



PROFESSIONAL PHYSICAL THERAPY

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Announcements:

Upcoming Clinical Excellence
Training sessions :
NYC May 28, classes are 10 and
3:00

New Professional
Seminars website is
www.professionalseminars.com

Professional PT Clinical Corner

Issue 11

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Need assistance with Clinical Education?

Where can I find protocols or clinical education articles?

Go to the company portal, click on Clinical education tab ,
<http://portal.professionalpt.com/clinicaleducation/default.aspx>, look on the left hand
side of the screen and you will find the Clinical Library and Rehab Protocols links
(plus other good info)

How do I sign up for a company sponsored course?

The easiest way to see and sign up for internal education seminars is to go on the
company portal, click on Clinical Education tab and the latest offerings will be on the
main page, click on the course you are interested in order to register.

Who do I contact if I am having a technical issue with my MedBridge ac- count?

You can always contact me (rshapiro@professionalpt.com) or MedBridge has an ex-
cellent support team at <mailto:support@medbridgeed.com>

How do I find out how much continuing education money I have left for the year?

Contact Teresa Barrezueta in the finance department

tbarrezueta@professionalpt.com (516) 321-2403

Congratulations to Victoria Wilson DPT (Commack)
and Patrick Figueiredo DPT (Garden City) on the ac-
ceptance of their article entitled "***The Immediate
Effects of Kinesiotape and Functional Perfor-
mance***". Watch out for this article in an upcoming
issue of International Journal of Sports Physical
Therapy.

Editors note:

We hope you are enjoying the Monday morning educational updates!, Please feel
free to reach out to us with any questions, comments or recommendations that you
may have. The company continues to grow and we are now over 400 clinicians
strong. There is some incredible talent in this company and we encourage each of
you to contribute articles, case studies, technique peeks , article reviews etc. We
can be reached at education@professionalpt.com.

Enjoy

Robert Shapiro MA ,PT, COMT, NKT, SFMA

Treating Your Patients Like Family

David Skudin, Director of Customer Service

We have all been patients ourselves and have seen two different kinds of physicians – ones that considered us as the individual and ones that considered themselves performing a function to too many of us, like we're only a number on a chart.

One way to ensure that our patients feel that we are treating them as individuals is to **Treat every patient like they're family. Treat them with kindness, respect, and appreciation.** After all, how could we be clinicians without our patients? **Treating patients the way you treat family can be very simple.**

Think of them as someone you have known forever. Of course, you have to complete the tasks at hand such as performing treatment or resolving an issue, but just think of it as if you are doing it for a loved one.

- Take an extra second to stop thinking about all the stresses of being a clinician. Bringing your stress level down helps you deal with the patient logically and

makes them feel very comfortable.

- Do what you can to accommodate the patient. The little things make a huge difference. Any opportunity to go above and beyond will make them feel like you genuinely care about them as an individual, Wow! Don't belittle or minimize any patient's feelings about their pain or injury. We may know we've seen a lot worse, but to them, their pain or circumstance is all that matters. Communicate with your patients – what was true yesterday might be different today. Don't assume they remember what you told them once or even twice and asking them how they're doing each day, reinforces that you are truly still interested in them as an individual.

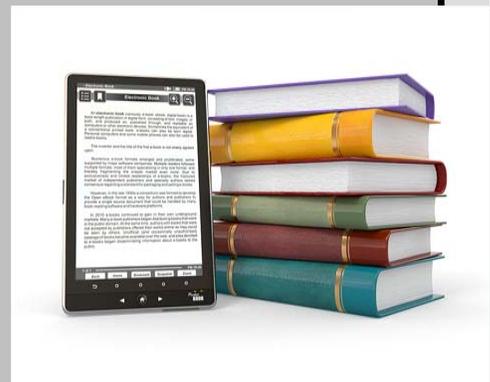
Never stop trying to **treat each patient like family.** We may have some relatives that we love and some that are not so great, but where would we be without the support and comfort of our family? **Where would our patients be without us? We need each other just like family!**

If you have any questions, comments or want to share an exceptional patient experience, please feel free to reach out to David at dskudin@professionalpt.com



Random Quiz Questions:

1. What is the condition where the pars interarticularis is fractured?
2. What is the condition caused by impaired blood supply to the femoral head with necrosis?
3. What is the normal angle of the femoral neck with the shaft of the femur?
4. What are some symptoms associated with tarsal tunnel syndrome?
5. If a magnetic resonance image (MRI) correctly identifies 95% of patients as positive for anterior cruciate ligament tears, then the MRI is....



A Comparison of Cryotherapy and Intermittent Compression Therapy and Their Effect on Muscle Recovery Following Exercise

Schroeder EN, Powers ME, Henry KJ: Marist College, Poughkeepsie, NY

Context: Optimizing recovery is beneficial for reducing fatigue and overtraining and overall injury risk when performing successive bouts of training or competition over a season. The inability to repeat the same level of performance in the days following intense training is frequently attributed to peripheral fatigue involving metabolite accumulation and muscle damage. Thus, various techniques have been suggested to accelerate the clearance of muscular damage or metabolite accumulations and optimize recovery. Cold water immersion (CWI) and intermittent pneumatic therapy (ICT) using extremity compression sleeves are two modalities commonly used to enhance recovery.

However, at this time their efficacy is not fully understood and comparisons between the two have not been investigated.

Objective: To compare the effects of CWI and ICT on recovery following a bout of intense exercise.

Design: A randomized and counter-balanced single blind cross-over design.

Setting: Athletic training facility.

Patients or Other Participants: Twelve healthy varsity athletes and recreationally active males and females (age=20 ±0.7 y, height=166.2 ±16.9 cm, mass=70.9 ±12.6 kg) who did not suffer from any contraindication to CWI or ICT volunteered.

Interventions:

Each participant reported for three sessions separated by a period of at least one week. At each session, the participants completed a drop jump protocol consisting of 100 drop jumps (5 sets of 20).

The participants dropped off a 0.61-m platform with both legs and performed a maximal vertical jump in

place immediately upon landing. A 10-s rest was provided between jumps and a 2-min rest between sets. Immediately following exercise, the participants completed one of three treatment conditions, CWI, ICT or control (CON). CWI consisted of immersion in 10°C water to the level of the iliac crests for 20-min. ICT utilized the NormaTec MVP Recovery System (Normatec, Newton-Center, MA) applied using manufacturer's instructions for a 20-min treatment. The CON condition consisted of seated recovery alone for 20-min.



Main Outcome Measures:

General muscle soreness using a visual analogue scale (VAS), maximum vertical jump height (Vertmax), 54.9-m shuttle time, and Yo-Yo intermittent recovery test (Yo-Yo IR1) performance were assessed immediately prior to and 24-h following the bout of exercise.

Results:

Muscle soreness was greater 24-h after exercise (F1,11=55.06, p=.001), however no treatment effect was observed. Likewise,

Vertmax (F1,11=10.28, p=.008) and 54.9-m shuttle time (F1,11=8.65, p=.013) performance declined 24-h following exercise however the treatment had no effect on these measures. In contrast, a significant decline in Yo-Yo IR1 (F2,22=4.77, p=.019) performance was observed following the CWI (pre=1186.3±484.2, post=1054.1±455.9 m) and control (pre=1268.0±489.3, post=1048.0±490.7 m) conditions, but not following ICT (pre=1196.0±426.2, post=1120.0±360.2 m).

Conclusions: While CWI and ICT did not appear to affect short duration anaerobic performance, ICT did provide improved recovery for aerobic performance. Thus, this treatment can be considered beneficial as a recovery modality.

Erin Schroeder is a Certified Athletic Trainer at Professional Physical Therapy's Great Neck clinic and Manhasset High School.



Compliance Corner: *Cell Phone Policy and Unlimited Data*

Daniel Hirsch PT, DPT | Director of Internal Audit

This article is intended to emphasize the importance of what our company cell phone policy is and how it impacts our daily routine in the clinic. We all know the well advertised unlawful state rule of operating a motor vehicle while utilizing a hand-held cell phone, but the risk of violating a HIPAA or privacy law by taking a photograph of a patient without their consent or sharing a video of a patient who just completed a gait analysis progression may be a simple oversight to make.

Best practice while working and treating patients in the clinic is to avoid cell phone use on the floor. If an emergency or exception to this rule presents itself, please ensure that your patient is supervised by a qualified licensed individual and promptly remove yourself from the treatment area to use the phone. Work-related messages, calls or emails on your phone to MD's, PA's or other patient-related resources such as a physical therapy applica-

tion to guide test and measurements should receive approval from the clinic director prior to implementing and be limited in patient areas.

Patients are requested to limit personal cell phone use for multiple reasons including frequently interrupting the session, limiting their focus on

therapeutic exercise details or safety and overall poor consideration for someone else's time. This variable is difficult to control, so please kindly stress the importance to each patient how much you value their successful outcomes in therapy and ultimately reaching their individual functional goals.

Instant data uploads to cloud based networks are common technology in most smart phones, so think twice before taking that picture or video without patient consent because retrieving or properly deleting it is very challenging. As always, please feel free to contact me directly with any questions, comments or concerns. Thank you very much,

Daniel Hirsch, DPT
dhirsch@professionalpt.com



Grading Knee effusion using stroke test. Test is performed with patient lying in supine position and has the knee in full extension the examiner puts his hand beneath the medial tibiofemoral joint line and then strokes his hand upwards and towards the suprapatellar bursa for 2 - 3 times in a sweeping motion in trying to move the effusion from the inside of the joint capsule to the suprapatellar pouch. The examiner then strokes downwards on the lateral aspect of the knee (thigh), just above the suprapatellar bursa towards the lateral joint line. The test is positive if you detect a small wave or bulge on the medial aspect of the knee, just inferior to the patella within a few seconds.

Grade	Test result
Zero	No wave produced on down stroke
Trace	Small wave on medial side with down stroke
1+	Larger bulge on medial side with down stroke
2+	Effusion spontaneously returns to medial side after upstroke (no down stroke necessary)
3+	So much fluid that it is not possible to move the effusion out of the medial aspect of the knee

Ask the Expert: Thoracic Pain Robert Shapiro MA PT COMT

A clinician emailed this question to the education department :

Pt is 79 yo female with 3 month duration insidious onset spine pain that travels her entire back, travels anteriorly to her B flanks, and has mid-gastric pain with spinal flexion around her xiphoid process. Pt PMH is extensive and significant for DMII, high cholesterol, and heart trouble, on Coumadin and lots of other meds. I just evaluated her and could barely do anything with her she was in so much pain. She denies bowel/bladder issues (though reports frequent urination prior to the back pain), saddle anesthesia, and reported having numerous medical tests, which "confirmed nothing." MD wanted to speak with me prior to eval, but I did not know this until after. She is very weak to BLE as she has been "sitting on the couch" for the past three months. She utilizes a wc for long distances and is currently dependent on aide for all ADLs and IADLs.

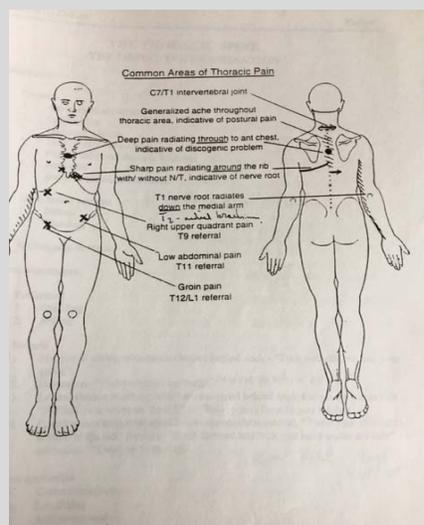
Where do I start? She has pain with almost all positions, only feels okay sitting. The anterior stomach pain freaks me out... though MD did not mention it on Rx. The Rx is detailed in it's medical hx. She has had PT prior 8 months ago that did not help... apparently they did not do much though.

Answer from the Clinical Excellence Team:

I will try to go point by point from your question.

- You report insidious onset: when a patient tells me it started insidiously I always interrogate (I mean ask :)) them about possible causes: did you lift something, shovel, clean the bathroom, walk more than usual, lift a baby etc.—to see if there it is truly insidious. Did they just wake up with it one day?

- Pain travels her entire back:* how far up, how far down? one side both sides. What is the quality of the pain? this will help you rule in/out if the pain is neurological, muscular, visceral in nature
- From a *neurological perspective:* thoracic **discogenic derangement** creates a deep dorsal spine pain that radiates through (from posterior to anterior) the sternum, **nerve root pain** in the thorax spine follows a specific root level and goes around from posterior to anterior. Herpes zoster (shingles) is prevalent in this patients age group and needs to be ruled out: are there any open sores etc that follow a specify nerve root? Remember post herpetic pain can last months after the rash is healed. **Costovertebral joint** pain refers laterally (flank)
- Did you appreciate any sensory



changes in your objective exam?

- It is always a good idea to rule out red flags when a patient reports general LE weakness as there could there be cord compression. Additional questions may include: are there any fractures or h/o fractures, steroid use, osteoporosis, unexplained

weight loss (10# in the last few weeks)

Where do I start?

- As you stated, make sure you and her doctor communicate.
- Your exam for this patient is going to be limited but you need to gain enough information to know where to start
- Planning the exam: we need to be able to r/o sinister pathology through the questions above plus Babinski
- Attempt to reproduce her pain via soft tissue palpation, breathing gentle UPA or CPA, done in sitting if easier for the patient?
- Differential dx for this patient is: rule out: sinister pathology, nerve root irritation, stenotic nerve root compression (since bilateral) costovertebral or costovertebral jt dysfunction, Herpes zoster, soft tissue restriction
- Once you find your comparable sign (e.g. flexion increases pain) then do a trial treatment and see the response. This is the type of patient you will have to test and re-test often to determine what is helpful. Be patient and thorough with your exam and progression. If you do too much at once you will get confused and the patient will become flared up.

If you have any clinically related questions feel free to email to Clinical Excellence Department and we will do our best to get you an answer within 24 hours.

We can be reached at education@professionalpt.com

Ask the Expert: Tim Stump MS PT, CSCS, USA-W

Question: I am seeing a patient who underwent a Reverse Shoulder Arthroplasty.

Short history of the pt is as follows: On 7/28/15, pt tripped and fell and landed on R shoulder. XRAY showed fractured humerus --surgical ORIF reverse TSA 7/29/15 -- non union. Another ORIF revision 11/2 and was immobilized in a sling thereafter --referred to therapy. Pt has no restrictions as per MD.

Pt subscapularis, pec, biceps, post cap is extremely restricted. Pt can tolerate PROM with pain at end ranges. Pt is willing to put in whatever work he needs to and endure whatever positions/STM/PROM he needs to get better.

Being that he underwent a reverse TSA, are mobilization techniques essentially reversed? Are there any techniques/resources you would recommend? I am pushing for range as far as I feel is safe/tolerable for the patient but we seemed to have reached a plateau.

Motion	AROM	PROM
Shoulder flexion	90	110
Shoulder ER	50	75
Shoulder abd	80	100

Response:

This is an extremely complex case for several reasons in my opinion.

Let's take them one by one.

First off this appears to be a catastrophic injury. I would like to know more about the actual mechanism of injury.

- Details of the fall.
- How old is the patient?
- History of previous shoulder pathology?

Initial treatment of ORIF & **Reverse TSR speaks volumes**. I'm going to

make some inferences based on my experience and knowledge of these 2 procedures.

ORIF is necessary to fixed a displaced fracture. The diagnosis was most likely a severe proximal humeral fracture. Given the fact that both procedures were performed there was a probable surgical neck fracture and a irreparable 4 part humeral head fracture &/or involvement of the glenoid.

The humeral head was obviously so badly damaged that an arthroplasty was needed. The fact that the surgeon choose to do a **reverse** TSR is even more telling. A reverse TSR is a very complicated surgery and most commonly thought of as a salvage procedure or the final option instead of doing a traditional TSR. In an isolated situation, a reverse TSR is typically done when the RC is insufficient-



namely the subscapularis (the most critical of all the cuff musculature in terms of contemplating a TSR). In this case, I suspect either high grade glenoid fracture &/or significant soft tissue damage was present. The soft tissue damage (RC) could have occurred at the time of the injury or there could have been underlying pathology (hence the above questions related to pt history- age, past shoulder pathology and details on the injury). This all helps the clinician piece together the clinical story.

This is a chronic condition with initial incident occurring 8 months ago, plus a significant complication of Non-union requiring a second procedure ~ 3 months later. As a critical thinking clinician we need to know the contributing factors of the non-union:

- Smoker?
- Patient compliance?
- Additional Trauma?
- Too aggressive PT treatment?
- Surgical technique flaw?

Some critical questions about the revision performed on 11/2.

- Did the same MD perform the revision as did the primary surgery?
- How long was the patient immobilized in a sling?
- Type of surgical fixation- plate vs IM nail?

Current MD orders of no precautions is very encouraging and should give you as the clinician the confidence that there is X-ray evidence that the fracture is healed and given the time s/p second procedure the patient is well into the remodeling phase of wound healing.

Using the Hierarchy of Physical Qualities to guide our treatment and goals I've found to be very helpful.

Evaluation / Assessment

- Pain levels?
- Current functional level?
- Pt's goals / expectations?
- ROM in my opinion given the situation is pretty good.

Possible expectations / realistic goals in terms of Mobility (with only the given information and not having seen the pt) passive forward elevation to 135 active forward elevation to or just above the horizontal.

Strength goals/expectations- to allow the performance of light ADL's to the horizontal position and potentially lifting and carrying heavier loads in a dependent position.

But the likeliness of achieving higher levels of physical abilities such as power or speed for recreational activities using this UE are not realistic.

(continued on next page)

Ask the expert (continued from page 6), Tim Stump MS PT, CSCS, USA-W

In regards to your initial questions:

Being that the he underwent a reverse TSA, are mobilization techniques essentially reversed?

You are correct, in that the biomechanics of the roll and glide in a reverse TSR are exactly reversed compared to the native joint. In the Reverse TSR, the roll and glide of the joint during elevation occurs in the same direction of limb movement. **However, I would NOT recommend any joint mobilizations to be performed at the GH joint.** The number one complication following any TSR (traditional or reverse) is instability at the joint. We do not want to contribute to this in any way shape or form. We need to restore mobility, fine, but not instability. In my experience soft tissue mobilization, trigger point release and traditional AA/PROM and stretching suffice. If you suspect tightness and

limitation with scapula-thoracic motion- then mobilizing the scapula would be helpful. But avoid direct joint mobilizations to the ball and socket.

Are there any techniques/resources you would recommend?

I've had good results with low load prolonged stretching in cases like this, but it might be best discussed in person.

I am pushing for range as far as I feel is safe/tolerable for the patient but we seemed to have reached a plateau.

Unfortunately you might have reached this limit. Aligning MD and Patient expectations are very important at this point in time.

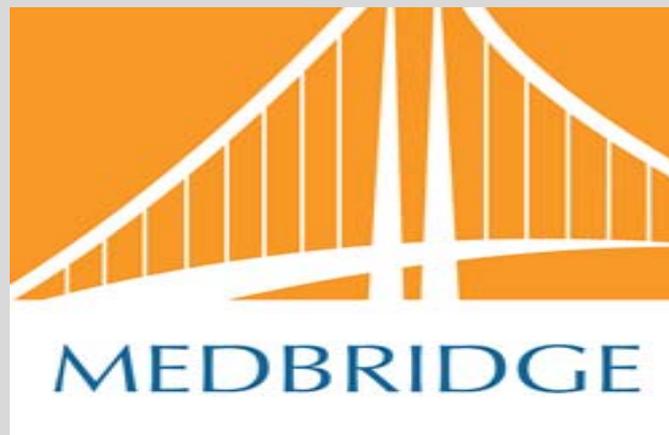


MedBridge Facts:

Professional Physical Therapy clinicians earned 2543 C.E.U's and completed 1021 courses last year through MedBridge.

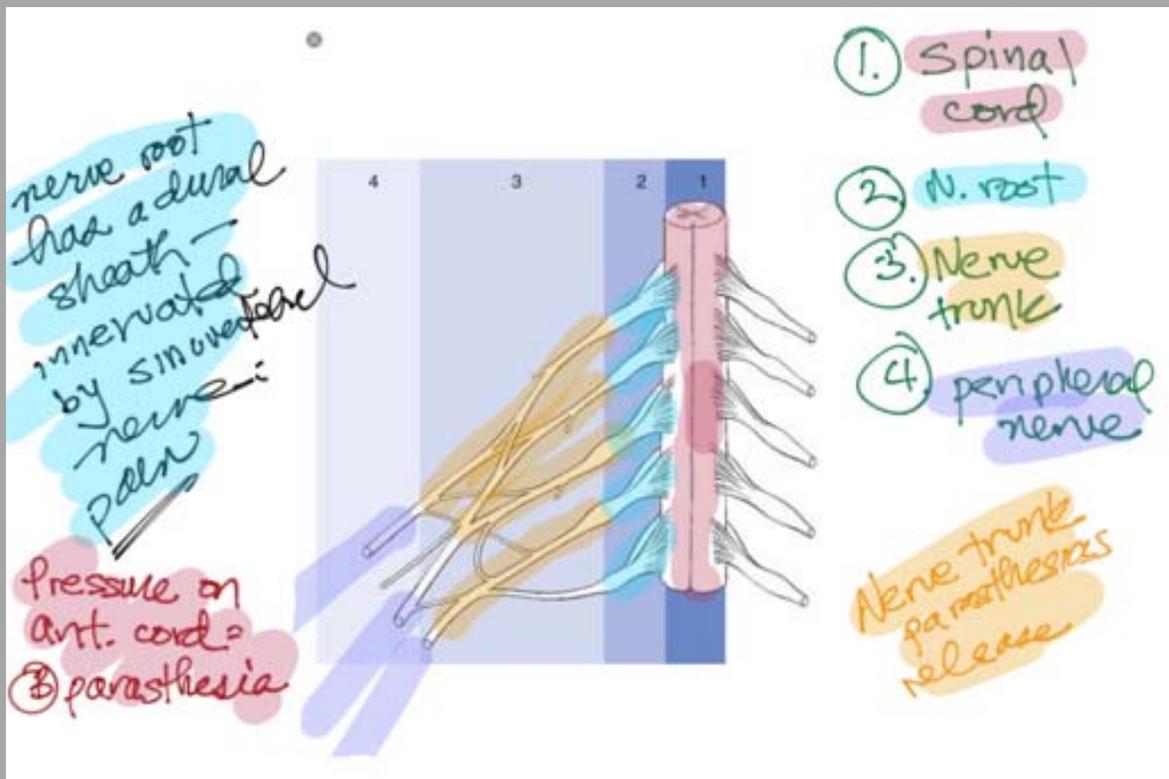
Top 5 clinics in completed courses are :

1. Queens (106)
2. Columbus Circle (76)
3. West Side (63)
4. Garden City (61)
5. Roslyn (48)



Nerve Compression with Associated Symptoms Robert Shapiro MA PT COMT

- | | |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1. Spinal Cord | Pins and Needles occur during compression, completely painless, Extra segmentally and bilateral paresthesias |
| 2. Nerve Root | Pain > Paresthesias, segmental distribution of symptoms |
| 3. Nerve Trunk | Parasthesias > numbness > pain, vaguely delineated areas, release phenomenon (pins and needles occur after the compression is ceased) |
| 4. Peripheral Nerve | Numbness > Paresthesias > pain, clearly delineated area |



Clinical Gems of the Month Robert Shapiro MA PT COMT

- * The multifidus lumborum deep fibers act as anti shear muscles and rotate the lumbar segments vertebrae the opposite direction
- * The popliteus can initiate the lateral rotation of the femur on a fixed tibia to create an "unlocking" of tibiofemoral joint from full knee extension.
- * Recovery of a peripheral nerve following injury occurs at a rate of 1 inch per month or 1mm/day just as long as the internal architecture of the nerve is preserved.
- * Tibialis posterior reflex can be elicited by tapping the tibialis posterior tendon behind the medial malleolus and is testing the reflex of the L4/5 segment.
- * Scalene cramp test is performed by having the seated patient rotate to the side being tested followed by the patient actively pulling their chin to the mid clavicular region. A positive sign is increased pain and may indicate the presence of a trigger point in the ipsilateral scalene.
- * Tinels sign can be elicited at two places in the ankle: front

of the ankle (anterior tibial branch of the deep peroneal nerve) and behind the medial malleolus (posterior tibial nerve)

- * Studies have shown that lumbar disc degeneration is present in 40% of individuals under the age of 30 and 90 % of those b/w 50-55.
- * 1/3 of individuals with a heel spur found on x-ray have no pain.



- * The sciatic nerve can be palpated at the lateral hip between the greater trochanter and the ischial tuberosity.
- * The **ABC's of Manual Therapy** are: Assume nothing, Believe no one, Check every-

thing and Don't forget the big picture. *Cliff Fowler PT NAIOMT*

- * Maximum glute EMG activity during a squat is at 90+ degrees of knee flexion.
- * Peak ACL shear forces occur between 15-30 of knee flexion during a squat.
- * When a person reports night pain, fever, chills r/o malignancy or infection.

Don't be shy....

Please feel free to contact Rob Shapiro with any gems you want to share with your colleagues:



rshapiro@professionalpt.com

Quiz answers:

1. Spondylolysis
2. AVN of the hip
3. 120 degrees
4. Pain, numb, paresthesia at the medial ankle to plantar aspect
5. sensitive

