NHS
Cambridgeshire & Peterborough

Surgical Threshold Policy

Management of Shoulder Pain (including referral for surgical assessment)

Definition

This policy covers the treatment of shoulder pain, including conservative management and, where necessary, referral to a specialist for surgical assessment.

Policy

Referral for treatment should be through the MSK service/pathway. BESS/BOA have developed a flow chart to aid the diagnosis of common shoulder problems in Primary, Community and Intermediate Care settings; **See flow chart**.

It is the responsibility of referring and treating clinicians to ensure compliance with this policy. Referral proforma should be attached to the patient notes to aid the clinical audit process and provide evidence of compliance with the policy. For patients not meeting the policy criteria, clinicians can apply for funding to the Exceptional Cases Panel by completing the exceptional funding section of the referral proforma.

Patients may be referred as shown in the pathway on page 3.

Patients with a traumatic injury or dislocation may be referred to Trauma and Orthopaedics.

Patients with **non-traumatic** shoulder pain should be given conservative management:

- Self-care advice on **modifying activities**, use of **NSAIDs** and **home exercises**.
- If these are not effective, patients should be referred for **physiotherapy**.
- **Steroid injections** will only be funded for patients whose pain is not controlled by NSAIDs or in whom the use of NSAIDs are contraindicated and other conservative management has failed. **NB:** in cases where injections are necessary to enable a patient to undergo physiotherapy, these may be used at the time of the first course of physiotherapy. The use of ultrasound guidance does not provide any additional benefits in comparison to unguided landmark injections for managing subacromial shoulder pain.
- **Hyaluronic acid injections**: Intra-articular or periarticular hyaluronic acid or its derivatives is not routinely commissioned for injection into the peripheral joints of the knee, hips, ankle or thumb.
- **Diagnostic tests:** X-rays (radiography) are usually appropriate for the initial imaging of shoulder pain. An MRI scan will be funded where a first course of physiotherapy (≥3 months) is judged to be ineffective and a rotator cuff, or superior labral anterior-posterior, tear is suspected. Referral for MRI, ultrasound or CT scans should only be made by secondary care consultants or specialists working in NHS C&P (ICB) commissioned musculoskeletal (MSK) services. Where patients are referred for a surgical assessment, these scans should be made available to the receiving institution.

  Shoulder arthroscopy will not be funded as a diagnostic tool.

Surgery for non-traumatic shoulder pain: Before shoulder surgery will be funded, patients should have undergone conservative management, including 3 months of physiotherapy/ rehabilitation. At this point:

- Where an MRI scan/ultrasound has demonstrated evidence of a full thickness rotator cuff tear or grade 2-4 superior labral anterior-posterior (SLAP) tear, shoulder surgery will be funded.
- Further 3 months of physiotherapy/rehabilitation before surgery funded for: partial thickness tears or grade 1 SLAP tears (degenerative).

Further 3 months physiotherapy/rehabilitation before surgery funded for: sub-acromial pain syndrome (shoulder impingement), adhesive capsulitis, non-traumatic instability, calcific tendonitis, biceps tendonitis or acromioclavicular or glenohumeral arthritis. Where there is clear evidence of severe progressive osteoarthritis, physiotherapists may refer patients before 3 months. Arthroscopic subacromial decompression for pure subacromial shoulder impingement should only be offered in appropriate cases. To be clear, 'pure subacromial shoulder impingement' means subacromial pain not caused by associated diagnoses such as rotator cuff tears, acromioclavicular joint pain, or calcific tendinopathy.

Shoulder replacement will be funded as per the Shoulder Replacement Policy.

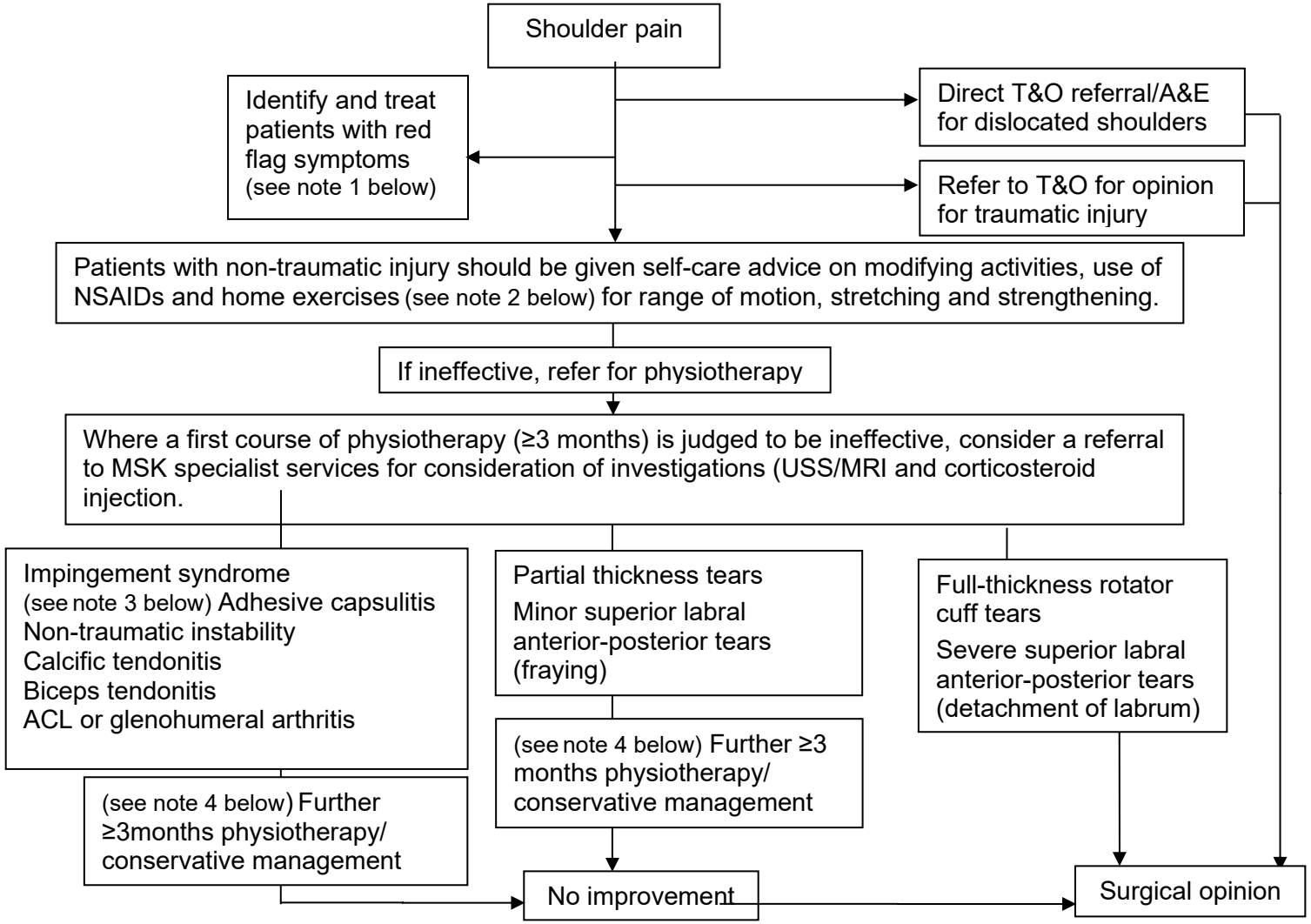
Smoking

Patients who smoke should be advised to attempt to stop smoking – see **stop smoking policy**.

Weight Management

Patients who are overweight or obese should be offered referral to the appropriate weight management service.

Shoulder Pain Pathway



Note 1 Recent fractures or dislocations, infection, malignancy, neurological lesion, cervical pathology or polymyalgia rheumatica.

Note 2 Physio resources: http://www.eoemskservice.nhs.uk/advice-and-leaflets

Note 3 May include manipulation under anaesthetic.

Note 4 Where other conservative measures have failed, corticosteroid/anaesthetic injections may be used in cases where pain is not controlled by NSAIDs or in whom the use of NSAIDs is contraindicated.

Rationale and Evidence

Shoulder Surgery: Trials of surgery versus non-operative management for **rotator cuff tears** (full and partial) do not show an advantage of surgery and the value of surgery in these patients is currently unclear (see reference 1). For patients with **sub-acromial pain syndrome**, good quality evidence (RCTs of surgery versus sham) show no benefit of surgery compared with non-operative treatment (see reference 2). Evidence suggests there is no additional benefit in utilising guided subacromial injections compared to unguided landmark injections for managing subacromial shoulder pain. Consequently, it is no longer recommended as a routine practice. (see reference 3 & 4)

For **calcific tendonitis,** no RCTs compared the use of rest, exercise or physiotherapy with surgical interventions. One RCT compared ultrasound-guided barbotage (needling and washout) with corticosteroid injections and suggested that surgery gives a greater improvement in pain and function (see reference 5). Surgery is unlikely to be necessary in most cases, but it may be helpful in sever refractory calcific tendonitis. Similarly, for **biceps tendonitis,** there were no RCTs comparing the use of conservative treatment with surgical interventions. Surgery should be reserved for patients who are refractory to conservative management, but where there are superior labral anterior-posterior (SLAP) tears, surgery may be necessary (see references 6 & 7).

For **adhesive capsulitis,** one small RCT compared arthroscopic capsular release with exercise therapy and suggested that surgery may be no more effective (see reference 8). There were no RCTs comparing it with other interventions. Surgery should be reserved for patients who are refractory to conservative management. For **acromioclavicular and glenohumeral osteoarthritis**, there were no RCTs comparing the use of conservative with surgical interventions. NICE recommends advice to exercise as a core treatment, including local muscle strengthening and general aerobic fitness (see reference 9) and the use of surgery may not be necessary in most cases.

For **glenohumeral joint dislocation/instability,** following traumatic dislocations, RCTs suggest that surgery may be necessary and a surgical opinion is needed (see reference 10 &11). For multidirectional (non-traumatic) dislocations, no RCTs comparing conservative and surgical management have been conducted (see reference 12) and it is unclear whether surgery is beneficial. For **acromioclavicular separation/instability,** trials suggest that, for many patients with ACL separation/dislocation, there is no advantage of surgery over conservative treatment (see reference 13).

Diagnostic tests: For many conditions associated with shoulder pain, it may be difficult to distinguish between different pathologies with physical examination (see reference 14 to 15). X-rays (radiography) are usually appropriate as the initial imaging method for shoulder pain. MRI, MRA or ultrasound may be necessary when radiographs are normal or inconclusive (see reference 16). However, these should not be offered in primary care (see reference 17 & 18).

Steroid injections: RCTs and comparative studies suggest that steroid injections may be useful for short-term pain relief for rotator cuff disease (see references 19 & 20) calcific tendonitis (see reference 21) and adhesive capsulitis (see reference 22), and NICE recommend corticosteroid injections for patients with moderate to severe osteoarthritic pain (see reference 9). However, there is inadequate evidence to suggest that they improve function.

Hydrodilatation: Although hydrodilatation has demonstrated short-term benefits (< 3 months) in pain and range of movement, its efficacy for longer-term outcomes is uncertain. Rigorous RCTs with larger sample sizes, extended follow-up durations and low risk of bias are required to establish its validity further (see references 28 to 33).

Glossary

Acromioclavicular separation:	The disruption of the acromioclavicular joint where the collarbone (clavicle) meets the highest point of the shoulder blade (acromion)
Adhesive capsulitis:	Known as ‘frozen shoulder’. The flexible tissue that surrounds the shoulder joint, becomes inflamed and thickened leading to pain and stiffness.

Arthroscopy:	Key-hole surgery using an arthroscope (light source and video camera).
BESS / BOA	British Elbow and Shoulder Society / British Orthopaedic Association
Biceps tendonitis:	Inflammation in the main tendon that attaches the top of the biceps muscle to the shoulder
Calcific tendonitis (Shoulder):	Build-up of calcium deposits in the rotator cuff tendons
Debridement:	Removal of dead, damaged, or infected tissue.
Extracorporeal shock wave therapy:	Procedure where shock waves (low energy sound waves) are passed through the skin
Glenohumeral dislocation:	Ball joint of upper arm has popped out of the shoulder socket.
Impingement syndrome:	Friction between tendon in the shoulder and the bone under which it passes, causing pain
NSAIDs:	Non-steroidal anti-inflammatory drugs. Medication used to relieve pain and inflammation and reduce temperature.
Osteoarthritis:	Degenerative joint disease that occurs when the cartilage that covers the tops of bones degenerates or wears down, causing swelling, pain and sometimes 'bone spurs' (additional bone growth where bones rub together)
Rotator cuff:	Group of four muscles that are positioned around the shoulder joint. The tendons of these muscles join together to form the rotator cuff tendon
Shoulder instability:	Instability of the shoulder joints due to acromioclavicular separation or glenohumeral dislocation

References

1. Karjalainen T V, et al. Surgery for rotator cuff tears. Cochrane Database Syst. Rev. Art. No.: CD013502 (2019). doi:10.1002/14651858.CD013502
2. Karjalainen T V, et al. Subacromial decompression surgery for rotator cuff disease. Cochrane Database Syst. Rev. Art. No.:CD005619 (2019). doi: 10.1002/14651858.CD005619.pub3
3. Roddy E, Ogollah RO, Oppong R, Zwierska I, Datta P, Hall A, et al. Optimising outcomes of exercise and corticosteroid injection in patients with subacromial pain (impingement) syndrome: a factorial randomised trial. Br J Sports Med. 2021 Mar 1;55(5):262 LP – 271
4. Academy of Medical Royal Colleges (AoMRC) Evidence Based Interventions. Arthroscopic shoulder decompression for subacromial pain - EBI [Internet]. [cited 2023 Nov 23]. Available from: https://ebi.aomrc.org.uk/interventions/arthroscopic-shoulder-decompression-for-subacromial-pain/
5. de Witte P, et al. Calcific tendinitis of the rotator cuff: a randomized controlled trial of ultrasound-guided needling and lavage versus subacromial corticosteroids. Am J Sport. Med 41, 1665–73 (2013).
6. Tokish J, et al. Arthroscopic repair of circumferential lesions of the glenoid labrum: surgical technique. J Bone Jt. Surg Am 92, 130–44 (2010).
7. Thayaparan A, et al. Return to Sport After Arthroscopic Superior Labral Anterior-Posterior Repair: A Systematic Review. Sports Health 11, 520–527 (2019).
8. Smitherman J, et al. Arthroscopy and manipulation versus home therapy program in treatment of adhesive capsulitis of the shoulder: a prospective randomized study. J Surg Orthop Adv 24, 69–74 (2015).
9. National Institute for Health and Care Excellence. Clinical guidance 177. Osteoarthritis: Care and management in adults. (2014).
10. Handoll H H, & Al-Maiyah M A. Surgical versus non-surgical treatment for acute anterior shoulder dislocation. Cochrane Database Syst. Rev. (2004). doi: 10.1002/14651858.cd004325.pub2
11. Longo U, et al. Management of primary acute anterior shoulder dislocation: systematic review and quantitative synthesis of the literature. Arthroscopy 30, 506–22 (2014).
12. Warby S A, Pizzari T, Ford J J, Hahne A, J & Watson L. Exercise-based management versus surgery for multidirectional instability of the glenohumeral joint: a systematic review. Br. J. Sports Med. 50, 1115–1123 (2016).
13. Tamaoki M, et al. Surgical versus conservative interventions for treating acromioclavicular dislocation of the shoulder in adults. Cochrane Database Syst. Rev. Art. No.:CD007429 (2019). doi: 10.1002/14651858.CD007429.pub3.www.cochranelibrary.com
14. Hanchard N, Lenza M, Handoll H & Takwoingi Y. Physical tests for shoulder impingements and local lesions of bursa. Cochraine Collab. (2014).
15. Chen H, Lin S, Hsu Y, Chen S & Kang J. A comparison of physical examinations with musculoskeletal ultrasound in the diagnosis of biceps long headtendinitis. Ultrasound Med Biol 37, 1392–8 (2011).
16. Cadogan A, McNair P, Laslett M & Hing W. Shoulder pain in primary care: Diagnostic accuracy of clinical examination tests for non-traumatic acromioclavicular joint pain. BMC Musculoskelet. Disord. 14, 1–11 (2013).

17. Nicholas Nacey, Fox MG, Blankenbaker DG, Chen D, Frick MA, Jawetz ST, et al. ACR Appropriateness Criteria® Chronic Shoulder Pain: 2022 Update. J Am Coll Radiol. 2023;20(5, Supplement):S49–69.
18. Academy of Medical Royal Colleges (AoMRC) Evidence Based Interventions. Scans for shoulder pain and guided injections for shoulder pain - EBI [Internet]. [cited 2023 Nov 20]. Available from: https://ebi.aomrc.org.uk/interventions/scans-for-shoulder-pain-and-guided-injections-for-shoulder-pain/
19. Roy J S, et al. Diagnostic accuracy of ultrasonography, MRI and MR arthrography in the characterisation of rotator cuff disorders: A systematic review and meta-analysis. Br. J. Sports Med. 49, 1316–1328 (2015).
20. NHS England. Evidence-based interventions: guidance for CCGs. (2019).
21. NHS England. Evidence-Based Interventions List 2 Guidance. (2020).
22. Boudreault J, et al. The efficacy of oral non-steroidal anti-inflammatory drugs for rotator cuff tendinopathy: A systematic review and meta-analysis. J. Rehabil. Med. 46, 294–306 (2014).
23. Buchbinder R, Green S & Youd J. Corticosteroid injections for shoulder pain. Physiotherapy 89, 140 (2003).
24. Gaujoux-Viala C, Dougados M & Gossec L. Efficacy and safety of steroid injections for shoulder and elbow tendonitis: A meta-analysis of randomised controlled trials. Ann. Rheum. Dis. 68, 1843–1849 (2009).
25. Maund E, et al. Management of frozen shoulder: A systematic review and cost-effectiveness analysis. Health Technol. Assess. (Rockv). 16, (2012).
26. Östör A J K, Richards C A, Prevost A T, Speed C A & Hazleman B L. Diagnosis and relation to general health of shoulder disorders presenting to primary care. Rheumatology 44, 800–805 (2005).
27. Rees JL, Kulkarni R, Rangan A, Jaggi A, Brownson P, Thomas M, et al. Shoulder Pain Diagnosis, Treatment and Referral Guidelines for Primary, Community and Intermediate Care. Shoulder Elb. 2021 Feb;13(1):5–11.
28. Buchbinder R GSYJMJR V, Cumpston M. Arthrographic distension for adhesive capsulitis (frozen shoulder). Cochrane Database Syst Rev. 2008;(1).
29. Poku D, Hassan R, Migliorini F, Maffulli N. Efficacy of hydrodilatation in frozen shoulder: a systematic review and meta-analysis. Br Med Bull. 2023 Sep;147(1):121–47.
30. Lädermann A, Piotton S, Abrassart S, Mazzolari A, Ibrahim M, Stirling P. Hydrodilatation with corticosteroids is the most effective conservative management for frozen shoulder. Knee Surg Sports Traumatol Arthrosc. 2021 Aug;29(8):2553–63.
31. Rex SS, Kottam L, McDaid C, Brealey S, Dias J, Hewitt CE, et al. Effectiveness of interventions for the management of primary frozen shoulder: a systematic review of randomized trials. Bone Jt open. 2021 Sep;2(9):773–84.
32. Catapano M, Mittal N, Adamich J, Kumbhare D, Sangha H. Hydrodilatation With Corticosteroid for the Treatment of Adhesive Capsulitis: A Systematic Review. PM R. 2018 Jun;10(6):623–35.
33. Saltychev M, Laimi K, Virolainen P, Fredericson M. Effectiveness of Hydrodilatation in Adhesive Capsulitis of Shoulder: A Systematic Review and Meta-Analysis. Scand J Surg SJS Off organ Finnish Surg Soc Scand Surg Soc. 2018 Dec;107(4):285–93.

Policy effective from	Policy adopted by NHS C&P (ICB) 1 July 2022 Reviewed policy ratified by QPF 22 March 2024 Reviewed policy approved by JCPEG 13 March 2024 Reviewed policy approved by CPF 5 March 2024 Policy developed by C&P Public Health Team
Policy to be reviewed:	March 2027
Document reference:	*CCG - CP Forum and Policies - CPF Pols & Working Area\Policies, Pathways & Position Statements\3. Surgical Threshold Policies\Shoulder Pain\Policies*