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Reshaping Exercise Habits and Beliefs (REHAB)

By Alyssa Stookey, PhD, CSCS

Stroke survivors tend to become physically inactive following hospital discharge. Regular exercise has been demonstrated to improve muscle strength, balance, and coordination in walking, as well as improve fitness levels and overall quality of life for stroke survivors. Investigators at the Baltimore Veteran's Affairs Medical Center and the University of Maryland Baltimore are examining the impact of a motivational program to help stroke survivors establish and stick to an exercise program at home following discharge from inpatient care. This 24 week program, Reshaping Exercise Habits and Beliefs (REHAB), is a unique home-based program designed to supplement outpatient therapy directly following a stroke. REHAB is designed to introduce exercise and targeted daily activities into the daily routine of stroke survivors in an effort to ultimately improve function, quality of life, and independence in activities of

daily living at home.

Eligible participants are randomly assigned to either an education group or an exercise group. Participants in the education group receive a basic educational program focusing on stroke, the benefits of exercise post-stroke, and the identification and reduction of risk factors for stroke. Participants in the exercise group receive the same educational information as the education group, but are also prescribed an individualized home-based, progressive walking program and customized daily activities. Participants are given 5-day/week walking regimen and a list of functional activities customized to their specific goals that are to be completed at least 5-days/week in and around the home. Both groups receive weekly phone calls for 12 weeks to reinforce the motivational/education program, provide encouragement, check weekly activity levels, and to identify and address potential barriers to exercise. Following the first 12 weeks, partici-

pants no longer receive weekly contact with the REHAB staff. Instead, they are contacted after 12 more weeks to see if they have maintained their exercise programs without weekly interaction with the staff.

Christopher Bernat is a recent REHAB graduate who suffered an Ischemic stroke at 47 years of age. Chris has a wife and 13 year old son. He realized that he needed to do something to help him recover from his stroke and was going to do what ever he could to prevent another stroke from happening. He decided to participate in the

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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.

FALLS PREVENTION STUDY

This study focuses on balance, falls and muscle strength/weakness. For more information, please call 410-605-7179., mention code FALLS.

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

Research Focusing on Conditions Associated with Aging

In September 2009, the University of Maryland Claude D. Pepper Older Americans Independence Center (UM-OAIC) and the Maryland Exercise and Robotics Center of Excellence (MERCE) funded eight new pilot and exploratory studies. Each study is a small-scale project designed to gain the knowledge necessary to develop even larger future projects. The newly funded studies will focus on several conditions associ-

ated with aging, including inflammatory bowel disease, Myasthenia Gravis and stroke rehabilitation. Congratulations to the newly funded investigators:



- **Dawn Alley, PhD:** Stress, Inflammation and

- Infection in Older Caregivers
- **Wilbur Chen, MD:** Immunologic Dysfunction in Elderly Subjects Who Undergo Aerobic Exercise Rehabilitation
- **Raymond Cross, MD, MS:** Impact of inflammatory bowel disease and aging on body composition and functional performance
- **Deepak Deshpande, DVM, PhD:** The effects

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Asparagus and Sole

Recipe Summary:

Preparation Time: 1 hour

Number of Servings: 4

Ingredients:

1 lb asparagus

1 lb Sole fillets (4 pieces approx. the same size)

1/4 tsp salt

1/2 tsp grated lemon or lime peel

4 Tbsp lemon or lime freshly squeezed juice

1/8 tsp Black pepper

1 Tbsp finely chopped chives

1 tsp mustard

Directions: Cut asparagus into 3 in. lengths. Cook in 2-quart saucepan in lightly salted water for 5 min., drain. Set aside. Season the skin side of the sole fillets with salt and lemon or lime peel. Place asparagus spears at one end of each fillet. Roll up fillets with asparagus spears inside and secure with plain round

toothpicks. Place in a 2-quart oven-save casserole dish liberally sprayed with non-stick cooking spray. In a small bowl combine remaining ingredients and pour over fish. Bake in a 400°F oven for approx. 15-20 minutes or until fish flakes easily. Baste fish every 7 min.

Nutrition Facts: Serving Size 1/4 recipe, Calories 130, Calories from Fat 15, Total Fat 2g, Saturated Fat 0g, Trans Fat 0g, Cholesterol 55mg, Sodium 270mg, Total Carbohydrate 6g, Dietary Fiber 2g, Sugars 2g, Protein 24g Source: www.fruitsandveggiesmatter.gov, Produce for Better Health

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REHAB study and was in the exercise group. He says, "REHAB helped me to strengthen my leg and arm, greatly improve my gait, and improve my overall health. The greatest result of the program however, was that it helped me change my mindset about exercise and focus on including exercise as part of my daily routine." Chris says the weekly phone calls during the first 12 weeks of the program helped him to make a lifestyle change to include exercise as part of his daily regimen. "Having to report to the REHAB staff on a weekly basis for the first 12 weeks encouraged me to work harder so that I could report improved results with each call. I'm not

sure if I hadn't had to record my progress each day that I would have stayed as focused and diligent in my exercise." After the weekly phone calls stopped, Chris was able to continue his exercise program on his own; this even continued after he completed the REHAB program. "I continue to exercise 6-7 days/week, and actually miss it and feel guilty when I am unable to exercise" says Chris.

With recent advancements in technology, for the first time it is now possible to accurately measure the amount of walking performed by people with gait deficits. REHAB uses such technology to monitor and track 48-hour daily step counts at different time points during the study to

see if participants are becoming more active. Preliminary results show that participants in the exercise group tend to be more active than participants in the education group by the end of the 24 week program. Chris is no exception. By the end of the study, Chris had nearly doubled his daily step count from the beginning of the program. He attributes his success with the program and his recovery to the REHAB staff and their hard work. "I can't thank the REHAB staff enough for their words of encouragement and their knowledge in assisting me on the road to recovery. Without them and the REHAB program I am convinced I wouldn't have recovered as well as I have."

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- of aging on airway smooth muscle contraction and relaxation
- **Ronald Goodman, PhD:** Cortical and Bio-mechanical Dynamics of Lower Extremity Robot Assisted Training at different levels of Motivational Incentive: Implications for stroke survivors
 - **Charlene Hafer-Macko, MD:** Myasthenia Gravis Exercise Program to Increase Physical Activity and Fitness and Reduce Cardiovascular Risk
 - **Lauren M. Jones-Lush, PhD:** Plasticity, Kinetics and Kinematics of Bilateral Reaching Therapy in Chronic Stroke

- **Kathleen M. Michael, PhD, RN, CRRN:** Task-Oriented Exercise and Behavioral Intervention to Promote Activity in Stroke

To learn more about the pilot and exploratory studies and other UM-OAIC and MERCE collaborative research projects, please visit <http://peppercenter.umaryland.edu>. The Web site is a fast and easy way to learn about the Centers' studies and how to volunteer to participate in a study.

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 **November 12, 2009**.

Participation is free.