crochet again. Zola called what she did with a needle and thread “hooking.” She also stated, “Barbara, if a job’s worth doing, it’s worth doing right” and that she wouldn’t make something and have it done poorly. It was the first time I had heard those words, and her belief in that philosophy was so strong, she would not allow herself to crochet if she could not do it to her strict standards. I told her I understood, but I was not especially picky and if she ever found her hook again, I would be honored to have a project from her.

I’m sure she felt her crocheting days were over and that she had lost a creative love that had spanned nearly a lifetime. Over the next few weeks, we discussed the doilies and how pretty they were. She usually began the conversation, and I could tell she was thinking seriously about “finding her hook” again. Then one day she said, “If I was to find my hook, what color do you like?” I told her that I found the ecru especially pretty, noting to myself that it was the color she used most. Sure enough, when I returned the next week, she had found her hook and had begun a small but difficult task of creating a masterpiece, a very small doily. The light began to shine in her eyes again, and she was taking on more and more responsibilities around her house. Her energy level improved until she was able to care for her husband in the way that she had always done. Toward my last visit with her, she presented me with my own doily to place underneath my bud vase. She did acknowledge that it normally didn’t take her so long to finish such a small task, but it took her a long time to “get it right” and that she tore it apart many times. And true to her belief, the small doily appeared flawless.

Nearly a year after I discharged Zola, I received a phone call from her. She asked me to stop by next time I was in the area. To my disbelief, she presented me with the most wonderful gift that I had ever received… a beautiful, flawless, hand crocheted tablecloth. It is still one of my most prized possessions. She thanked me for helping her find her hook, as she felt it had been lost forever, and I thanked her for her lesson to me. Even now, 25 years later, I think often of Zola. Anytime I begin a project and I’m in a hurry and start taking shortcuts, I hear her say, “Barbara, if a job’s worth doing, it’s worth doing right.” Thank you Zola.

Barb Tackitt, RN, BSN, Home Care Director, Clay County Health Department, Flora, IL
The St. Louis VA GRECC (Geriatric Research, Education, and Clinical Center) in collaboration with the VA Employee Education Service (EES) has created a limited number of DVDs showing how to administer five common geriatric assessments: The VA SLUMS Exam, the CAM, Dehydration, the SNAQ, and Dual Tasking. This DVD can be used by busy healthcare professionals to ensure that these assessments are administered properly and consistently by students, residents, interns, fellows, and new office staff members. In accordance with Federal guidelines, the DVD is 508 compliant. To determine if you are eligible to receive a free copy of the DVD, please contact Nina Tumosa at Nina.Tumosa@va.gov.
confines of school and academia. As Annie Simpson, 2nd year SLUSOM student remarked, “Being able to interact with such vibrant individuals was the highlight of my week. While venting my creative energy, I was inspired by my fellow classmates and the older adults of the Vital Visionaries Project.”

During subsequent sessions, SLUSOM students and adults worked collectively to create art describing themselves. Some participants created poetry about their elder partner after extensive interviews, and recited their new masterpieces to the group. Others made masks symbolizing participants’ external and internal selves. These art projects formed the bridge by which young and old could express themselves and find common ground between generations. Who knew that chocolate, traveling, and coffee could be passions shared by “Generation X’ers” and World War II survivors? The final session was especially poignant as each student and adult pair decorated totes for one another based on all they had learned about their counterpart. It was evident that meaningful relationships had been made, as everyone toiled over their totes in an attempt to make something truly special for their new friends.

Several of the medical students rushed to the museum after finishing a Saturday morning exam so they would not miss the last session. At each site, control groups of medical students were recruited to assess the effect of the program. These individuals did not participate in the activities, but completed the same questionnaires as the test group at the beginning and end of the program. At the onset, both groups had similarly positive attitudes toward older adults. However upon completion of the program, participating students saw substantial improvements in their attitudes toward older adults. Similar improvements were seen in students’ perception of “commonality,” meaning the participating students felt they had more in common with older adults. As 1st year medical student Jessie Whitfield put it, “I realized that people really don’t change all that much as they age. There is no mystical time threshold that upon crossing renders you unable to relate to or interact with people of a different generation. I was surprised by how much I had in common with the older participants.” These improved scores were not seen in the control group.

Prior to Vital Visionaries, many students had had very limited exposure to non-familial, healthy older adults. By interacting with ambulatory, engaging elders in a non-medical setting, students gained confidence in their ability to interact with the older population. Ability to communicate across generational boundaries is a skill that will serve these future physicians well, regardless of what medical specialty they choose. As most of the participants in this program are still early in their medical careers, it will be some time before we are able to discern whether or not the program had any influence on their future career paths. Regardless of their future career choice, their Vital Visionaries experiences have undoubtedly empowered them to foster the openness and communication necessary to providing better care to elders.
Putting Us To Work For You

Below is an excellent example of the resourcefulness of Aging Successfully readers. Diana F. Abadie, MSPH, NHA, from the State of New York Department of Health converted the information from our Fall 2008 centerfold on fall risk into a one-page falls assessment. She has given us permission to share it with you.

New York State Department of Health
Falls, Me, and My Health Care Provider

Name ___________________________________________________ Age _____ Date ______

Together, you and your provider can help prevent injuries from falls.
Circle “Y” (for Yes) or “N” (for No) next to each question below.
Give the completed form to your provider.

ME During the past 12 months...

Y N I fell two or more times.
Y N I was injured by a fall that limited my regular activities for at least 1 day.
Y N I saw a doctor because I had a fall.
Y N It’s been hard for me to walk or climb stairs.
Y N I’ve had trouble getting up from a soft chair.
Y N I’ve been unable to stand on one foot for 12 seconds without losing my balance.
Y N I’ve had trouble with my eyesight.
Y N I was told that I’m having memory trouble.
Y N I’ve felt dizzy or light-headed after a big meal.
Y N I’ve taken medication that caused me to feel dizzy or light-headed.
Y N I’ve taken 9 or more different medications.
Y N I’ve dropped some of my regular activities.
Y N I’ve been taking a calcium supplement regularly.
→ If “Yes,” how many milligrams per day? _____
Y N I’ve been taking a vitamin D supplement regularly.
→ If “Yes,” how many units per day? _____
Y N My doctor checked the vitamin D level in my blood.
Y N I’ve walked, danced, exercised, or practiced tai chi at least 3 times a week.
Y N My home was checked for any dangers and modified as needed.

The Danger of Falls: Important Facts

• About 1.5 million bone fractures occur in the United States each year.
• Hip fractures are increasing out of proportion to the aging population.
• Half of those who have fallen once will fall repeatedly.
• Of those who have had a bone fracture, 40% cannot walk independently and 20% have a permanent disability.
• There is a higher mortality rate for men who have bone fractures than for women.
This 4-CD set contains multiple PowerPoint presentations on the four topics listed above. Import individual slides into your current lectures or use the talks in toto.

Send $20 (includes shipping) to:
Saint Louis University School of Medicine
Division of Geriatric Medicine
1402 South Grand Boulevard, Room M238
St. Louis, MO 63104.
Make checks payable to SLU Geriatrics.
Statins or Religious Attendance?

By John E. Morley, MB, BCh

While the United States remains one of the most religious nations in the world, there have been an increasing number of persons who fail to see the need to regularly go to religious services. This raises the question of whether there are any secondary benefits of religious attendance. The answer is a resounding yes with studies showing that people who regularly attend church have a reduced risk of death.

In a beautifully written article, the surgeon Daniel Hall (from the University of Pittsburgh) explored whether “religious attendance was more cost-effective than lipitor?” Lipitor is one of the better known statins. Statins are drugs that are used to lower cholesterol and prevent the development of atheromata in the arteries. Using a sophisticated mathematical analysis he concluded that regular church attendance extended one’s life for 2 or 3 years while cholesterol lowering agents increased lifespan by 2 ½ to 3 ½ years. More dramatically, even if one followed the Old Testament edict of giving a “tithe” (10 percent) of their income to God, it actually was more cost-effective to go to religious services than it was to use a statin. His analysis did find that physical exercise extended life even further (3 to 5 years) and cost even less per year of life gained.

The reasons why religious attendance increases lifespan are not clear. Emerging evidence suggests that being spiritual helps people deal with stressful life crises, an important factor in survival. People who regularly attend church tend to have somewhat better health behaviors than those who don’t. Getting out of the house as one gets older is associated with improved physical function. The importance of this is underlined by the finding that persons who gain their religious services from the television do not have the same improvement in lifespan. Going to church provides an interactive community and also social support, both of which can be helpful at times of illness. However, studies that have examined these factors tend to find that there remains an x-factor as part of the explanation for these findings. Dare we suggest that this is a belief in God?

Despite the robustness of his analysis, Dr. Hall did not suggest that health professionals should recommend going to church along with exercise and statins. He also made it clear that he did not support management care paying for the church’s “tithe.”

This article was previously published in the online version of the St. Louis Post Dispatch.
Think It’s Too Late to Start Exercising?

A study by Stessman and colleagues from Hadassah Hebrew University in Jerusalem found that initiating physical activity over the age of 70 years leads to a 12% increase in longevity. This study was published in the September issue of the Archives of Internal Medicine.

This study also found that physically active persons between 70 to 85 years not only were less likely to die, but also had increased function and less loneliness. In addition, the physically active considered themselves to be more healthy than the inactive group. The findings of this study were similar to the British Heart Study and the Zutphen Elderly Study, both of which showed that physical activity was associated with longer lifespan in older persons.

Another study in the Archives of Internal Medicine found that in postmenopausal women increasing the amount of exercise improved both the mental and physical aspects of quality of life.

A study from the University of North Carolina in Chapel Hill reported that young people who actively commuted (walked or rode a bicycle to work) had a reduced risk of developing cardiovascular risk factors. The risk factors they looked at were obesity, fitness, blood pressure, triglycerides and blood insulin levels.

The BOTTOM LINE: Taking up exercise at any age will increase your chances of living longer.

Could This Treatment Provide the Pain Relief You Seek?

I recently attended the St. Louis GRECC conference on Pain Management. The conference stressed that pain management requires multiple approaches. Medications alone are rarely the answer. Pain is often amplified by social stresses and by psychological problems. People with depression have poor responses to pain medications unless their depression is treated.

Many non-medication approaches to pain management were discussed. The example of Norman Cousins, who edited the Saturday Evening Post many years ago was cited. He had severe pain from Ankylosing Spondylitis. Whenever he had an attack of pain he would watch Marx Brothers’ movies, and this would make him forget his pain. Massage techniques can be used to cure headaches and back pain. Ultrasound, heat, and cold can all reduce muscle pain. Exercise can be used to build muscles around arthritic joints and decrease pain.

Acupuncture has been used since 2000 BC by the Chinese. It involves placing needles into certain specific points in the body to relieve pain. Ancient Chinese believed that acupuncture re-adjusted the “qi” (pronounced chee) or life force of the body. I first saw acupuncture used at Purdue University over 25 years ago when I went there as a visiting professor. They were doing it on horses and that certainly made a believer of me. While recognizing there is a strong placebo effect of acupuncture, some well-designed recent trials have shown a significant advantage of acupuncture over placebo for arthritis of the neck and the back. Acupuncture is safe and, as such, can be considered an appropriate therapy for some individuals with chronic pain.

A highlight of the conference was the presentation by Professor Vitaly Napadow from Harvard. He talked about the effects of acupuncture on the brain as seen with neuroimaging. His studies have shown that acupuncture activates areas in the brain, especially those associated with emotional responses, and this is responsible for its effects. He also has recently found that persons with fibromyalgia have a disruption of intrinsic brain connectivity and this is related to their pain. He told me that “Pain harms the brain and acupuncture is a direct path to the pain.”
The Mystery of Pain: Neuromuscular Assessment and Treatment
November 12, 2009
Libertyville, Illinois USA
For more information on this conference, call 217-443-8777.

21st Annual Saint Louis University Summer Geriatric Institute
June 1-2, 2010
St. Louis, Missouri USA

Dental Hygiene Update
November 13, 2009
Libertyville, Illinois USA
For more information on this conference, call 217-443-8777.

Aging and Falls: Assessment, Prevention, and Intervention
November 11, 2009
Bloomington, Illinois USA
For more information on this conference, call 217-443-8777.

For more information about upcoming conferences, contact 314-894-6560.
Moving?

Please fax the mailing label below along with your new address to 314-771-8575 so you won't miss an issue! If you prefer, you may email us at aging@slu.edu. Be sure to type your address exactly as it appears on this label.