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Labrum tear test

 Many of our physical therapists are residency or fellowship trained, board certified specialists that are dedicated to providing personalized care to each patient. For every visit with us, you can expect to be seen one-on-one by a licensed physical therapist. With convenient locations, we are happy to serve you no matter where you are in the Greater Baltimore Region. Orthopedic Physical Therapy Sports Physical Therapy Pre / Post Surgical Total Joint Replacement Neck & Back Injury Performance Center Manual Therapy Dry Needling IASTM Muscle Energy Technique Strain / Counter Strain Spinal Decompression Click here to watch our other videos I've started my PT at the Rosedale office and so far have been completely satisfied. Everything being done has been explained and the staff there are very kind. Hopefully this therapy will get rid of my pain. I do feel better after my session. from Rosedale/White Marsh Office This was my second round up of therapy with PTF. The therapist Sarah is very knowledgeable and helped me a great deal. I was in a lot of pain when I first started due to a bad lower back. I made significant improvement and reduced my pain a great bit. Sarah is very attentive and has a wonderful personality. Thanks PTF! from Roland Park Office John Baur is an excellent physical therapist. He is extremely knowledgeable and professional. The staff at the Columbia office is also excellent. I highly recommend this facility to anyone in need of physical therapy. from Columbia/Clarksville Office 200 W Cold Spring Ln #300Baltimore, MD 21210 (410) 662-7977 5005 Signal Bell Ln #202Clarksville, MD 21029 (410) 531-2150 Onelife Fitness126 Shawan Rd, Suite 300Cockeysville, MD 21030 A healthcare provider asks you to:Raise your arms to 90 degrees (parallel to the floor) with your elbows fully extended. You may be sitting or standing.Bring your arms toward the center of your body slightly (10 to 15 degrees).Rotate your arms inward. The tops of your hands will face toward each other, and your thumbs will point down. Your elbows will face toward the outside of the body. This is called pronation.Your healthcare provider presses down on your arms while standing in front of you or behind you. They ask you to resist the pressure and push the arms upward.Next, the healthcare provider asks you to rotate your arms the other way. Your palms will face the ceiling, and your elbows will face the floor. This is called supination. Again, your healthcare provider presses down on your arms and asks you to resist.What does a positive O'Brien test mean?A positive O'Brien test means that you have pain in the first position but less pain in the second position. You must have reduced pain in the second position for the O'Brien test to be positive.If the pain is deep in your shoulder, that may indicate a labral tear. With a labral tear, the test may also cause a clicking sound.If the pain is closer to the surface at the top of your shoulder, that can mean you have an issue with your AC joint instead.How do I prepare for the O'Brien test?You don't have to do anything to prepare for the active compression test. It's a common procedure usually performed in a doctor's office.What should I expect after the O'Brien test?After the test, your healthcare provider will talk to you about the results and what they might mean. They'll also tell you whether you should have any other tests.Is the O'Brien test reliable?The active compression test can be positive in patients who have healthy shoulders. It's one of many tools a healthcare provider uses to assess shoulder pain. It usually must be combined with other tests for an accurate, comprehensive diagnosis. Page 2 Page 3 Shoulder Surgery cannot be performed in isolation and requires the expertise of qualified and experienced therapists to get the best results. Our Shoulder Exercise Book is popular and a useful tool for patient rehabilitation, designed by specialist shoulder therapists. Page 4 These protocols are a guide to the post-operative rehabilitation. Individual surgeons and therapists will differ. These are simply proven programmes we have used, based on our experience, training and surgical techniques. These protocols are not our 'accelerated rehab protocols', which need close therapist supervision and may not be applicable to all practices and patients. Shoulder Protocols Shoulder Exercise Guide Page 5 This section contains a selection of Educational Material compiled by ShoulderDoc.co.uk It is aimed primarily at Clinicians and Therapists, and contains information and software that may be of benefit to practising Shoulder clinicians. It is based on largely on our own experience, material that may be difficult to generally find and recent innovations and techniques we have adopted. Shoulderdoc is proud to be able to make available some of the great out-of-print and rare books on the shoulder: Page 6 Injections of the shoulder are common treatments for numerous shoulder disorders. In this section we include some information on our techniques, tips and reviews of the literature that may be of benefit to other clinicians. Page 7 Please note that I cannot provide medical advice by email, as per GMC guidance. The content on this website is provided as an education resource by Prof. Lennard Funk. If you would like to arrange a consultation for treatment then please go to www.thearmclinic.com For more information on the author lenfunk.com For enquiries related to this website only:Email: info@shoulderdoc.co.uk Page 8 AbstractPurpose: To evaluate biomechanical characteristics of 3 arthroscopic sliding and sliding-locking knots and the square knot, the gold standard used in open surgery. Type of study: Biomechanical investigation. Methods: Four different knot types (Weston, square, Duncan loop, and Nicky's) were tested in 5 configurations in a closed-loop system on a materials testing device. Three of the 5 knots were backed up with 3 reverse half-hitches and alternating posts and all sliding and sliding-locking knots were tied using an arthroscopic technique. Twelve knots of each configuration were tested for loop security with a 7-N preload, and for knot security with load to failure at a strain rate of 1.25 mm/second and cyclic loading of a 30-N force for 50 cycles. Results: No knots subjected to the 7-N preload failed or slipped and all had similar elongation (0.1 ± 0.1 mm) except Nicky's knot (0.3 ± 0.2 mm). There was no significant difference in load at failure for the square knot (178 ± 14 N), the Weston knot backed with 3 half-hitches (168 ± 14 N), the Duncan loop (160 ± 20 N), or Nicky's knot (148 ± 13 N). Most knots with 3 half-hitches failed with rupture at the knot. Under cyclic loading, no knots failed and none elongated greater than an average of 0.3 mm. Conclusions: All knot configurations maintained high loop security. All sliding and sliding-locking knots backed with 3 half-hitches had load at failure comparable to the square knot. With cyclic load testing, all knots tested elongated minimally. Additionally, this study confirms that all knots, even the sliding-locking Weston knot, are best backed up with 3 half-hitches alternating posts and directions of the throws. Clincial relevance: Sliding and sliding-locking knots are becoming increasingly popular among arthroscopic shoulder surgeons. This study provides a biomechanical basis for the clinical use of these arthroscopic knots and compares them with the gold standard, the open square knot. 1 Identify the pain. Locate where the pain in your shoulder is exactly and to where the pain radiates. Be precise, so that you can help your physician accurately locate the pain later on.[1] 2 Describe the pain. Describe the feeling of the pain. Pain can be described as sharp, throbbing, pressuring etc.[2] Labrum pain is often sharp and throbbing 3 Measure your shoulder's range of motion. Measure the range of motion in your shoulder. Note down what motion you are still able to do and what motions you are unable to perform. The labrum stabilizes the shoulder, therefore, stabilizing the motion of the shoulder. Loss of range of motion due to the instability of the shoulder joint is quite common.[3] 4 Identify Altering factors. Recognize what makes the pain worse or better. Pain is often altered with certain posture or activity. Distinguishing what alters the pain can tell a lot about the injury to the physician. 1 Give a chief complaint: Tell the whole story behind the pain to your physician and then recall what you identified from the four categories in the "Identifying symptoms" portion and articulate them to your physician as well. Your chief complaint, is your interpretation of the injury for your doctor. Don't be afraid to give details. The smallest detail could make a huge difference in the course of the diagnosis 2 Take the labrum tear test. There are 4 tests your doctor will conduct on your shoulder that specifically identify a labrum tear. If you respond in pain to any of the test, your test will be considered a pass for that specific test. Depending on how many test you pass or fail, the doctor will be able to conclude a percentage chance of a labrum tear.[4] Test 1: The doctor will ask you put the arm of injury in a 90-degree angle pointing upward. Facing you, while holding the elbow still, will push back against your forearm to see if any pain is triggered. Test 2: The doctor will ask you to put your arms out and resist him as he applied fore down. Test 3: The doctor will ask you to put your arms out and turn your palms in. He will then request for you to apply force against his palms as he holds them between your arms. Test 4: Doctor will ask you to reach across with the arm in pain and grip his finger. He will across your body and ask your to resists his pull. 3 Get Imaging done. The doctor will refer you to a radiologist specialist to get and MRI arthrogram done on your shoulders. Take the written script he provides you and get imaging done at local imagine center.[5] The MRI on its own isn't enough to identify such a small cartilage. The arthrogram is a dye that is injected into the shoulder ligament before the MRI so that it can specify the labrum. An MRI date can range from next day to a week from the day of your visit. Arthrogram insertion is a 20-45 minute process and the MRI can last from30-45 minutes. 4 Find out if your labrum is torn and what degree tear you have. Follow up with your doctor 1 week from when you got your MRI-Arthrogram done and find out whether your labrum is torn or not. If it is torn you well be told what degree tear you have, and that will determine the type of treatment you will receive going forward.[6] 1st degree tear is the slightest tear is the smallest of the tears. Recovery for a such a tear comes with rest and time. Doctor will offer optional physical therapy, but it is not necessary. 2nd degree tears are also quite small, but still give the physician some concern. He will strongly recommend physical therapy to ensure recovery. 3rd degree is where surgery will come into play. 3rd degree tears can limit daily life because of the intensity of pain and limitation of mobility. Doctor will give the patient of surgery if they intend on going back to intense physical activity. If the patient just wants to regain regular daily motion, the doctor will give a script for 4-6 months of physical therapy in order to strengthen the shoulder to support the weakness of the torn labrum. 4th degree tears are the worse tears, because they are complete tears. Such tears can lead to more shoulder problems and most likely arthritis. Doctors in this case will require surgery, regardless of whether the patient is going back to sports or daily life. Add New Question Question How do you strengthen your shoulder with a torn labrum? Joel Giffin, PT, DPT, CHT Physical Therapist Dr. Joel Giffin is a Doctor of Physical Therapy and the Founder of Flex Physical Therapy in New York, New York. With over 15 years of experience as a Certified Hand Therapist (CHT), Dr. Giffin treats the whole body and specializes in rehabilitation of the hand and upper extremities. He has treated Broadway theater performers backstage at shows such as The Lion King, Sleep No More, Tarzan, and Sister Act. Flex Physical Therapy also specializes in occupational and pelvic floor therapy. Dr. Giffin earned his Master's degree in Physical Therapy with honors from Quinnipiac University and received his Doctor of Physical Therapy (DPT) degree with distinction from Simmons College. He is a member of the American Physical Therapy Association and the American Society of Hand Therapists. Always get guidance from a physical therapist before you start going to the gym—with a torn labrum, you need to be careful as to how far you go into certain motions. If you start exercising without good supervision, you could cause more issues in the long run. Ask a Question Thanks Thanks Thanks Thanks Thanks Thanks Show More Tips Dr. Tarek S. Hadla Sports Medicine, MD This article was co-authored by Joel Giffin, PT, DPT, CHT. Dr. Joel Giffin is a Doctor of Physical Therapy and the Founder of Flex Physical Therapy in New York, New York. With over 15 years of experience as a Certified Hand Therapist (CHT), Dr. Giffin treats the whole body and specializes in rehabilitation of the hand and upper extremities. He has treated Broadway theater performers backstage at shows such as The Lion King, Sleep No More, Tarzan, and Sister Act. Flex Physical Therapy also specializes in occupational and pelvic floor therapy. Dr. Giffin earned his Master's degree in Physical Therapy with honors from Quinnipiac University and received his Doctor of Physical Therapy (DPT) degree with distinction from Simmons College. He is a member of the American Physical Therapy Association and the American Society of Hand Therapists. This article has been viewed 52,947 times. Co-authors: 12 Updated: August 4, 2024 Views: 52,947 Thanks to all authors for creating a page that has been read 52,947 times. "Seeing 3 different doctors (VA),and wanted to have some knowledge beforehand about my problem and how they might respond. Article helped a lot, thank you."..." more Last Thursday Dr. Schierling treated the piriformis syndrome that I had suffered with most of my twenties. For the first time since my accident, I feel like I have my life back again. Thank you God for directing me to Read More » I have had 3 treatments and am 95% percent healed. I have not had a headache since my first treatment which was early this year. I felt the relief within minutes. I am now able to do the things I Read More » My experience with Dr Schierling was outstanding. I'm a professional triathlete and 2x world champion, and I've traveled the world to find a cure for my piriformis syndrome butt pain issues. Dr Schierling is not only an amazing and attentive Read More » The orthopedic doctors were going to operate on my neck without really knowing if it would fix my problem!!! I can not thank Dr. Schierling enough for what he has done for me. Read More » Awesome doctor! Well worth the drive wherever you're from! His treatments are like nothing you have ever experienced in a chiropractor's office! He is all about getting to the root of the problem……. And solving it…. Then and there…. No Read More » The treatment worked wonders for the pain I had in my hand. For 7 years I had thought that it was arthritis in my thumb, but it wasn't, it was a scar tissue problem called DeQuervain's Syndrome. Dr. Schierling treated Read More » Lennard Funk, 2010 In this article we will discuss the superior labrum, what is a SLAP tear, the approach to each type of SLAP tear and some of the results of SLAP repairs. If we look at the superior labral complex it is totally adherent to the superior glenoid and congruent with the articular cartilage of the glenoid. The superior labrum may have a meniscoid variant but within the meniscoid variant the articular cartilage is still not undercut and the superior labrum is still tightly adherent to the superior glenoid bone. The blood supply of the superior glenoid and labrum is predominantly from the long head of biceps and to a much smaller extent from the glenoid bone. There is a watershed area in the anterior superior labrum which creates a potential for tears and also maybe significant with regards to the healing of SLAP tears in older patients and chronic tears (Peters, 1992; Guttmann, 2010). INDICATIONS FOR SURGERYThe indications to proceed to an arthroscopy and probable SLAP repair would not be based on any one particular finding. I use a combination of the history, clinical examination and findings on MR Arthrogram. Within the history patients are generally athletes with a specific traumatic event consistent with a SLAP tear. This may be a throwing injury with a peel back mechanism or a direct impact landing on the elbow with the shoulder flexed forcing the humeral head up and avulsing the superior labrum or a traction injury on the superior labrum, such as that sustained in a dislocation or a subluxation of the shoulder joint. The patient will also have some typical symptoms consistent with a SLAP tear, such as painful clicking and clunking from the joint, possible locking, pain on eccentrically loading the biceps such as pulling through the water in a swimmer, on making contact with a ball in racquet sports and on releasing the ball in throwing. There is no single good clinical examination test for a SLAP tear and therefore a combination of tests is preferred. My preference is a combination of the OBriens test, Kibler clunk test and a labral load test. MR Arthrogram findings consistent with a SLAP tear would also further support the diagnosis, however the accuracy on MR Arthrogram is 75% to 90%, bearing in mind that a SLAP tear is a dynamic injury and an MR Arthrogram a static investigation. A number of smaller tests may be missed on MR Arthrogram. A Shoulder Surgeon should also review the scan images themselves and reporting of MR Artghrograms is dependent on the definition used by the Radiologist for a SLAP tear since these differ in the radiological literature. ARTHROSCOPYAt arthroscopy there may be some disagreement as to what constitutes a true SLAP tear. This would be a combination of the clinical findings and history above but a true SLAP tear also is one which can be lifted beyond the articular cartilage at the superior glenoid exposing the bone of the superior glenoid neck. This area should not be visible when lifting the superior labrum in an intact superior labrum. This definition was described in the 1980s by Andrews and Snyder. MANAGEMENT BY TEAR TYPE SLAP I TEARSLAP I tears are rare and more commonly found in older degenerative patients. These do not require a repair and may be treated with debridement alone. SLAP II IV TEARSThese SLAP tears constitute a detachment of the superior labrum and require surgical fixation. Looking at the incidence of SLAP repairs in my Practice over a 10 month period from January to October 2010 we undertook 27 SLAP repairs. The vast majority of these were SLAP Type II (C) tears involving the anterior posterior footprints, followed by SLAP II (B) tears. 88% of these injuries were sports related and the average age was young at 26.3 years (range 18 to 47). The majority were males with a ratio of male to female of 21 to 6. The commonest sport involved was rugby. SLAP II (B) REPAIRNote: A detachment of the posterior superior labrum may be associated with posterior labral tear and therefore the posterior labrum should always be viewed via the anterior portal as well. 1. Viewing from the posterior portal a cannula is inserted through the rotator interval and the superior glenoid debrided with a bone shaver. 2. A trans-tendinous portal is created through the supraspinatus rotator cuff musculotendinous region behind the long head of biceps and just lateral to the acromion using an outside in technique with a needle and a No. 11 blade is inserted to make a small longitudinal split in the cuff. 3. A small suture anchor cannula inserted, a hole drilled and a double loaded high strength suture anchor is inserted. 4. A 45 degree suture hook is inserted via the anterior portal. For a right shoulder a left sided suture hook is used and for a left shoulder a right sided suture anchor is used. This is passed underneath the long head of biceps over the top of the postero superior labrum and passed through the postero superior labrum. It is important to avoid catching any of the superior capsule or supraspinatus muscle with the suture hook. 5. The sutures are then taken through the anterior cannula and with good suture management the suture is then tied. The labrum is assessed for stability . Often the second suture is required posterior to the long head of biceps origin as well. The repair should be assessed for stability via the anterior and also posterior portals.There has been concern about the trans-rotator cuff portal, however in a study in The American Journal of Sports Medicine in May 2008 by Han Oh et al this portal was shown to be safe both clinically and on CT Arthrograms over 6 months post operatively. SLAP TYPE II (C)Type II (C) SLAP tears involve the anterior and posterior superior labrum. A single anterior portal can be used for the entire repair. After preparation of the superior glenoid with a shaver a high strength double loaded suture anchor is inserted with the eyelet perpendicular to the superior labrum. The postero superior labrum is repaired using the opposite contralateral side suture hook through the labrum and not tied behind the origin of the long head of biceps. A crescent shaped suture hook is inserted anterior to the long head of biceps though the antero superior labrum and the anterior suture from the suture anchor can be tied in front of the long head of biceps origin. It is important not to capture the superior glenohumeral ligament or middle glenohumeral ligament in this repair as this could lead to post operative stiffness.Click here for animation of the technique SLAP TYPE II (A) TEARFor Type II (A) tears a single anterior portal can be used with a crescent suture hook as for the anterior repair of a type II (C) tear above. SLAP TYPE III TEARType III SLAP tears involve a bucket handle tear of the superior labrum. The bucket handle should be excised via the anterior portal. It may be necessary to swap portals and remove any fragments of the posterior labrum. It is also essential to assess the anterior and posterior labrums for associated tears. The remaining superior labrum should then be assessed for stability. Should there be a detachment here this can be repaired as for a Type II(C) SLAP repair above, or if this is stable it can be left alone. SLAP IV REPAIRSSLAP IV tears involve labral detachment extending into the long head of biceps. These tears can be repaired if the tear is fresh and healthy and the patient is young. However in more chronic tear in an older patient the detached labrum can be excised and a long head of biceps tenodesis performed. My preference is for an extra-articular biceps tenodesis with an Interference screw in these situations.We published our results in The Clinical Journal of Sports Medicine in 2006 on rugby players (Snow & Funk, CJSM 2006). There was a high satisfactory at 3 to 6 months with a return to play of 89% at 3 months and 94% at 6 months. Friel et al, JSES September 2010 published longer term results in all comers including athletes and non-athletes. This was a 3.4 year follow up of 48 cases with an average age of 33 years. There was no difference between athletes and non-athletes and a 54% return to previous level of sport. The patients in this study were all repetitive overhead athletes, predominantly baseball and some tennis. Baseball players fared better than the tennis players. If one looks at the return to sports after SLAP repairs there is great variation in the literature. On deeper inspection it would appear that the variation in return to sports is related to the patient groups. In the studies which varied significantly the repetitive overhead and throwing athletes had a lower incidence of return to sports than the non-overhead and throwing athletes. There was also a difference in age groups with younger patients having a higher likelihood of return to sports than older patients. This is to be expected as the pathology in a repetitive chronic overhead throwing athletes shoulder is multi-factorial with elements of posterior capsular tightness, rotator cuff involvement and muscle imbalance problems. Whereas a single traumatic event in a non-overhead throwing athlete is more likely to do better since they have less chronic problems. See table below. SUMMARYIn this article we have reviewed the indications, techniques and results for SLAP repairs. In athletes SLAP repairs do appear to be effective. SLAP tears can be diagnosed using a combination of symptoms, signs and MR Arthrography. The technique for repair is specific for the tear pattern and associated pathologies should also be looked for and addressed. The results of SLAP repairs in non-overhead athletes tend to be better than repetitive overhead throwing athletes. Page 2 Please note that I cannot provide medical advice by email, as per GMC guidance. The content on this website is provided as an education resource by Prof. Lennard Funk. If you would like to arrange a consultation for treatment then please go to www.thearmclinic.com For more information on the author lenfunk.com For enquiries related to this website only:Email: info@shoulderdoc.co.uk Page 3 Page 4 Shoulder Surgery cannot be performed in isolation and requires the expertise of qualified and experienced therapists to get the best results. Our Shoulder Exercise Book is popular and a useful tool for patient rehabilitation, designed by specialist shoulder therapists. Page 5 These protocols are a guide to the post-operative rehabilitation. Individual surgeons and therapists will differ. These are simply proven programmes we have used, based on our experience, training and surgical techniques. These protocols are not our 'accelerated rehab protocols', which need close therapist supervision and may not be applicable to all practices and patients. Shoulder Protocols Shoulder Exercise Guide Page 6 This section contains a selection of Educational Material compiled by ShoulderDoc.co.uk It is aimed primarily at Clinicians and Therapists, and contains information and software that may be of benefit to practising Shoulder clinicians. It is based on largely on our own experience, material that may be difficult to generally find and recent innovations and techniques we have adopted. Shoulderdoc is proud to be able to make available some of the great out-of-print and rare books on the shoulder: Page 7 Injections of the shoulder are common treatments for numerous shoulder disorders. In this section we include some information on our techniques, tips and reviews of the literature that may be of benefit to other clinicians. Learn more about how functional training can protect your shoulders. If you're experiencing shoulder pain, you may be wondering if you have a torn shoulder labrum. Read on for the science behind labral tear detection and diagnosis, and why functional training should be your first choice for managing pain and building the strength you need to maintain shoulder stability. What are Shoulder Labral Tears? How Do You Know If You Have a Labral Tear? The Reliability of MRI, MRA, and CT Scans for Diagnosing Labral Tears The Reliability of Physical Tests for Diagnosing Labral Tears The Reliability of Anesthetic Injections for Diagnosing Labral Tears Joint Popping, Snapping, and Clicking and Labral Tears Shoulder Pain and Labral Tears Do Surgeries for Shoulder Labral Tears Work? Functional Training for Shoulder Mobility and Shoulder Pain Recap: What You Should Do if You Think You Have a Labral Tear in Your Shoulder *** Shoulder pain is extremely common. A 2015 study found that up to 26 percent of the population is experiencing shoulder pain at any given time. By some estimates, shoulder pain is the second most common complaint after lower back pain. In fact, a 2011 study from the Netherlands estimated that 3 out of every 100 people go to a general practitioner due to shoulder pain every year. Many orthopedic surgeons will tell you that shoulder labral tears are the cause of your shoulder pain, and prescribe surgery. But I recommend taking a broader view on what might be causing your shoulder pain. In this article, I'll take a deep look at the research around shoulder discomfort, labral tears, when to consider surgery (hardly ever), and how functional training can help. If you're in shoulder pain, you'll have a better sense of whether or not you might have a tear, and if you do, whether you should take action, and how. Remember that in a functional training environment, you're trying to improve your range of motion, comfort, and overall movement competency. If a doctor tells you that a labral tear is a one-way ticket to joint degeneration and that you should move less to avoid making things worse, that's a pretty disempowering perspective. It's also one I think you shouldn't take too seriously. In fact, I think people are better off ignoring that perspective completely. Why? Because we've seen people with failed shoulder surgery regain full function with proper training. More on that later. But first, what is a shoulder labral tear… See also: Hip Labral Tears: Everything you Need to Know About Hip Pain, Injections, Surgery, and Functional Training Solutions What are Shoulder Labral Tears? In the shoulder, the labrum is a piece of cartilage between the head of the humerus and the scapula: An anatomy drawing of a shoulder labrum. Illustration by Biodigital. A shoulder labral tear is an injury to this piece of cartilage, due to direct trauma, overuse, or instability. Orthopedic surgeons will tell you that the labrum increases joint stability and serves as an anchor for ligaments and muscles. Doctors classify labral tears according to the sector of the labrum that's been torn and if there's pain or instability in the shoulder. There are several places and ways your shoulder labral could be torn: in the front of the shoulder (anterior tear), in the back (posterior tear), and commonly both, in a tear called superior labrum anterior posterior, meaning the tear runs from the upper part of the labrum to the back and the front. This is affectionately called a SLAP tear. They may tell you a shoulder labral tear leads to catching, clicking, and irreversible damage to the shoulder joint, including movement problems and eventual shoulder osteoarthritis. See also: ATM Theory: Your Joint Pain May Actually be Muscle Pain How Do You Know If You Have a Labral Tear? Well, to sum it up, with ambiguous MRI readings, useless physical tests, and no evidence that injections tell us anything about the cause of shoulder pain, we're left with no reliable way to diagnose a shoulder labral tear. Read on for the research behind each of these methods. The Reliability of MRI, MRA, and CT Scans for Diagnosing Labral Tears X-rays are designed for bone tissue, not cartilage, so they aren't helpful when trying to assess a labral tear. Magnetic resonance imaging (MRI), magnetic resonance arthrography (MRA), and computed tomography (CT) scans are used instead. MRI and MRA Research has shown that MRI and MRA may actually miss some tears, but the more interesting research finding is the high degree of variability you find between how radiologists and surgeons interpret images and define damage. Interestingly, what radiologists (the people reading and interpreting your medical images) and surgeons see aren't the same. In other words, a radiologist might identify a labral tear via MRI, but the surgeon might go into your shoulder and decide it's not a significant tear. In this 2014 study, 100 patients with shoulder labral tears went through MRI. The patients later underwent shoulder surgery for those labral tears. The records reveal something interesting: The surgeons found that 18 percent of the labral tears diagnosed via MRI were not relevant during the surgery. In other words, radiologists may diagnose lots of labral tears with MRI, but then the surgeon opens you up, sees the tear, and decides it doesn't need to be treated. Reading an MRI is not black and white. It comes down to who reads your MRI. This 2015 study assessed the reliability of the opinion between two radiologists and an experienced shoulder surgeon. Researchers did MRI on 21 patients who underwent the same shoulder labral tear surgery. The surgeon and the two radiologists had to assess whether the labrum was healed or re-torn after surgery (i.e. if the surgery was successful or not). The three professionals only agreed on the MRI diagnosis 43 percent of the time. These professionals didn't have the same opinion about more than half of the MRI. CT Scans The primary problem with CT scans is that they can involve a powerful dose of x-ray radiation, comparable to 200 x-rays. In a 2009 study from Brigham and Women's Hospital in Boston, researchers estimated the potential risk of cancer from CT scans in 31,462 patients over 22 years. For the group as a whole, the increase in risk was slight — 0.7 percent above the overall lifetime risk of cancer in the United States, which is 42 percent. But for patients who had multiple CT scans, the increase in risk was higher, ranging from 2.7 percent to 12 percent. (In this group, 33 percent of the patients had received more than five CT scans; 5 percent had received more than 22 scans; and 1 percent had more than 38 scans.) Do you think they'll share the same opinion? Photo by EVG Kowalievska on Pexels. This means two healthcare professionals could evaluate the same MRI and arrive at different conclusions. How would you know whose opinion to trust when considering shoulder surgery? Unfortunately, it's impossible to know if one person's interpretation of an MRI is accurate. Furthermore, it's actually impossible to know with certainty whether the labral tear really is causing your pain. The Reliability of Physical Tests for Diagnosing Shoulder Labral Tears Sometimes doctors and therapists will say that physical tests, or moving your shoulder in specific ways and noticing how that triggers pain, can help determine whether you have a shoulder labral tear. A 2010 systematic research review tested the reliability of physical tests for shoulder pathology. Researchers evaluated 36 studies about shoulder tests performed on patients with shoulder pain. They included tests not only for shoulder labral tears but for shoulder impingement, scapular positioning, range of movement, and shoulder instability, among other pathologies. The 2010 review found that the reliability of physical tests for diagnosing shoulder pain was problematic, to say the least. The researchers concluded that physical tests can't be used to diagnose shoulder pathology and suggested that physical tests be abandoned for figuring out shoulder pain. Let's take a look at two more studies about physical tests for shoulder labral tears: In this 2018 systemic research review, researchers looked at 17 studies of people with shoulder pain. In each study, patients with shoulder pain were evaluated for labral tears through clinical tests, then evaluated for labral tears during arthroscopic surgery. No single type of test was good enough to accurately determine the presence of a shoulder labral tear. No particular test was statistically accurate in any of the studies. And this wasn't the first time this happened. Another 2009 review wanted to examine the clinical usefulness of shoulder labral tear tests. The authors analyzed 15 studies focused on the physical exam of shoulder labral tears, and concluded that there aren't good physical tests to effectively diagnose SLAP tears. Long story short: For decades, studies have shown that physical tests for shoulder pathology and labral tears are inaccurate and unreliable. However, medical professionals keep using the same tests to "prove" your labral tear is the cause of your pain. The tests don't prove anything, and research demonstrates that over and over again. Plus, when you combine tests that are wildly inaccurate with MRI and MRA readings that are ambiguous, you have a situation ripe for error. See also: How Shifting Your Perspective on Chronic Pain Can Help You Heal The Reliability of Anesthetic Injections for Diagnosing Labral Tears As we've seen, shoulder labral tears are common. We know they're present in people with no shoulder pain in high numbers. We also know that physical tests for shoulder labral tears are useless. MRI can show labral tears, but that doesn't tell us if the labral tear is causing shoulder pain. So, how do you determine if your shoulder pain is actually coming from a labral tear? How do you differentiate it from other pain sources? Doctors will sometimes propose an anesthetic injection inside the joint. They believe this numbs the pain coming from labrum damage. If the labrum is the source of pain, the injection should resolve it. If the pain remains, the source is something else (e.g. the rotator cuff, bursitis, even pain radiating from the neck). Easy peasy. There's just one problem. We haven't found any study to back-up this belief. We simply can't find a study that tests the accuracy of injections for diagnosing shoulder labral tears. However, there is research on this with hip labral tears. And… the available evidence shows that this type of injection doesn't work for diagnosing hip labral tears. Would injections for shoulder labral tears be any different? Doubtful. With all of these methods, really, all you have is a guess based on a theory. See this video on how to recover from a bad shoulder: Joint Popping, Snapping, and Clicking and Labral Tears It's extremely common to hear from doctors that any popping, snapping, and clicking in your shoulder might be a symptom of a labral tear. But the labrum itself is not stiff enough to catch on anything to make a loud clicking sound. It's like a small cushion in your joint. Imagine sitting on a pillow and trying to make a snapping sound by rubbing your butt on it. No matter how hard you rub, you won't get a clicking or popping sound. Here's a visual breakdown: If you're experiencing popping and snapping in your shoulder, there's probably nothing to worry about. It's highly likely that tight muscles are rubbing against each other (or against some bony protuberance) and causing the noise. And if that's not enough to calm your fears, maybe this will: My son, when he was a newborn, would occasionally have popping and snapping noises in and around his shoulder when I was holding him. His shoulders are fine. See also: Why Strength Training, Not Surgery, Is the Solution to Shoulder Clicking and Popping Shoulder Pain and Labral Tears When it comes to correlating shoulder pain to labral tears, remember that the theory that shoulder labral tears cause pain hasn't been proven! Labral tears don't seem to have a relationship to shoulder pain. But more importantly, whether you have a labral tear or not has no bearing on whether you have shoulder pain. In a 2016 study, researchers took a sample of 53 adults from 45 to 60 years old and took MRI of their shoulders. None of the subjects had shoulder pain or any previous shoulder trauma. Two radiologists read the MRI. One radiologist found shoulder labral tears in 55 percent of the study subjects. The other found them in 72 percent. Researchers didn't find major differences regarding age, sex, type of job, or patient participation in overhead sports. So, in a group of people with zero shoulder pain, 55 percent to 72 percent had shoulder labral tears, depending on the radiologist interpreting the scans! If labral tears cause shoulder pain, most of the people in that group should have had shoulder pain. But they didn't. The study concludes that shoulder labral tears might be a normal finding in asymptomatic middle-aged people! In other words, what we call labral tears may just be the way a labrum is supposed to look! We've just misinterpreted it as "damage." This isn't a new discovery. For example, a 2002 study evaluated MRI findings in both shoulders of 14 professional baseball pitchers. That's a total of 28 shoulders evaluated. Now, THAT'S some shoulder range of motion. Photo by Pikrepo. Each pitcher had at least one year of professional experience. All athletes had asymptomatic shoulders and no history of previous shoulder injury, symptoms, or surgery. Two radiologists experienced in interpreting shoulder MRI reviewed the images. They found labrum "abnormalities" in 22 of the 28 shoulders. Ten of those shoulders had labral tears. One pitcher had a labral tear in both shoulders! Twenty-two "abnormal" labrum-shapes. Ten shoulder labral tears. Zero pitchers with shoulder pain. These are people who are pushing their shoulders to the very edge of maximum performance. Again, studies like these demonstrate that the presence of a labral tear has little (or nothing) to do with shoulder pain. A 2019 review of the literature on SLAP tears and surgical summarizes everything you've read so far: Labral tears have no consistent correlation with pain, and the tests to diagnose them are ambiguous at best. See also: Shoulder pain from labral tears: are labral tears really causing the problem? Do Surgeries for Shoulder Labral Tears Work? If you have shoulder pain and someone has told you that it's coming from a labral tear, you may feel like your only option is surgery. After all, if something in your shoulder is torn, how could you possibly be able to do anything to fix it besides having surgery? You can't possibly go in yourself to fix that tear!But what are the odds of shoulder labrum surgery success? While surgeons may suggest that shoulder surgery is often extremely successful, it's important to look at the research. As with many orthopedic surgeries, initial reports of great success may not play out in the long run. In addition, what is considered success for a surgeon may not be the same for you as someone with shoulder pain. Check out this video on whether or not labral tears should even be blamed for shoulder pain: First of all, you should know that the research on surgery for shoulder labral tears doesn't provide crystal clear answers for how to approach labral tears surgically. There is no obvious, clear answer about which surgical procedures do the best for specific shoulder problems. A 2016 systematic review looked at 26 research articles on the surgical treatment of SLAP tears. The study was looking for "best practices" for surgery for shoulder labral tears based on overlap from the other studies. The review found many studies did not include enough details on the actual repairs, criteria for determining if repairs were complete, and the actual details of post-operative rehabilitation. There wasn't enough information in these studies to be able to make meaningful comparisons and conclusions. If, for example, one surgical study performed a repair one way and another study reported it another way, the researchers couldn't conclude whether one method was better than another. So, how do you go from having shoulder pain to a doctor telling you you should get shoulder surgery? It's actually very easy. Most doctors follow guidelines similar to the ones below to determine if you are a good candidate for shoulder labral tear surgery: You have a history of a traumatic shoulder events and shoulder pain You take positive physical tests (which we know are inaccurate) MRI shows a shoulder labral tear (which we know are ambiguous) And, maybe, you did six weeks of physical therapy or rest, also called conservative care.(or maybe not) That's it. We know from the research that physical tests are unreliable and shoulder MRI shouldn't be relied on. But only six weeks of conservative care? That's a month and a half. That's a very short amount of time to see real results, especially before jumping into the potential risks and complications associated with shoulder surgery. See also: RIIPS: Why Rest, Ice, Injections, Pills, and Surgery Shouldn't be Your Only Options Types of Shoulder Labral Surgery The surgical options for shoulder labral tears are: Labral repair. Here, the surgeon reattaches the torn tissue. Sometimes the labrum is removed and reattached. If deemed necessary, the surgeon tightens the ligaments and the capsule, too. Labral debridement. With this procedure, the surgeon cuts off the torn pieces of the labrum. Biceps tenodesis. This is an option if the biceps tendon is affected, too. The surgeon cuts the attachment of the biceps tendon to the labrum and reattaches it to the humerus. The surgery can be open or through arthroscopy. The first involves opening the joint to access it easily. It's pretty gruesome. In the latter, the surgeon inserts a tiny camera to see the joint during the surgery. It's less aggressive than open surgery. Most studies about surgical procedures for shoulder labral tears focus on the process and outcomes of SLAP tears, as they're the most frequent. The conclusion of this 2016 systematic research review is that there's not a clear answer for which surgical procedure is best for SLAP tears. There isn't a consensus on how to surgically approach shoulder labral tears. Success Rates for Shoulder Labrum Surgery This 2013 research review wanted to analyze the outcomes of SLAP arthroscopy. Researchers did a four-year follow-up with 179 patients who underwent the same SLAP surgery. Their results were disappointing: On average, patients had less range of motion. On average, flexion and external rotation both decreased by 5 degrees and abduction decreased by 15 degrees 66 patients met the failure criteria, meaning 36 percent of the surgeries failed! 50 underwent revision surgery From these results, we can tell that SLAP surgery doesn't improve shoulder range of motion. It may actually worsen it, and a large percentage of surgeries failed. Not great results. A 2015 analysis of diagnostic and therapeutic standards for SLAP tears, had some dismal conclusions about surgical treatment for shoulder labral tears: "In overhead athletes poor results after SLAP repair have been reported in more focused studies with persistent shoulder pain and long-term inability to return to previous level of sports." This 2017 randomized trial evaluated the outcomes of labral surgery versus placebo surgery for SLAP tears. A placebo surgery is a fake surgery intervention. It mimics the initial incision and keeps the patient in the surgery room for the same time as a real surgery. It's a clinical way to assess the placebo effects from surgeries. In the 2017 study, researchers worked with a population of 118 patients with criteria for undergoing SLAP surgery: 40 underwent labral repair 39 underwent biceps tenodesis The remaining 39 had placebo surgery Researchers did a two-year follow-up. You would expect the real surgical interventions had better results than placebo surgery. However, SLAP surgery–whether repair or tenodesis–had similar results to placebo surgery, or opening the shoulder and doing nothing. The placebo surgery worked just as well as the two real procedures. But real surgeries also have real complications. What are the complications from shoulder labrum surgeries? This 2015 study reviews the complications after arthroscopic labral repair to treat shoulder instability. The most common complications were: Anchors, or carbon-fiber structures inserted during surgery, have the risk of perforating the glenoid capsule–one of the many structures that stabilize the shoulder. Anchors can also leave debris within the joint. A study mentioned in this review found anchor debris in more than 50 percent of cases. This debris damages the joint. They also found chondral damage, or damage to cartilage, in 70 percent of the patients. The more time after the surgery, the more chondral damage. Translation: Rapid destruction of the cartilage cells. It results in a complete loss of cartilage. This leads to a progressive and severe loss of shoulder function. This is apparently common in patients who had intra-articular pain pumps, or disposable medical devices implanted during arthroscopic surgery intended to deliver a local anesthetic after the surgery. This is cartilage damage due to wear and tear. The rate of shoulder osteoarthritis after labral repair is 26 percent for arthroscopy and 33 percent for open surgery. That's an incidence of one in four for arthroscopy, and one in three for open surgery for a shoulder labrum. This is a severe loss of range of motion, accompanied by severe pain. This is usually treated with physical therapy and conservative treatment. But if that fails, the patient goes to surgery, again. This is the most ironic complication possible. Shoulder instability is one of the most frequent complications after labral repair to treat shoulder instability. Recurrent instability can range from 2.9 percent to 13 percent depending on the specific procedures. So, would you undergo a shoulder labral tear surgery knowing that: It's likely that you'll lose range of motion? It has similar results as placebo surgery? You could end up with debris in your joint? Your shoulder may still be as unstable as it was before? You might be saying, "But aren't there studies with high success rates for shoulder labrum surgery?" Of course there are! Whether their results are reliable is another matter. Keep in mind that surgeons may have a different concept of "success" than a patient with shoulder pain. See also: Why you DON'T Need Orthopedic Surgery for Joint Pain This 2012 study looked at the results of SLAP repair after five years. Thirteen percent of the patients still suffered from post-operative stiffness and pain. The researchers looked at 107 patients, and they used the Rowe score (see below) to measure the results. The average score was 62.8 preoperatively and 92.1 at follow-up. Using this version of assessment, a 90 Rowe score can show that you still have limited mobility and discomfort, but your shoulder doesn't subluxate, or shift around and is slightly dislocated. The surgery could have improved shoulder stability, but at the cost of less range of motion and, still, mild pain. That's considered a "positive" outcome. The Rowe score designed to measure shoulder stability. However, there are two important flaws in this score: This 2008 study wanted to measure the outcomes of SLAP surgery in 33 patients. They used the DASH score to evaluate the results. This score evaluates the Disabilities of the Arm, Shoulder, and Hand (DASH). It has 30 questions related to daily activities, including writing, making the bed, and pushing a door. Each question has five options. The more points, the worse the outcome. Well, these patients scored an average of 10 points less after surgery. If you play with the score a while (here's the link), a 10-point reduction is not a gigantic improvement. You can see for yourself how easy it is to get a 10-point improvement. To say you had "success" with a 10-point improvement is silly. You could get that same 10 points by waking up on the right side of the bed. For many, a variation of 10 points could happen without surgery! Do surgeons believe surgery for shoulder labral tears actually works? Sure. Does it work sometimes based on some metrics? Sure. But do the metrics align with your goals? And is the evidence strong that you'll get what you want from shoulder surgery? Functional Training for Shoulder Mobility and Shoulder Pain I've done my homework on shoulder pain, shoulder labral tears, and other shoulder joint pathologies. Through this process, I've learned a lot about the myths, misinformation, and plain deceptions around shoulder pain. And with time, experimentation, and experience, I've seen that you can take care of your shoulder labral tears in healthier ways than what the medical world currently offers. In some cases, surgery may not work as promised. It can actually cause more problems than solutions–not to mention the cost in terms of time, money, and your emotional well-being. I believe there's a better long-term solution for shoulder pain than surgery. Before going further, don't take this as medical advice. It's coming from a very non-medical perspective. The ideas offered here are decidedly not medical but they are evidence-based. If you've been told that a shoulder labral tear is causing your shoulder pain, think about these major questions: Is there any way to know that the labral tear is actually causing your shoulder pain? Based on the research, no! Shoulder labral tears are common in people with no symptoms. What's the likelihood that surgery will fully fix your shoulder pain? That's tough to say, but there's evidence that placebo surgery is just as good as the real thing. What else could cause your shoulder pain? Movement problems are muscle problems. Muscle problems require retraining. A surgeon who says "surgery guarantees to fix your shoulder pain" is well-intentioned and may truly have your best interest in mind. But research shows surgery is a worse option than conservative treatments like exercise and massage. I've worked with people with shoulder labral tears to avoid surgery. I've also worked with people after shoulder surgery failed to help. And I strongly encourage people to acknowledge their fears and anxieties around shoulder labral tears. I also also encourage them to remember there's very little evidence that labral tears actually are the definitive cause of shoulder pain. I've seen that the game changer is training—gradually and carefully—your shoulder muscles to work in balance. Based on your body and your background, this process requires time, learning, and patience. It's not about silver bullets or quick results, rather it's a highly individualized process that requires you to be fully engaged. Here are some suggestions: Find a trainer, coach, or a physiotherapist who can help you move with good form in new ranges of motion. Please don't jump into high-intensity interval training or some kind of boot camp, group class, or Crossfit situation. This work has to be customized for you. Identify areas that aren't moving well and work to improve them. Learn how to stretch properly and appropriately for your body and your life. Identify muscles that are weak and build strength. Identify positions you find difficult and carefully work to make them more comfortable (by training the muscles there). Aim to improve on something every single day. Consistency is the most important part of this process. See this story of a failed shoulder labral tear surgery, with suggestions for ways to strengthen your shoulders and reduce the risk of injury: Recap: What You Should Do if You Think You Have a Labral Tear in Your Shoulder Remember: just because a doctor believes something is true or says something is fact doesn't actually mean it is. Surgery sounds quite promising. Many people believe surgery will give them full function back, only to discover that retraining muscles is even more important after a long period of rest (and atrophy) after the surgery. Many people I've talked with have been told that they should never go back to high impact, high-intensity activities ever again after surgery. That's not a great outcome for anyone who's active. No more overhead weight lifting. No more pull-ups. No more cartwheels. No more basketball. Instead, you can experiment with functional training as an alternative to surgery, and restore shoulder mobility gradually and progressively so you save you thousands of dollars and months or years of suffering. And while retraining muscles is not a quick fix, it's a solution that gets rid of pain naturally. It's a process that expands your ability to enjoy all the activities that you love in life—even the high impact, high-intensity ones (once you're ready!). As a trainer and movement coach, I am intensely interested in how people train the muscles that control movement to help people find range of motion and feel better It's simple: Movement is ultimately what needs to be improved, so focus on the organs that help you move—your muscles! By working with muscles gradually and safely, you can drastically improve your pain levels, confidence, and quality of life. If you are experiencing hip pain, read my article on muscle dysfunction: ATM Theory: Your Joint Pain May Actually be Muscle Pain Still not convinced? Why you DON'T Need Orthopedic Surgery for Joint Pain