More than 265,000 hip fractures occur each year in the United States. One out of every four of hip fracture patients die within the first year and three out of every four patients never attain their full day-to-day function. Approximately, 90% of hip fractures occur after 70 years old, and 75% of hip fractures occur in women. Increased risk of hip fractures in the aging population is associated with declines in muscle mass and strength, as well as decrements in testosterone levels. A pilot study suggested that testosterone supplementation may increase muscle mass, strength and improve quality of life of women after a hip fracture.

Researchers at the University of Texas Medical Branch are participating in a national multi-center study, nicknamed “STEP-HI” (Starting a Testosterone and Exercise Program after Hip Injury) that explores the efficacy of testosterone combined with 6 months of exercise training on physical function in older women who suffered a hip fracture. Researchers will study whether the treatment with testosterone and exercise can improve the distance walked in 6 minutes more than exercise alone. Bone mineral density, lean body mass and muscular strength will also be measured.

To participate in STEP-HI, volunteers must be women aged 65 and older who have recently suffered a hip fracture, have lived either at home or in assisted living before the fracture, and do not have any significant memory loss such as Alzheimer’s disease or other dementia. Researchers will ensure that all volunteers are able to understand the purpose of the study, the benefits and risks of participation, and have an opportunity to ask questions.

Eligible participants are randomized into three groups: an exercise plus testosterone gel group; an exercise plus inactive placebo (non therapeutic drug) group; or a home-based exercise group. Neither the participants nor the researchers will know who received the testosterone gel. In total, there will be 300 participants who live in areas within or near the 6 clinical sites.

Testosterone supplementation and exercise may increase muscle mass, strength and improve quality of life of women after a hip fracture.

UTMB is one of the clinical sites for the study. The other clinical sites involved are Washington University in St. Louis, MO; the University of Colorado Denver, CO; the University of Connecticut (UCONN) Health in Farmington, CT.; the University of Maryland School of Medicine and John Hopkins University School of Medicine, both in Baltimore, MD; and Hebrew SeniorLife and Harvard Medical School, in Boston, MA.

Volunteers are currently being recruited. All testing, medications and exercise training are provided free of charge. There will also be regular consultations with a dietitian and monthly educational materials provided.

For more information or to volunteer for this study, please contact the study coordinator Eloisa Martinez by calling (409) 266-9643 or emailing esmartin@utmb.edu.

The STEP-HI Project is sponsored by the National Institute on Aging (NIA) and is governed by the terms in NIA grant number 1R01 AG051647.

Dr. Elena Volpi, MD, PhD, the director of UTMB’s Sealy Center on Aging, is a principal investigator of this grant.