Birmingham and Solihull Integrated Care System
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Elbow Pain Pathway (Age 16+)

EXCLUDE Red Flags requiring Emergency treatment

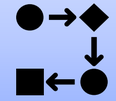
- History of recent significant trauma/Suspected fracture, dislocation or tendon rupture – Send to ED
- Clinical suspicion of Infection – Complete News 2 and Send to ED

EXCLUDE Amber Flags requiring urgent treatment

- NEW Atypical mass or Swelling – NICE Guidance - Symptoms suggestive of bone and soft tissue sarcoma Check criteria and Refer for 2WW to Sarcoma Clinic
- Suspected Inflammatory Disease – Refer to Rheumatology
- Rapid Deterioration of symptoms following Surgery – Ensure no systemic infection – Urgently refer to Secondary care back to the operating surgeon
- Bicep Rupture – Abnormal Hook test – less than 6 weeks since injury refer urgently to surgeon
- Acute Olecranon Bursitis - Differentiate Septic arthritis – refer to ED **Sepsis signs**

Acute Olecranon Bursitis Diagnosis

Start **Elbow Pain** Pathway



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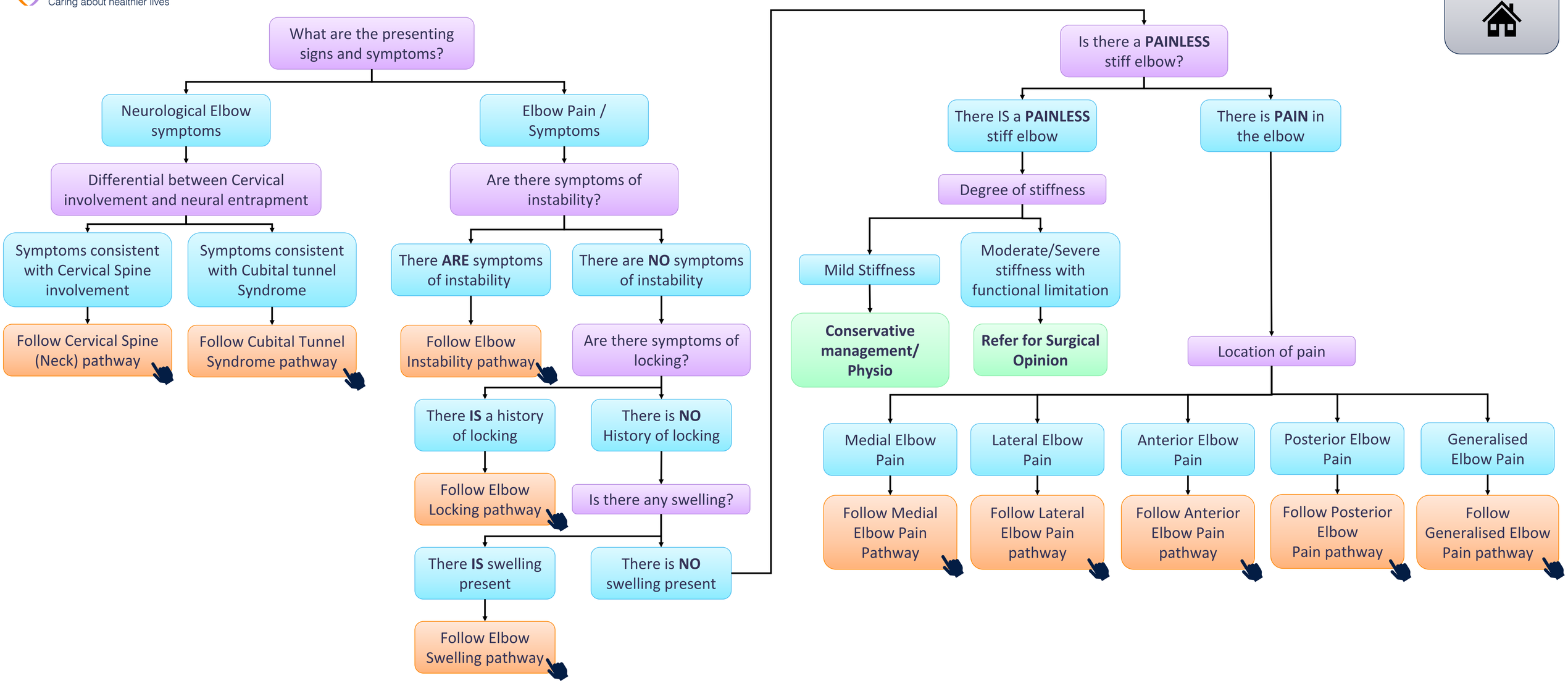

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Medial Elbow Pain

The most common cause of medial elbow pain is **Golfer's Elbow**

It is a self-limiting condition that lasts 6 months to 2 years, with only 20% of patients experiencing symptoms beyond 12 months

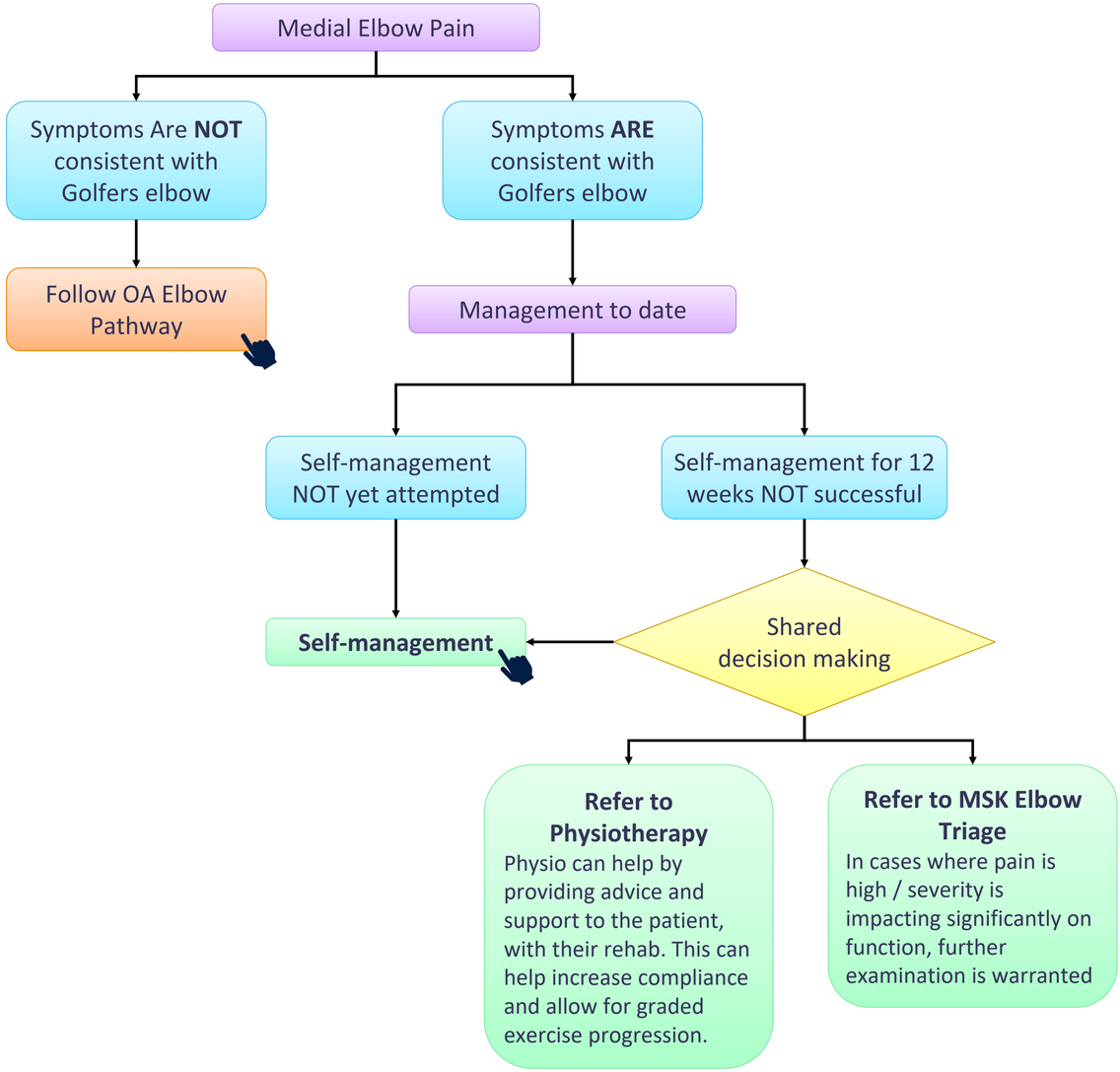
Presenting condition:

- Medial elbow and upper forearm pain
- Typically, a gradual onset, worsened with use of affected muscles
- Precipitating factors: repetitive movements involving forearm muscles, acute injury, occupational or recreational activities that may provoke pain

Examination findings:

- Pain on resisted wrist flexion and pronation
- Can have pain on active and passive movements at the elbow, but often this can be normal
- Localised tenderness over and distal to the medial epicondyle

There is a poor evidence base for steroid injections of golfer's elbow. At best, there is evidence it might provide 6 weeks of short-term pain relief. Unfortunately, there are numerous studies revealing poorer long-term prognosis for golfer's elbow patients who have received an injection



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Self-management for Golfers Elbow (Medial elbow pain)

Evidence for injection is poor. Research suggests some possible short-term relief (roughly 6 weeks) however, there is evidence to suggest that injection is associated with worse long-term outcome.
Not considered an inflammatory problem and therefore, NSAID's likely to be of limited value
Encourage exercise-based rehab and activity modification
Prescribe getUbetter if available in practice and patient is digitally enabled

Messaging for patients

- Golfer's Elbow is the term used to describe pain from the tendon of the forearm muscles and where it attaches to the bone at the medial epicondyle
- Aggressive early management is the best way to settle symptoms in the first 12 weeks. However, it is important to understand that it can last 6 months - 2 years
- In most cases it is treated with self-management only
- Self-management should be focused on strength exercises, activity modification and the use of an epi clasp to offload the tendon

Additional information

- https://www.yourphysio.org.uk/condition-directory/elbow-conditions/golfers-elbow/
- https://www.ncbi.nlm.nih.gov/books/NBK507006/

Return to Medial Pathway

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Lateral Elbow Pain

The most common cause of lateral elbow pain is **Tennis Elbow** (Lateral Epicondylalgia)
It has a high prevalence (between 1-3% of the population)
The peak onset is between 40-50 years. Women and men are equally affected. The dominant arm is affected in 75% of people

Symptoms:

- Lateral elbow and upper forearm pain
- Often aggravated by repetitive movements of the elbow, lifting and gripping tasks, sometimes with reduced strength
- Lifting with a pronated arm is commonly worse

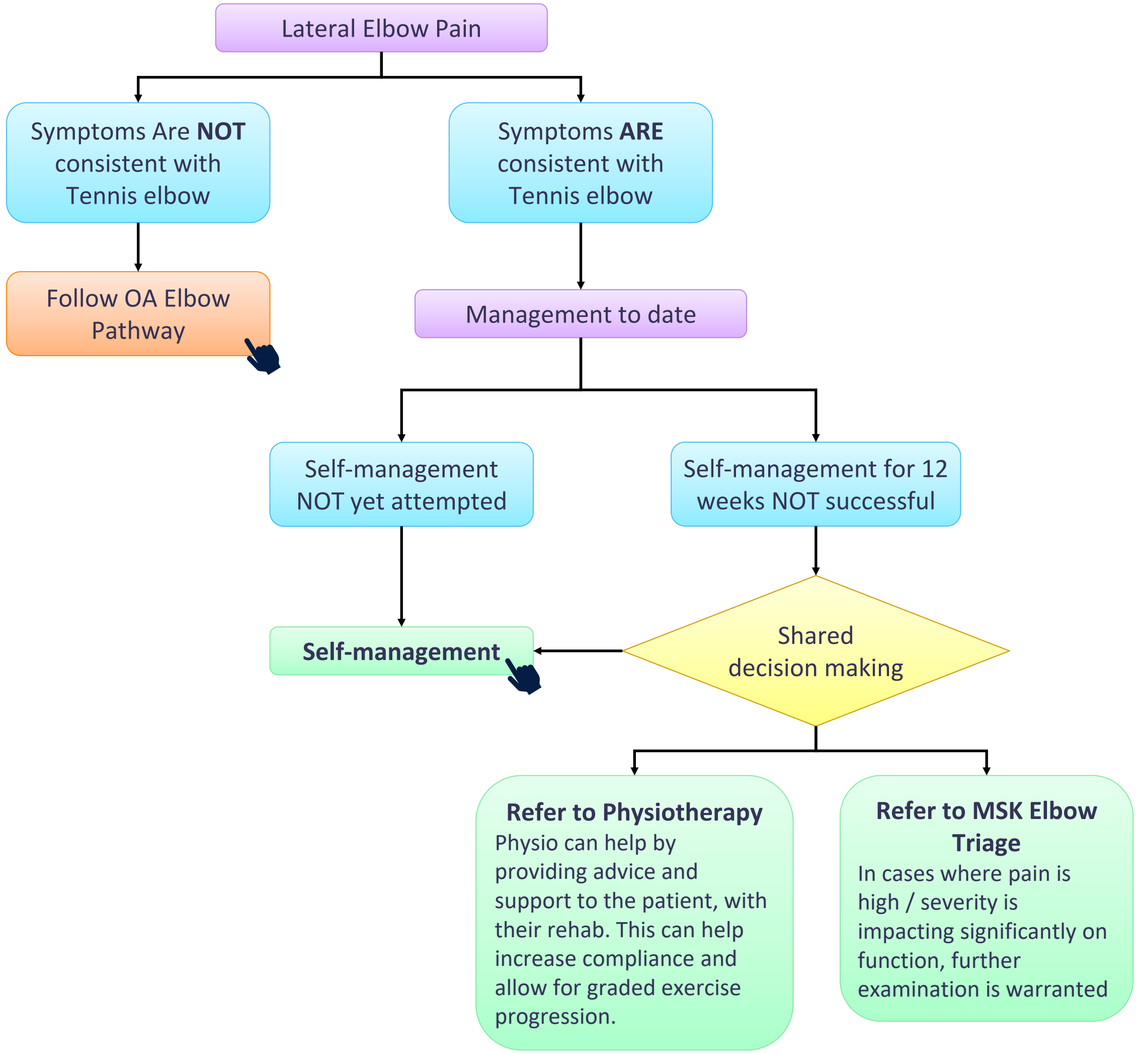
Examination findings:

- Focal tenderness over the anterior facet of the lateral epicondyle
- Pain on resisted wrist extension with elbow fully extended
- Pain with resisted extension of the middle finger with elbow extended

The following test may also be positive:

- Pain with forced wrist flexion with elbow extended

Of note, there is a poor evidence base for steroid injections of tennis elbow. At best, there is evidence it might provide 6 weeks of short-term pain relief and at worst, poorer long-term prognosis for tennis elbow patients who have received an injection



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Self-management for Tennis Elbow (Lateral elbow pain)

Evidence for injection is poor. Research suggests some possible short-term relief (roughly 6 weeks) however, there is evidence to suggest that injection is associated with worse long-term outcome.
Not considered an inflammatory problem and therefore, NSAID's likely to be of limited value
Encourage exercise-based rehab and activity modification
Prescribe getUbetter if available in practice and patient is digitally enabled

Messaging for patients

- Tennis Elbow is the term used to describe pain from the tendon of the forearm muscles and where it attaches to the bone at the lateral epicondyle
- Aggressive early management is the best way to settle symptoms in the first 12 weeks. Modification of activity and avoidance of overwork are helpful in the early stage of onset and simple approaches such as turning the palm up while lifting
- However, it is important to understand that symptoms can last 6 months - 2 years
- In most cases it is treated with self-management only
- Self-management should be focused on strength exercises, activity modification and consider trying a tennis elbow clasp to off load the tendon

Additional information

- https://www.nhs.uk/conditions/tennis-elbow/
- https://www.ncbi.nlm.nih.gov/books/NBK506995/#:~:text=Eccentric%20strengthening%20exercises%3A%20Example%201&text=Use%20your%20free%20hand%20to,of%20exercises%20two%20more%20times
- https://www.youtube.com/watch?v=o8KLKhu3XFA

Return to Lateral Pathway

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Anterior Elbow Pain

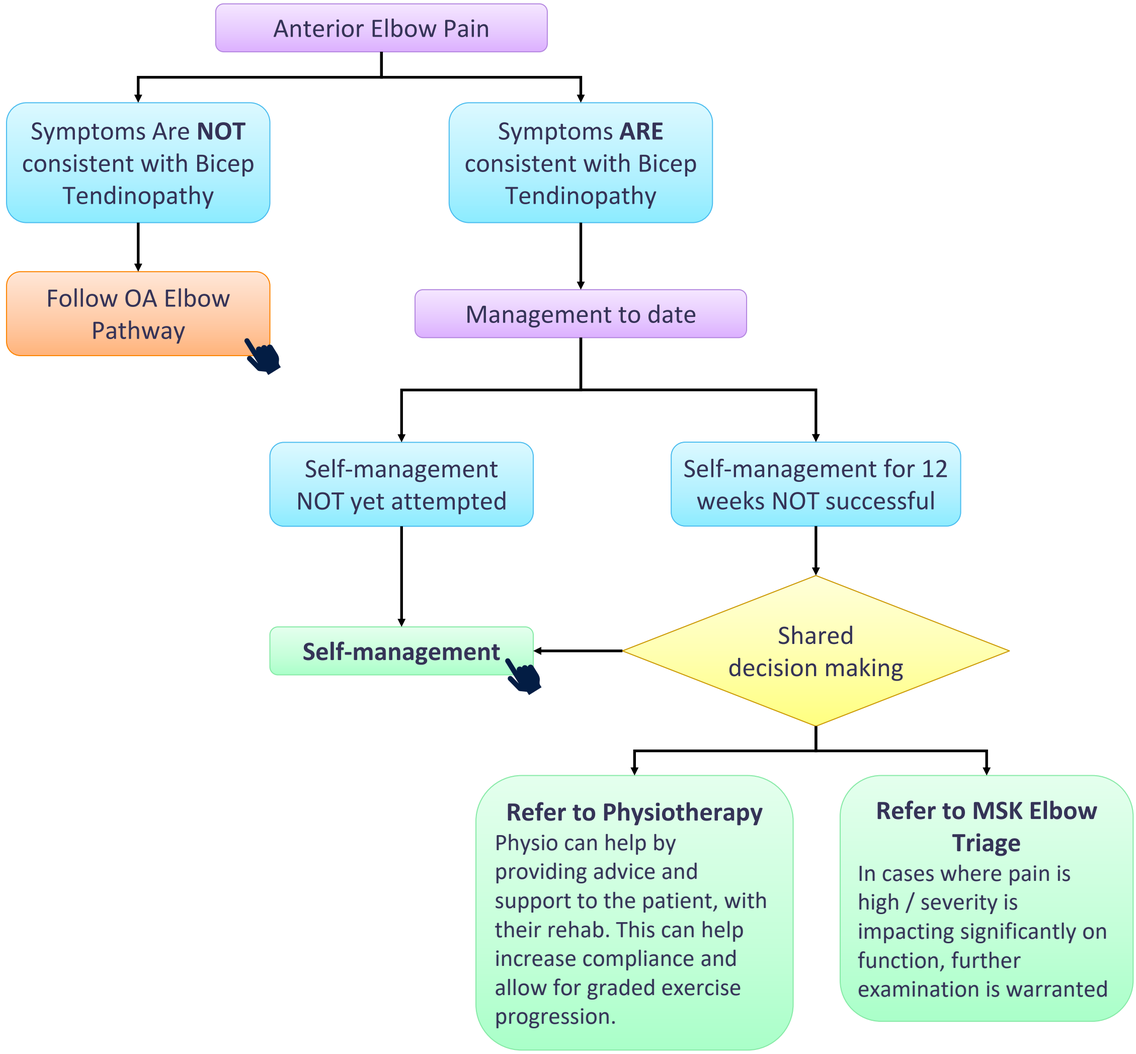
Most likely cause of anterior symptoms will be the biceps tendon

Symptoms of biceps tendinopathy:

- Localised Pain without swelling
- Pain with lifting through elbow flexion

Positive examination findings:

- Pain with resisted elbow flexion/supination
- May have tenderness to palpate over distal biceps tendon



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Self-management for Bicep Tendinopathy (Anterior elbow pain)

Not considered an inflammatory problem and therefore, NSAID's likely to be of limited value
Encourage exercise-based rehab and activity modification
Prescribe getUbetter if available in practice and patient is digitally enabled

Messaging for patients

- The biceps tendon is the main tendon at the front of your elbow and is attached to the muscle called Biceps that is involved in pulling activities / bending the elbow. Pain from a tendon will usually occur as:
- a result of overuse, in which case simple measures to settle symptoms should be effective (ice, stretches, avoidance or aggravating activities)

and/or

- a result of normal age-related changes which usually respond well to graded strength exercises/activity modification

Additional information

- https://www.versusarthritis.org/media/23083/elbow-pain-information-booklet.pdf
- https://www.sports-injury-physio.com/post/distal-biceps-tendonitis-causes-and-treatment
- https://www.webmd.com/a-to-z-guides/best-exercises-biceps-tendonitis

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Posterior Elbow Pain

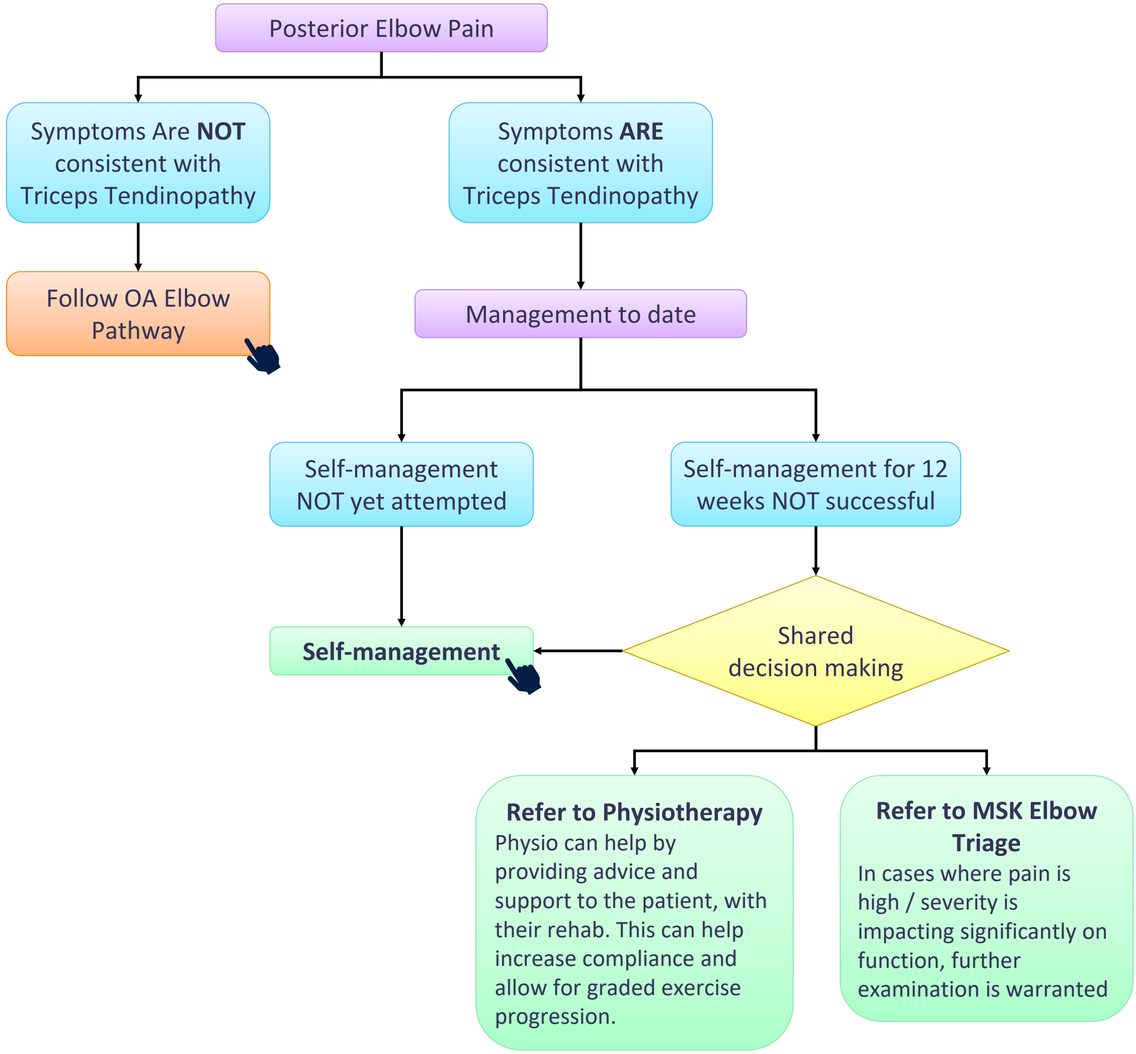
Most likely cause of posterior elbow symptoms will be the triceps tendon

Symptoms of triceps tendinopathy:

- Localised Pain without swelling
- Pain with resisted elbow extension e.g. pushing up from a chair

Positive examination findings:

- Pain with resisted elbow extension
- May have tenderness to palpate over distal triceps tendon



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Self-management for Tricep Tendinopathy (Posterior elbow pain)

Not considered an inflammatory problem and therefore, NSAID's likely to be of limited value
Encourage exercise-based rehab and activity modification
Prescribe getUbetter if available in practice and patient is digitally enabled

Messaging for patients

- The triceps tendon is the main tendon at the back of your elbow and is attached to the muscle called Triceps, involved in pushing activities / straightens the elbow. Pain from a tendon will either usually occur as:
- a result of an overuse in which case simple measures to settle symptoms should be effective (ice, stretches, avoidance or aggravating activities)

and/or

- a result of normal age-related changes which usually respond well to a graded strength exercises, activity modification

Additional information

- https://www.sports-injury-physio.com/post/triceps-tendonitis-treatment-and-causes
- https://www.versusarthritis.org/media/23083/elbow-pain-information-booklet.pdf

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Generalised Elbow Pain

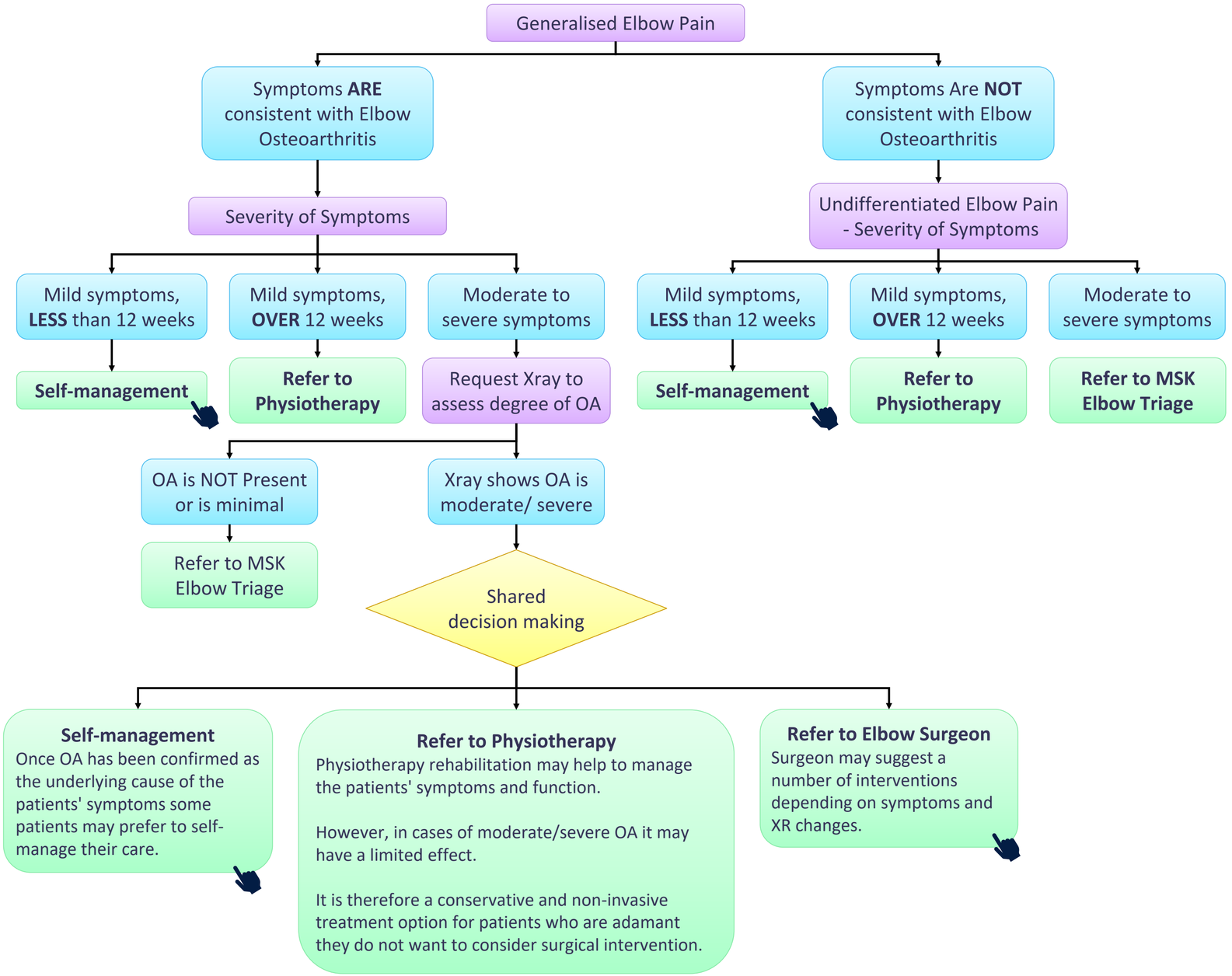
Osteoarthritis is a possible cause of generalised elbow pain in the older adult. Onset typically occurs in patients 50 years of age or older, but some patients can have symptoms earlier.

However, the elbow is one of the least affected joints due to the congruence of the joint surfaces and strong ligament complex.

Elbow OA, without previous injury, is more common in men than women

Features of OA:

- More commonly seen in patients over the age of 65
- Gradual and insidious onset
- Pain can be variable in location
- Often with loss of end range flexion and extension
- No significant visible swelling
- May report catching



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Self-management for Elbow Osteoarthritis

Consider pain killers/ NSAID's if clinically appropriate (OTC) - Check NICE guidance

Encourage exercise-based rehab and activity modification

Prescribe getUbetter if available in practice and patient is digitally enabled

Messaging for patients

- Long term self-management of OA elbow should be focused on strength and mobility exercises alongside advice regarding sensible activity modification

Additional information

- https://www.versusarthritis.org/media/23083/elbow-pain-information-booklet.pdf
- https://www.versusarthritis.org/about-arthritis/conditions/osteoarthritis-oa-of-the-elbow-and-shoulder/

Return to Generalised Pathway

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Self-management for Undifferentiated elbow pain

Consider pain killers/ NSAID's if clinically appropriate (OTC)

Encourage exercise-based rehab and activity modification

Prescribe getUbetter if available in practice and patient is digitally enabled

Messaging for patients

- There are no symptoms of concern, and we would expect your elbow pain to resolve with simple measures such as avoidance of any obviously painful activities, simple painkillers and basic exercises

Additional information

- Versus Arthritis – Elbow pain information booklet - https://www.versusarthritis.org/media/23083/elbow-pain-information-booklet.pdf
- Versus Arthritis – Exercises for Elbow Pain - https://www.versusarthritis.org/about-arthritis/exercising-with-arthritis/exercises-for-healthy-joints/exercises-for-the-elbows/

Return to Generalised Pathway

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Referral to Elbow Surgeon for Elbow Osteoarthritis

Image-guided injection.

- Benefits can include decreased pain, improved range of motion, and improved function.

Elbow debridement

- a minimally invasive procedure used to treat elbow osteoarthritis (OA).
- This procedure is usually done in an outpatient setting and can provide relief from pain and stiffness in the affected joint.

Elbow replacement

- a surgical procedure used to replace a damaged or diseased elbow joint with an artificial joint.
- After the procedure, the patient will be able to move their elbow and regain some of the range of motion they had before the injury or disease.
- Recovery time varies depending on the severity of the damage and the patient's age and health.

QE and ROH are the only units that can offer surgical opinion for the elbow.

When referring to Elbow Surgeon for opinion on surgery consider fitness for surgery using the following parameters and highlight in clinical notes.

- HbA1c < 69mmol/mmol
- Advise and support patients to stop smoking minimum 8 weeks pre-surgery

Additional information

- https://www.versusarthritis.org/about-arthritis/conditions/osteoarthritis-oa-of-the-elbow-and-shoulder/
- https://www.versusarthritis.org/about-arthritis/treatments/surgery/shoulder-and-elbow-replacement/

Return to Generalised Pathway

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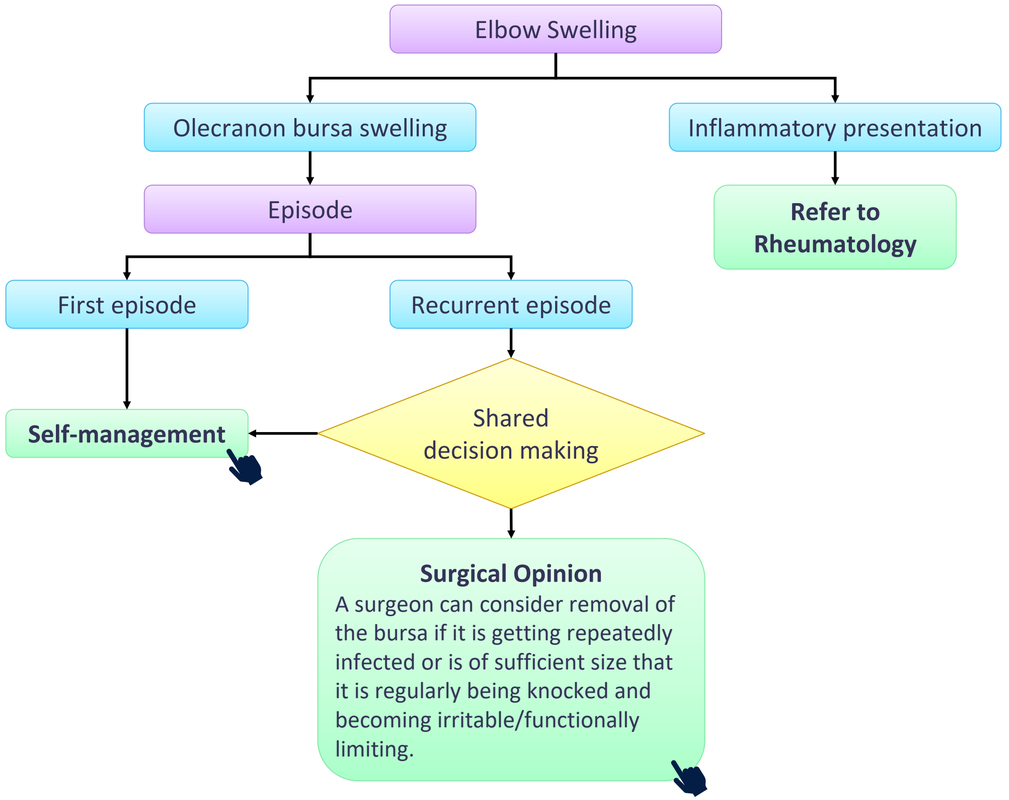
Elbow Swelling

Localised swelling of the posterior elbow consistent with olecranon bursitis	Generalised thickening or joint swelling can be indicative of inflammatory disease
Olecranon bursitis can be associated with gout	The most common inflammatory arthropathy is rheumatoid arthritis (RA). Generalised swelling elbow/ synovial thickening In 5% of cases of RA this will present as a Monoarthropathy and as part of a polyarthropathy in 20–65% of cases.



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Self-management for Olecranon Bursitis

No strong conclusive evidence to support use of NSAIDs
Consider tophaceous Gout as an associated condition.
Advise on conservative measures (such as rest, compression bandaging, avoidance of trauma to the elbows, and analgesia) until symptoms improve

Messaging for patients

- A bursa is a fluid filled sack designed to prevent friction. There are many around the body but you are not aware of them unless they become irritated and inflamed
- Usually, simple measures to reduce the inflammation and subsequently addressing the cause of inflammation such as prolonged direct compression or overuse will resolve or reduce the swelling
- Acute pain and swelling caused by inflammation should improve with simple anti-inflammatory measures and once settling try and establish possible triggers and address

Additional information

- https://www.nhs.uk/conditions/bursitis/
- https://www.versusarthritis.org/about-arthritis/exercising-with-arthritis/exercises-for-healthy-joints/exercises-for-the-elbows/

If causing persistent discomfort, please seek GP review
Be aware of symptoms of possible infection: This includes an increase in redness of the area, heat or swelling and would require urgent GP review
Any associated symptoms of a temperature / fever / feeling unwell can indicate sepsis and if present attend ED **Sepsis signs**

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Surgical management for Olecranon Bursitis

A surgeon can consider removal of the bursa if it is getting repeatedly infected or it is of sufficient size that it is regularly being knocked and becoming irritable/functionally limiting.

Recovery time following the procedure would be 4-6 weeks before returning to full function.

20-25% will experience a recurrence of the bursitis.

Additional information

- https://www.nhs.uk/conditions/bursitis/
- https://www.versusarthritis.org/about-arthritis/exercising-with-arthritis/exercises-for-healthy-joints/exercises-for-the-elbows/

Be aware of symptoms of possible infection: This includes an increase in redness of the area, heat or swelling and would require urgent GP review
Any associated symptoms of a temperature / fever / feeling unwell can indicate sepsis and if present attend ED **Sepsis signs**

Return to Swelling Pathway

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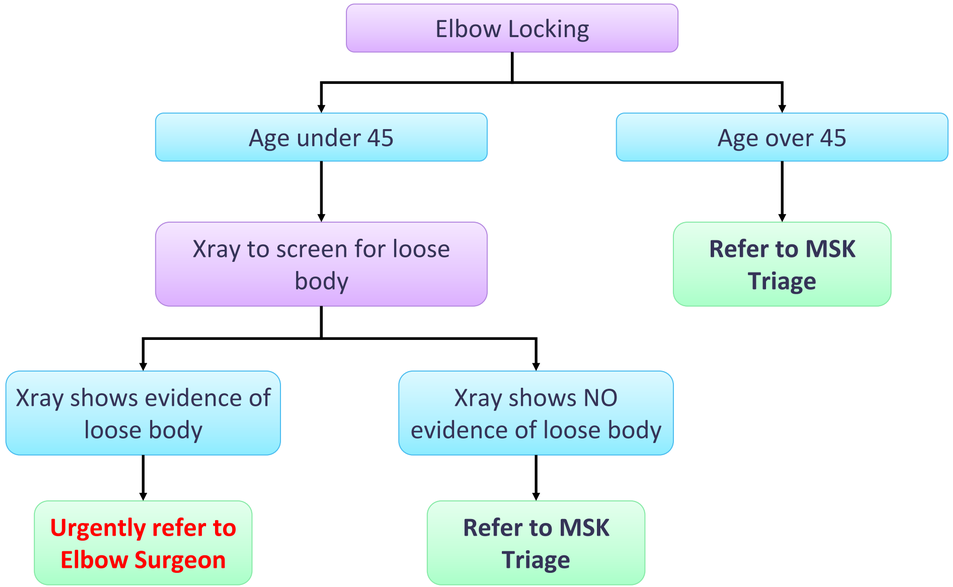
Elbow Locking

Is the patient reporting episodes of the elbow becoming locked in a position or intermittently blocked to full extension or full flexion?

This may or may not be associated with pain and/or swelling

Locking of the elbow due to a loose body is a rare condition. The patient may report clicking and locking of the elbow during function which is not always painful. There may or may not be associated swelling and, in some cases, there will be a block to full extension.

A locking elbow in a patient under the age of 45 may well benefit from an early surgical opinion, if a loose body has been confirmed as the underlying cause. It is therefore advised to request an AP and Lateral X-Ray to investigate this.



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Elbow Instability

The patient will report a predominant symptom of the elbow being unstable/ feeling it will sublux or dislocate

This may be associated with a history of -

- previous elbow dislocation or previous surgery
- a feeling of the elbow giving way or ‘popping’ out of place

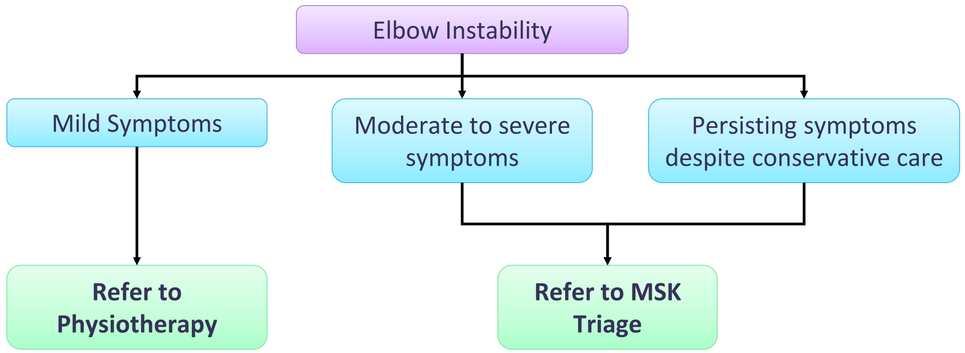
Additionally, they may report -

- difficulty doing a press up or pushing up out of a chair
- locking, catching or clicking at the elbow
- pain on the inside of the elbow with overhead activity or throwing an object at speed

It can be hard to elicit clinical signs of instability with physical examination. Therefore, the clinician is advised to rely on the patients history of presenting condition (e.g. previous trauma or possible dislocation) and subjective description of their symptoms.

Mild instability may present as a feeling of apprehension/ weakness during physical exertion such as heavy lifting or loading through the arm

Moderate to severe instability would be considered as higher levels of apprehension alongside feelings of instability/ subluxation or dislocation with basic tasks



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Cubital Tunnel Syndrome Pathway

Symptoms of pins and needles, numbness and/or weakness are often related to some form of neural compression/ irritation. Whilst this will more commonly occur in the neck it can also occur more locally to the elbow

The ulnar nerve can be restricted behind the inside part of the elbow, and this is called cubital tunnel syndrome

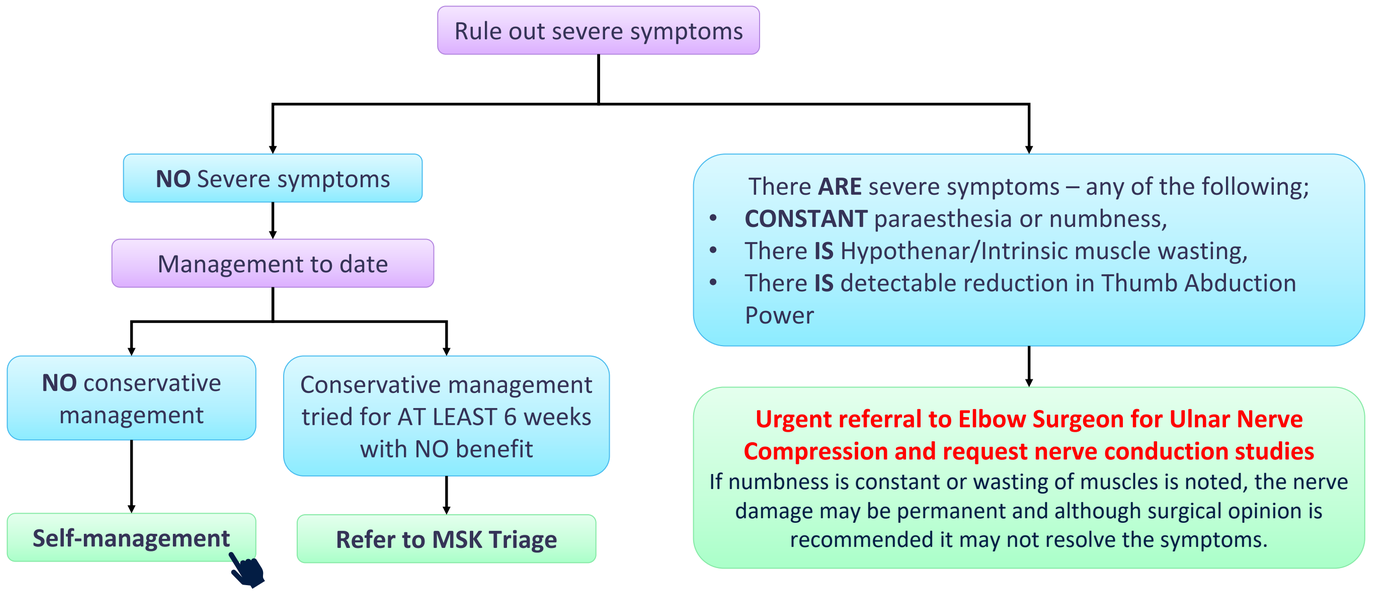
Some factors may predispose patients to this condition such as; prior fracture or dislocation, bony spurs, OA elbow, cysts near the elbow and repetitive or prolonged activities that require the elbow to be bent/flexed for prolonged periods

Indication that symptoms are originating from the elbow:

- Numbness and tingling sensation in the little and ring finger, can cause waking at night
- Worse with repeated or sustained elbow flexion

Less common:

- aching pain at the inner elbow and forearm
- Weakness of grip (in more severe cases)



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Self-management for Cubital Tunnel Syndrome

A short-term course of NSAIDS may ease symptoms if able to tolerate (OTC)
Prescribe getUbetter if available in practice and patient is digitally enabled

Messaging for patients

- The Cubital Tunnel is the name given to the groove in which the ulnar nerve passes as it tracks down to the hand. Any irritation can cause pain, tingling or intermittent numbness
- Rarely the nerve can get compressed as passes through an area in the palm of your hand
- Symptoms are often aggravated by prolonged and/or repeated movements affecting the nerve as it passes through a narrowed area
- Identification of the likely trigger and activity modification to limit this can be key to allowing the nerve to settle with time.
- Keep the elbow and wrist moving whilst being mindful of not aggravating symptoms
- Symptoms will often settle over 12 weeks

Additional information

- https://www.bssh.ac.uk/_userfiles/pages/files/Patients/Conditions/Elective/cubital_tunnel_leaflet_2016.pdf

Consult your GP if symptoms are not starting to improve after 8-10 weeks
Request urgent review if symptoms deteriorate with a definite increase in numbness, pins and needles or if you develop weakness in the hand

Return to CTS Pathway

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Differential Diagnosis of Acute Swelling

Acute Olecranon Bursitis	Infected Olecranon Bursitis	Septic Arthritis
Defined swelling over the posterior elbow usually appears over several hours to several days, usually in response to a change in activity may be tender or warm and fluctuant (but can be painless),	Localised swelling displaying signs of infection (hot, red)	Redness, swelling, heat Pain is severe or, in people with pre-existing joint disease, is out of proportion to their usual symptoms. Fever may or may not be present May be systematically unwell
Movement at elbow joint is painless except at full flexion when the swollen bursa is compressed.	Effect on movement restriction likely dependent on extent of infection Will have tenderness on palpation of the olecranon bursa	Movement is severely restricted, with pain
Often a history of preceding trauma or bursal disease More common in young or middle-aged men Consider jobs which involve risk of regular elbow trauma or pressure on the bursa e.g. gardeners or mechanics May occur in athletes who play sports which involve repetitive overhead throwing or elbow flexion and extension.	Infection can enter the bursa through an abrasion or From seeding of the bursal sac with micro-organisms, usually bacteria. Consider if other concomitant infection elsewhere	Commonly only one joint is affected, although in up to a fifth of people with septic arthritis, more than one joint is affected
First Line management	**Management of infected Bursitis**	**Send to Emergency Department**

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First Line Management of Acute Olecranon Bursitis

Where there exists no clear mechanical trigger, consider the possibility of a soft tissue infection (refer to infected olecranon bursitis if concerned).
Advise on conservative measures (such as rest, avoidance of trauma to the elbows, and analgesia) until symptoms improve
Offer reassurance that most people will respond to conservative treatment

Messaging for patients

- A bursa is a fluid filled sack designed to prevent friction. There are many around the body, but you are not aware of them unless they become irritated and inflamed
- Usually, simple measures to reduce the inflammation and its underlying cause, will resolve or reduce the swelling. This can include activity modification, reducing prolonged direct compression and/or overuse
- If there is no likely cause of inflammation, it may be prudent to treat for underlying infection

Additional information

- https://www.nhs.uk/conditions/bursitis/
- https://patient.info/bones-joints-muscles/olecranon-bursitis-students-elbow

Acute pain and swelling caused by inflammation should improve with simple anti-inflammatory measures. Once settling, try and establish possible triggers and address
If causing persistent discomfort, please seek GP review
However, if being treated with antibiotics, monitor the pain and swelling. An increase in redness of the area, heat or swelling would require an urgent GP review
Any associated symptoms of a temperature / fever / feeling unwell can indicate sepsis and if present attend ED **Sepsis signs**

Return to Differential Diagnosis

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Management of infected olecranon bursitis

Advise higher dose antibiotics within the licensed range; flucloxacillin is the first line antibiotic (If the person is immunocompromised, seek specialist advice)
Aspiration is not recommended in primary care
Manage any associated conditions, such as gout, rheumatoid arthritis or cellulitis
Manage in primary care provided no evidence of systemic toxicity

Messaging for patients

- **Monitor the pain and swelling. An increase in redness of the area, heat or swelling would require an urgent GP review**
- **Any associated symptoms of a temperature / fever / feeling unwell can indicate sepsis and if present attend ED** Sepsis signs
- A bursa is a fluid filled sack designed to prevent friction. There are many around the body, but you are not aware of them unless they become irritated, inflamed or infected

Return to Differential Diagnosis