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NEVADA PHYSICAL THERAPY
Orthopedic and Sports Rehabilitation

In this Edition

- Updates on current evidence and how it relates to patients with LBP
- A breakdown of how Nevada Physical Therapy approaches this population and what sets our model apart.
- Resources for PCPs and talking points to better help patients on the front line dealing with these issues.
- Evidence for non-operative management of common MRI findings.

Physical Therapy, Low Back Pain and Primary Care

As PCPs, you are often the first stop for patients with low back pain and we appreciate how debilitating these episodes can be for patients. The purpose of this newsletter is to update you on the current conversations being had with patients suffering from low back pain and what we can do to help!

Acute vs Chronic

We know acute pain is often associated with tissue damage whereas chronic pain, *pain lasting greater than three months*, can often be the brain's perception of a perceived (or real) threat. Carragee, all the way back in 2005, showed that there was little correlation between structural findings and low back pain but psychosocial variables strongly predicted both short and long term disability. We also know most low back pain is non-specific (Koes 2006) and 70-90% will resolve on its own (Cherkin et al., 1996, Coste et al., 1994 respectively). So, great news right? *Why send them to physical therapy*??

It is in our nature to want to pinpoint the exact cause of someone's pain but if we look at the evidence, we find this to be a difficult task and we need to be more "*comfortable with uncertainty"*. Our jobs become two-fold: **first, and foremost it is to minimize fear and catastrophizing** and truly help our patients understand that there is a very high likelihood that everything will be ok. This means attempting to minimize reliance on opioids for pain, decreased reliance on MRIs (save your cash), and building independence as quickly as possible. Second, in acute cases, it is to try and identify the mechanism of their injury and guide them through a program aimed at reducing their risk for re-injury. In chronic cases, it becomes a bit more involved but in these individuals it may be necessary to try and change patients' beliefs (gasp!). Modifying Fear Avoidance Behavior (FAB) and seeking "outside-in" treatment approaches are fantastic starting points with the intent of showing them that *they are not their diagnosis* and an "inside-out", independent model is truly the path they need to walk for long term recovery. This is where we insert a Kung-Fu Panda quote on the power has always been inside you (or something).

> *"There is some evidence that catastrophizing as a coping strategy might lead to delayed recovery. The influence of catastrophizing in patients with LBP is not fully established and should be further investigated. Of particular importance is the establishment of cutoff levels for identifying patients at risk."*
>
> -Wertli , 2014

Strength is Key

Regarding acute low back pain, Pengel et al. in 2003 published a systematic review that found most low back episodes to resolve within a few weeks regardless of the treatment. It would appear *all exercise works*, but quite possibly some better than others. Searle 2015 would state that resistance exercise is more effective. Saragiatto 2016 would say motor control exercises can have some positive effect. Either way, while everyone loves manual therapy and gadgets, the evidence is strongly suggestive that strengthening is the key. In the same study by Pengel et al. there was a 73% reoccurrence rate of low back pain within 12 months. As physical therapy providers, we hope to impact these individuals and reduce this reoccurrence rate.

Our bodies have an incredible ability to adapt over time if given the right dosage and stimuli. It is this primary understanding that allows us to have such excellent results with patients where many have struggled. Setting patient expectations is key.

Our Philosophy

What makes Nevada Physical Therapy different??

- **Evidence-Based Practice**– We sift through hundreds of articles and critically appraise research daily to create the most up-to-date treatment models in the region so our patients can trust they are getting the *best care possible*.
- **Patient-Centered Approach**– Our philosophy is based on creating *patient independence* and everything we do from the way we speak to the treatments we incorporate (*or don't!*) is focused to give our patients the tools they need to truly heal themselves from an "inside-out" approach.
- **Honesty**– In an industry filled with gurus and catch-phrases, we strive to be a lighthouse to our patients. No "body hacks", gimmicks, or trendy modalities. Just honesty, time, consistency and good old-fashioned hard work.

"I Have Degenerated Discs"… Yeah, who *doesn't*??

We've heard it all before. *Degenerated discs, joints, disc disease,* etc. whatever you want to call it, it's whispered like a death sentence in the halls of every clinic in America.

But does it need to be? In a study by Hicks et al. 90% of people >65 years old had some level of degenerative disc or facet pathology regardless *of pain status.* They also found radiographic severity was not associated with pain severity among those with chronic low back pain. Brinjiki (2014) would state that DDD is present in 37% of 20-year old's and up to 96% of 80-year old's. This appears more a natural progression of aging but still, if almost 40 percent of 20-year old's have the finding it is bordering on being more abnormal if you do not have some form of degenerative disc disease.

This isn't isolated to DDD or DJD, but disc herniations as well. (Note: it's actually becoming clear in the literature that what we have been diagnosing as a mechanical issue in a multitude of musculoskeletal conditions are seen in large percentages of asymptomatic populations. Which begs the question: How can we deem something abnormal if its seen in non-painful individuals? **Spoiler: Pain Science**.

"Maybe the people with the pristine MRI's are the weirdos after all." -Derek Miles, PT

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2013 Neer Award: predictors of failure of nonoperative treatment of chronic, symptomatic, full-thickness rotator cuff tears

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At Nevada Physical Therapy, we are dedicated to providing the best possible care for our patients. This is built on both a strong hands-on approach and progressive research-based protocols. Not content with status-quo, we are constantly pushing our field forward and striving to create the highest standard of care possible.

That Aggravating Rotatory Cup!

In 2013 Warren et al. found an interesting finding in regards to full thickness rotator cuff tears. Structural factors, such as tear size, *were not predictors of failure of non-operative treatment.* Their findings found *patient expectations are the greatest predictor of non-operative failure*. This indicates the need for appropriate patient education! These tears can often be managed conservatively with an excellent outcome.

A reasonable clinical decision for surgery, Warren et al. would argue, are patients with a higher activity level *and have failed conservative management.* However, if physical therapy is appropriately dosed, and patients understand the benefit, those patients with any degree of rotator cuff tearing have a great opportunity to manage their injury or degenerative tear non-operatively.

"Whether you think PT will work or will not work, you're (probably) right!"

SYSTEMATIC REVIEW

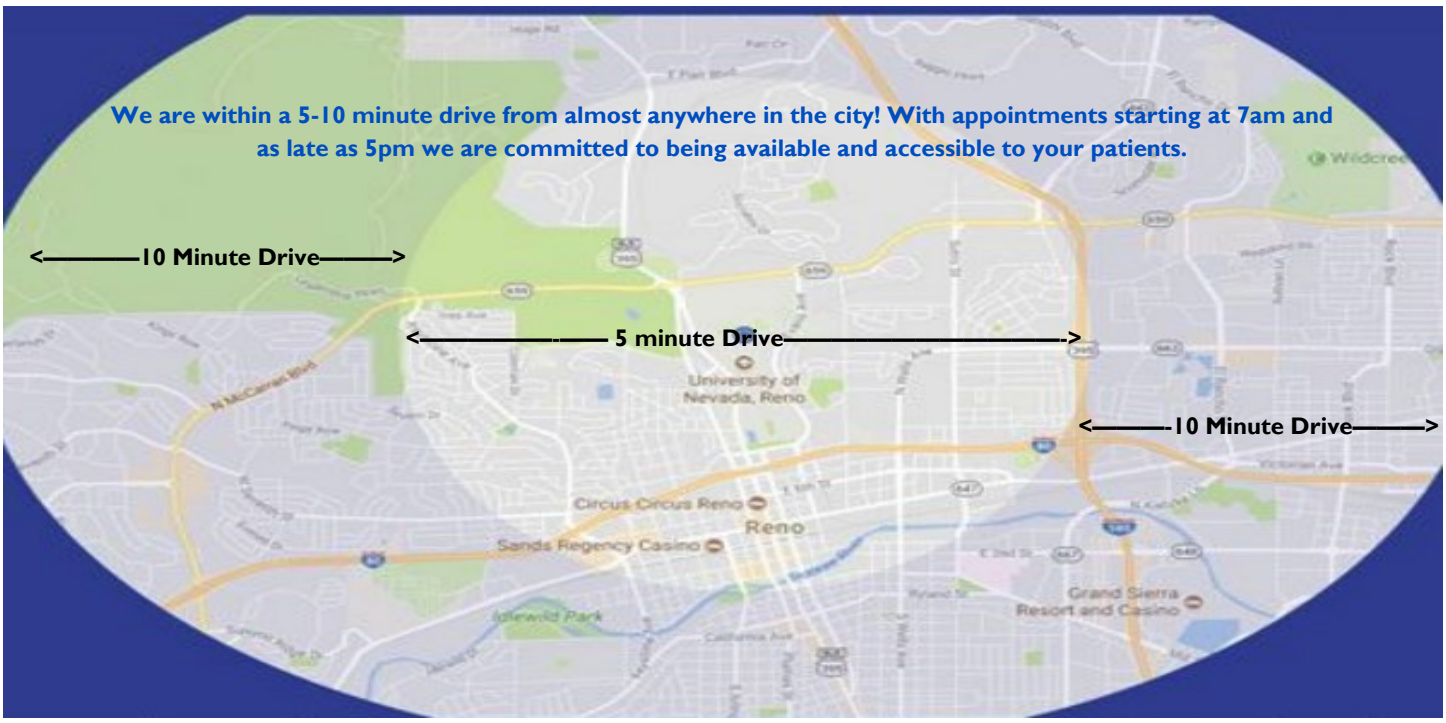
The Prevalence of Meniscal Pathology in Asymptomatic Athletes

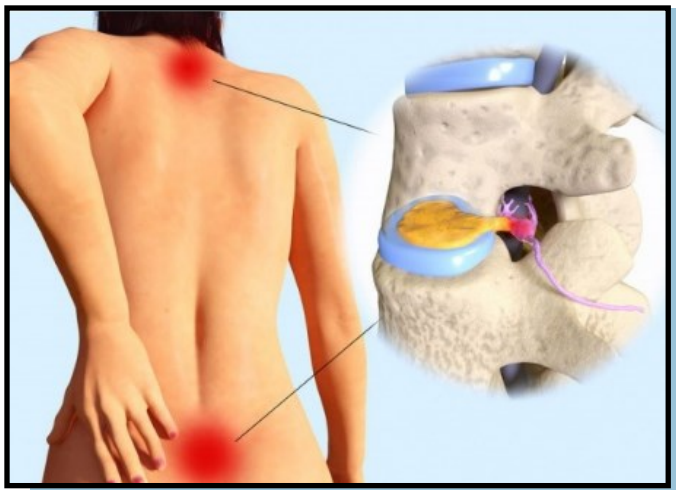
Corey T. Beals[1,2] · Robert A. Magnussen[1,2] · William C. Graham[3] · David C. Flanigan[1,2]

A tough question patients are commonly left with is whether or not surgery is indicated, and often let imaging studies dictate their treatment. Often times imaging can bias clinicians and patients may feel they are only left with a surgical option. Studies have shown loss of ligamentous integrity or meniscal lesions don't necessarily require surgical intervention.

In 2016 Kise et al. completed a RCT which found *no clinical difference in outcomes at a two year follow up* when comparing 12 weeks of supervised exercise alone or arthroscopic partial meniscectomy alone. Not only was there no difference at the one year follow up, the exercise group demonstrated improved strength at their three month follow up. We typically see patients who have true mechanical locking of the joint benefit from surgery but outside of that (pain, swelling, instability, etc) most patients will recover with an appropriately-dosed conservative management!

Another important factor we should consider is the correlation between symptoms and no symptoms. According to Beals et al. in 2016, 31.1% of the study's population has an isolated meniscal pathology and was *asymptomatic.*





If you google, "Lumbar Disc Herniation," this is one of the first images patients see. Are we creating a misconception that these injuries have to be painful and debilitating? Or further, that their "slipped disc" is even the cause of their pain??

In 2010, Janardhana et al. analyzed the correlation between clinical features and MRI findings in regards to lumbar disc lesions. They concluded, the MRI finding correlated well with the clinical level if motor loss was present. In other words, if we know what the patient's pain pattern is, we can correlate; if we try to form a conclusion from their MRI, we most definitely cannot. Therefore is a (often times costly) MRI necessary unless surgery is planned? The answer is almost always: no. Additionally they found not all MRI lesions have clinical symptoms, in fact *48% of the MRI studies with lumbar disc lesions were asymptomatic!*

Grindem et al. in 2014, completed a cohort study analyzing sport participation in with nonsurgical vs. surgically reconstructed ACLs. What they found was individuals playing level 1 sport, the favored intervention to return to preinjury level was surgical management. However, *individuals playing level II sport was successfully managed nonsurgical, and had better outcomes than those managed surgically*; this finding was also the same for level III sports.

What does this mean to you as a PCP? If you have an athlete or patient who doesn't participate in high-level athletics that require unanticipated cutting, single leg jumping, etc. then they are likely good candidates for conservative management. Our own physical therapist, Jonathan Hodges, has ruptured both ACLs and is a competitive powerlifter, snowboarder, and has ran the Reno-Tahoe Odyssey (twice!) which goes to show, strength and PT are often all a patient needs!

Nonsurgical or Surgical Treatment of ACL Injuries: Knee Function, Sports Participation, and Knee Reinjury

The Delaware-Oslo ACL Cohort Study

TABLE I Sports Recorded in the Monthly Online Activity Survey Classified According to Activity Level

Sport	Activity Level
Handball, soccer, basketball, floorball	I
Volleyball, martial arts, gymnastics, ice hockey, tennis/squash, alpine/telemark skiing, snowboarding, dancing/aerobics	II
Cross-country skiing, running, cycling, swimming, strength training	III

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