Franklin Physical Therapy

The Orthopedic and Sports Injury Specialists

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Staff

Matthew J. Tibert, DPT, CSCS
Doctor of Physical Therapy

Brandi Oakley, DPT
Doctor of Physical Therapy

Jessica Henneberry, PTA
Physical Therapist Assistant

Melissa Colwell
Physical Therapy Aide

Carmine DePaola, ACSM, ISSA
Physical Therapy Aide

The Orthopedic and Sports Injury Specialists

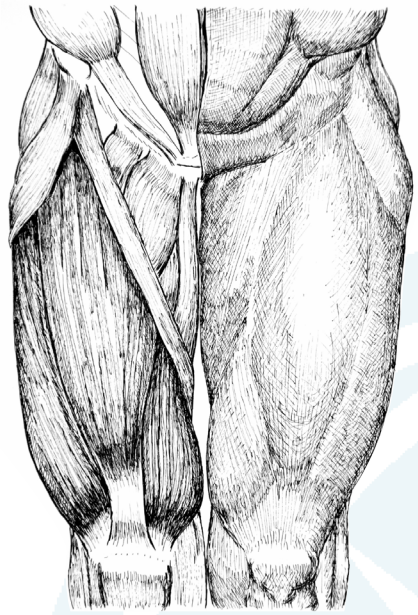
385 West Central Street
Franklin, MA 02038
Located in Liquor World Plaza on Route 140

Phone:
508.528.0147

Fax:
508.528.6470

Website:
www.franklinpt.com

STRONGER QUADRICEPS LEAD TO BETTER RECOVERY AFTER TKA



Total knee arthroplasty (TKA) is an extremely common surgery affecting thousands of individuals each year -- and the number of TKA surgeries is on the rise. By 2030, estimates indicate that TKA numbers will reach 500,000 surgeries annually. The age group with the fastest rate of increase is the 45 to 64 years range.

Research has been conducted regarding the prediction of outcomes for patients undergoing TKA using questionnaires. However, one area surrounding TKA that researchers Mizner, et al found lacking was how pre-operative quadriceps strength affects the outcome of TKA.

It is well known that muscle strength plays an important role in the functionality of older adults, and weakness in the quadriceps muscles has been associated with the development of osteoarthritis (OA) of the knee, which is one of the common reasons for undergoing TKA. Mizner, et al hypothesized that quadriceps strength would be an excellent predictor of the functional ability of patients after TKA.

To test this hypothesis, the researchers studied 40 subjects, 25 male and 15 female, scheduled for TKA due to OA. Two weeks before the surgery researchers gathered information through assessments completed in this order:

1. ***Self-report questionnaires.***
2. ***Assessment of knee ROM.***
3. ***Functional assessment.***
4. ***Quadriceps strength assessment.***

These measures were taken again 12 months after the surgery.

The results of the research showed that preoperative quadriceps strength was indeed an accurate predictor of the patient's functional abilities one year after surgery. Those with weaker quadriceps strength before surgery experienced less functional ability at the 12 month follow up.

From this research, we can deduce that pre-operative treatment of patients to build quadriceps strength will greatly benefit the outcomes of the surgery. Physicians should consider pre-operative interventions including physical therapy consisting of quadriceps strengthening exercises to help reduce post-operative pain and enhance the patient's ability to lead an active life.

Reference: Mizner, Ryan L, Petterson, Stephanie C, Stevens, Jennifer E, Axe, Michael J, Snyder-Mackler, Lynn, Preoperative Quadriceps Strength Predicts Functional Ability One Year After Total Knee Arthroplasty, The Journal of Rheumatology, 2005.

For more information about our clinic, check out our website@

http://www.franklinpt.com

Until Next Month,

The Staff at Franklin Physical Therapy

Thank you for taking the time to read this newsletter. Healthy regards from Franklin Physical Therapy!