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THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE—CLINICAL NUTRITION RESEARCH UNIT, &
THE MARYLAND EXERCISE AND ROBOTICS CENTER OF EXCELLENCE

Aging and Disease: A Recipe for Functional Decline

By Gregory Steinbrenner, M.S.

Aging is associated with declines in physical and cognitive function. The number of people age 65 and older is increasing at a rate faster than the total population. With that thought in mind, it is going to be important for health care providers to develop rehabilitation strategies to improve function and quality of life in the aging population.

Age-associated changes in physical and cognitive function are due to three factors: biologic aging (primary), lifestyle (secondary), and disease (tertiary). These factors contribute to the development of acute events (i.e. brain injury, hip fracture, heart attack) which can lead to further physical and cognitive impairments. To date, there is little information about how these three factors influence change in physical and cognitive function as we get older. The University of Maryland Claude D. Pepper Older Americans Independence Center is currently imple-

menting a research study, *Aging, Health, and Functional Performance (PEPFUN)*, to answer these questions.

PEPFUN recruits participants across the entire age-span who are living with and without chronic diseases to assess aerobic fitness, muscular strength, flexibility, activities of daily living, cognitive performance and quality of life. Participants range from 43 – 88 years of age and are generally healthy or have a range of co-morbidities that include stroke, heart disease, high blood pressure, diabetes, hip fracture, or chronic kidney disease.

One of the primary physical function measurements in this study is aerobic fitness. Aerobic fitness is a measure of how well the body uses oxygen. People with high levels of aerobic fitness are able to perform higher levels of physical activity. Unfortunately, aerobic fitness declines as a natural consequence of aging. Additionally, chronic disability can lead to further

declines in aerobic fitness. PEPFUN finds that people who have had a stroke have a 42% lower aerobic fitness than their similarly aged, healthy counterparts. This clearly shows how a chronic disability can significantly reduce physical function.

Cognitive function also declines with age and one of the ways that researchers are testing cognitive performance in PEPFUN is

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RESEARCH PAGE: The studies listed below are actively looking for participants. For more information about our studies, please visit the UM-OAIC Web site at: <http://peppercenter.umaryland.edu>.

Supervised Exercise Program for Older Adults at the University of Maryland, Baltimore: Healthy, non-smoking men & women 50-75 years old needed to participate in an exercise research study at the University of Maryland / Baltimore VA Medical Center. Work with Doctors and Exercise Physiologists to safely get fit. Participation involves tests to measure your fitness and function. You will receive free medical and fitness evaluations, 6 months of supervised exercise sessions, free parking, and compensation for your time. Call 410-605-7179. Mention code: STX

Stroke Survivors Needed

Do you know someone who has had a stroke and has arm or leg weakness? A study is being conducted investigating the benefits of exercise after stroke. Please call 410-605-7179 for information.

COMING IN 2009 FALLS PREVENTION STUDY

This upcoming study will focus on balance, falls and muscle strength/weakness.

Medically Structured Weight Loss/Exercise Study: Overweight, non-smoking, men and women ages 45-80 needed to participate in a diet or exercise research study. Work with Doctors, Dieticians and Exercise Physiologists to safely change your diet and physical activity to help you lose weight or get fit. Free cardiac, diabetes, and blood pressure risk evaluation. No diet drugs. Call if you are ready to make a commitment to losing weight or exercising and improving your health. Contact, U. of MD-BVAMC 410-605-7179, mention CODE-Ryan

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by using the Trail Making Test. This test requires a subject to “connect the dots” of 25 consecutive targets on a sheet of paper as quickly as possible. Poor performance on this test is associated with many types of brain impairments. Study results show that it takes more than double the amount of time for individuals who have had a stroke to complete the test compared to healthy individuals.

These preliminary results indicate how an acute

event such as a stroke can lead to significant physical and cognitive deficits, which reduce one’s quality of life. PEPFUN researchers are continuing to collect data to determine where functional and cognitive deficits exist among other chronically disabled populations.

For you, it is important to remember that prevention is the best “recipe” for maintaining and sustaining a healthy, functionally independent lifestyle. Following a “healthy aging recipe” that

includes regular physical activity and healthy eating will help to minimize functional and cognitive declines.

Interested in learning more about our research programs?

Give us a call at 410-605-7179. We are happy to do educational-community presentations.

Chicken and Fruit Salad

Recipe Summary:

Preparation Time: 20 min.

Number of Servings: 4

Ingredients:

1 lb roasted chicken breast
1 medium-size bunch spinach
2 medium-size pink or white grapefruit
2 medium-size red delicious apples
3/4 lb seedless green grapes
1/3 cup fat-free Dijon salad dressing

Directions:

Remove and discard skin from chicken; tear chicken into bite-size pieces. Chop 1 cup loosely packed spinach leaves; set remaining leaves aside. Cut peel from grapefruit; remove sections with knife. Cut unpeeled apples into 3/4-inch chunks. In large bowl, combine chicken, chopped spinach, fruit, and salad dressing; toss to coat. To serve, arrange remaining spinach leaves on platter; spoon chicken salad over spinach leaves.

Nutrition Facts:

Calories 380, Total Fat 5 g, Saturated Fat 2g, Trans Fat 0 g, Cholesterol 95 mg, Sodium 380 mg, Total Carbohydrate 45 g, Dietary Fiber 6 g, Sugars 32 g, Protein 40 g

Source: www.fruitsandveggiesmatter.gov, Produce for Better Health

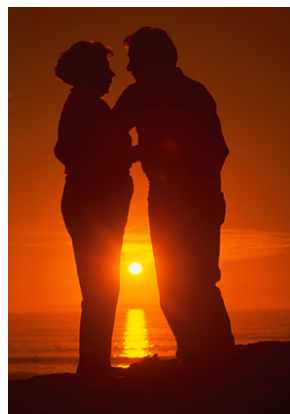
A Dose of “D” for Grade-A Health

By Tara Caulder, M.S., R.D.

Many people are concerned about bone health. It is well known that adequate dietary calcium helps keep bones strong. What you may not know is that another nutrient plays a large role in maintaining healthy bones – Vitamin D.

Your body needs Vitamin D to absorb calcium properly. A long-term deficiency of Vitamin D can lead to a condition called osteomalacia, which is characterized by soft, spongy bones. New research suggests that the nutrient may also play a role in heart disease and diabetes risk as well as cancer prevention. Vitamin D deficiency may increase

heart disease risk whereas adequate Vitamin D status may be protective against certain cancers.



Vitamin D deficiency is actually quite common. Some researchers suggest that 20-30% of US adults have moderate to severe Vitamin D deficiency. The risk of Vitamin D deficiency increases with age because

the skin's ability to produce Vitamin D declines as you get older.

Your skin can make Vitamin D with the help of sunlight. Some researchers suggest that adequate Vitamin D production requires exposing skin to direct sunlight during peak daylight hours without sunscreen several times a week. According to the American Dermatology Association, this type of sun exposure may increase your risk of skin cancer. Therefore, eating a diet rich in Vitamin D may be the best way to prevent deficiency.

Getting enough Vitamin

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D from food takes some effort because few foods are rich in the nutrient. Milk and some fruit juices have Vitamin D added to them, and these are the most common sources of Vitamin D for most Americans. Additionally, some fatty fishes, such as tuna, salmon, mackerel and sardines, are high in Vitamin D.

Two glasses of skim milk per day plus 3 ounces of tuna canned in oil meets the daily dietary Vitamin D recommendations for an adult aged 50-70, while a 3.5 ounce serving of either salmon or mackerel meets about 90% of the needs for that group. A serving of

ready to eat cereal as well as a whole egg (yolk included) each have around 10% of the daily recommended amount of Vitamin D. However, the American Heart Association recommends that you should limit egg yolks to 3 per week for heart health.

Remember, you should speak with a doctor or a registered dietitian before making major changes to your diet. At your next visit with one of these health professionals, ask about your own daily dose and blood level of Vitamin D!

PEOPLE ENCOURAGING PEOPLE (PEP) GATHERING

The PEP Club meetings are reunions for our study participants and their family members. The club meetings also include a stroke education component and research updates. For details about the PEP Club, please call 410-605-7000 extension 4151. The next meeting will be held **August 6, 2009.**

Participation is free.