

Orthopaedic Section of the APTA Grant Program Annual Progress Report Form

Date: 5-25-15

Name of Investigators: Stephanie Muth, PT, PhD, Philip McClure, PT, PhD, FAPTA, Scott Stackhouse, PT, PhD

Name of Grant: Neurosensory Responses to Thrust Mobilization and Eccentric Exercise in People with Rotator Cuff Tendinopathy

Award Period: June 1 2013 to May 31, 201 (Initial award date – date on contract as start date)

Current Year of Award completed (circle one): 1st, 2nd, no-cost extension year (3rd) 2nd

Progress reports are due no later than 1 year plus 10 days after the initial award date. Failure to submit a timely progress report may result in the termination of your award.

1. Summary of accomplishments in the past year: We hired a research assistant this year; however, she obtained full-time work and had to resign her RA position. In addition, we put significant financial resources into print advertising in a local newspaper. While this effort generated many inquiries, it did not yield a high volume of eligible participants. Since then, our research assistant has compiled an extensive list of local physical therapy clinics. We delivered print flyers to many of these facilities; however, this failed to generate increased enrollment. We are now reaching out to a select group of local clinics to build formal partnerships such that these clinics will target appropriate clients for study participation.

2. Provide a one-paragraph summary of results or abstract suitable for posting on the Orthopaedic Section website.
Title: Neurosensory Responses to Thrust Mobilization and Eccentric Exercise in People with Rotator Cuff Tendinopathy
Background: Shoulder pain is a common problem and frequently involves rotator cuff tendinopathy (RCT). Rotator cuff tendinopathy may cause pain and difficulty with shoulder function. One evidence-based and frequently employed intervention to address the pain and dysfunction associated with RCT is spinal thrust joint mobilization (TJM). Recent evidence indicates that TJM techniques are associated with immediate decreases in pain and improved force production in people with signs of shoulder impingement. Thrust joint mobilization induced hypoalgesia has been attributed, at least in part, to alterations central pain processing however, mechanisms associated with increased force production are not well understood. The primary goal of this study is to identify neurophysiologic mechanisms associated with increased force production following spinal joint thrust mobilization.
Methods: Nine participants with signs of rotator cuff tendinopathy have been recruited for this study. Dependent variables include the following: Pain with provocative testing, external rotation force production, voluntary activation deficits of the infraspinatus, pain and thermal threshold and thermal temporal summation. These are assessed before and immediately following either a true or sham cervicothoracic spine manipulation. Participants return 5 – 7 days later to have these variables reassessed.
Results: We have screened 16 participants over the phone who failed to meet initial inclusion criteria. An additional thirty-six subjects have been consented and screened for participation. Nine of these individuals met our inclusion criteria and have completed participation in the study. Two additional eligible candidates are scheduled for participation in the next two weeks.

3. Attach a list of your publications published or accepted during the past year, or currently being written. Send reprints when available. List presentations made and abstracts accepted for presentation based on this work. Indicate with an asterisk (*) those publications supported by Orthopaedic Section funding.

Muth, S., Brunner, L., Kung, W., Ooms, N., Steets, S., Wiacek, S. *Effects of High-Velocity Low Impact Thrust Manipulation on Lateral Inversion Ankle Sprains: A Systematic Review. Journal of Orthopaedic & Sports Physical Therapy, 2015, Volume: 45 Issue: 1 Pages: A1-A18 doi:10.2519/jospt.2015.45.1.A1*

4. Provide a budget, using the original approved budget. Indicate total funds spent to date per major categories. If there was $\geq 25\%$ deviation (greater or less spent) of use of funds for any of the budget category, please BRIEFLY indicate the rationale.

		Budget - Year 1	Budget - Year 2	Expende d FYE	Expende d FYE	Expende d FYE	Total	Remaining Balance
Expense	Description	5/1/13 - 4/30/14	5/1/14 - 4/30/15	thru 5/31/20 13	thru 5/31/14	thru 3/31/201 5	Expended	4/30/2015
1-1840-05-5001	Salaries	3,873.50	4,373.50	-	-	437.50	437.50	7,809.50
1-1840-05-5002	Benefits	-	-	-	-	119.88	119.88	(119.88)
1-1840-05-5012	Advertising	1,000.00	1,000.00	-	202.50	-	202.50	1,797.50
1-1840-05-5027	Honorarium s (Services)	1,375.00	1,375.00	-	350.00	650.00	1,000.00	1,750.00
1-1840-05-5033	Materials & Supplies	1,831.50	171.50	-	1,772.96	-	1,772.96	230.04
		8,080.00	6,920.00	-	2,325.46	1,207.38	3,532.84	11,467.16

Budget deviations: To date, we have only spent about 25% of our total budget

Personnel: We were able to use graduate assistants to handle some of the recruitment, eliminating the initial need for addition funding for a research assistant. We were able to hire a research assistant for a short period of time; however, she obtained a full time job and is no longer able to provide her services.

Due to low participation, we have not spent are allotted funds to pay therapists to perform the interventions. The PI has donated all of her time in-kind. Money allotted for the PI's salary was donated towards payment of the RA's benefits (after receiving formal approval).

Subject Recruitment: We spent \$650 to advertise (captured in the services row in the above budget table) in a local print paper. This advertisement generated 24 inquiries but few of these individuals met our inclusion criteria for participation.


Subject honoraria: We have had fewer eligible participants than anticipated.

Several of our participants opted to forego the participation stipend because they did not want to provide a social security number required for the check request.

As previously noted, we have spent about 25% of our budget. We respectfully request a one-year, no-cost extension to carry out the additional recruitment and data collection necessary to complete this study.

5. Objectives for the next year: (pending no-cost, 1 year extension):

1. In the final two months of the second, we are focusing our energy on recruitment of eligible subjects. Our research assistant has compiled and extensive list of local PT clinics. We will be reaching out to these clinics in an attempt to funnel participants to ur study as local print and electronic advertisement has failed to yield adequate numbers of eligible participants.
2. Complete data collection by April of 2016.
3. Complete data processing and analysis by end of May 2016
4. Submit preliminary results of this study for presentation at the APTA's Combined Sections Meeting, May 2016
5. Complete manuscript preparation Summer 2016


Your Signature

6-1-15
Date

Return to:

Tara Fredrickson, Executive Associate
Orthopaedic Section, APTA, Inc.
2920 East Avenue South, Suite 200
LaCrosse, WI 54601-7202

Orthopaedic Section of the APTA Grant Program No-Cost Extension Form

Date: 5-24-15

Name of Investigators: Stephanie Muth, Philip McClure, Scott Stackhouse

Name of Grant: Neurosensory Responses to Thrust Mobilization in People with Rotator Cuff Tendinopathy"

Award Period: June 1 2013 to May 31, 2015

(Initial award date is the date that the award was made to your institution)

Current Year of Award completed: 1st, 2nd, no-cost extension year (3rd)
2nd

Carryover Amount: \$ 11,467.16 (Amount not spent by end of award)

Justification:

❖ Reason Funds Remain:

Enrollment of eligible subjects has been challenging. We have tried several different modes of advertising for recruitment with marginal success. We are currently stratigizing to meet with local PT clinics to feed us appropriate participants. In addition, we have used fraduate assistants to perform some of the RA work which has decreased costs. Finally, some participants were unwilling to share their social security numbers so waived their participation stipend.

❖ How funds will be used in current year:

A new RA has been idenitified and will be put on salary. In addition we hope that our new recruitment approach will ensure adequate enrollment to complete the study.

If you are making a request for a no-cost extension, pleaes also complete an annual progress report form as well.

Stephanie Muth, Ph.D.

Please return form via e-mail, fax or mail to:

Tara Fredrickson, Executive Associate
Orthopaedic Section, APTA, Inc.
2920 East Avenue South, Suite 200
LaCrosse, WI 54601-7202