RACGP

Curriculum and syllabus for Australian general practice (7th edition)

Musculoskeletal presentations

RACGP Curriculum and syllabus for Australian general practice (7th edition): Musculoskeletal presentations.

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Recommended citation

The Royal Australian College of General Practitioners. Curriculum and syllabus for Australian general practice (7th edition). Musculoskeletal presentations. East Melbourne, Vic: RACGP, 2026.

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Published September 2026

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We acknowledge the Traditional Custodians of the lands and seas on which we work and live, and pay our respects to Elders, past, present and future.

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Musculoskeletal presentations

Context

Musculoskeletal presentations are among the most common reasons for seeking care in Australian general practice and span the full life course, from acute injury to chronic and complex conditions. These presentations arise from a wide range of degenerative, inflammatory, infectious, metabolic, traumatic, and autoimmune processes, and may involve localised symptoms or reflect systemic disease. While many presentations are mechanical or injury related, rheumatological conditions such as inflammatory arthritis, connective tissue disease, and crystal arthropathies are also encountered regularly in general practice and may present subtly or evolve over time.[1,2]

Musculoskeletal conditions are a leading contributor to pain, disability and reduced participation in work, family and community life in Australia. They frequently coexist with other chronic conditions, including mental health conditions and cardiometabolic disease, increasing the complexity of care. The prevalence and impact of musculoskeletal conditions rise with age, contributing to functional decline and loss of independence, particularly among older people.[1–5]

GPs play a central role in early assessment, diagnosis and long-term management of musculoskeletal and rheumatological conditions. This includes distinguishing self-limiting conditions from serious or time-critical pathology, identifying red flags and systemic disease, and supporting timely referral where needed. GPs also support prevention through risk factor management, injury prevention, and promotion of physical activity, also facilitating recovery, function, and participation through patient-centred, evidence-informed care.[2,6,7]

Management often requires a holistic and coordinated approach, integrating pharmacological and non-pharmacological strategies and collaboration with allied health and non-GP specialists. In rural and remote settings, GPs frequently manage a broader scope of presentations with limited access to specialist services. Culturally safe care, including for Aboriginal and Torres Strait Islander peoples, and attention to social, occupational, and geographical contexts are essential to effective musculoskeletal care in Australian general practice.[6–8]

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Learning outcomes

The GP is able to:

- communicate, with empathy, the possible outcome of an injury or serious inflammatory condition, its associated complications and sequalae
- establish a provisional diagnosis and management plan for musculoskeletal and rheumatological presentations based on history, targeted examination, and appropriate investigation
- identify yellow and red flags and explore for potential complications including neurological or multisystem involvement
- identify and manage acutely unwell (eg infective arthritis) or injured patients
- collaborate with relevant support networks in the management of the condition, this may include allied health, other non-GP specialists, sports team coaches, and parents, and when needed modify activities
- maintain self-awareness of strengths and limitations of procedural skills and seek opportunities to strengthen their skillset (eg joint aspirations and injections)
- identify and manage presentations of rheumatological conditions that may not present with predominantly musculoskeletal symptoms
- manage patients presenting with non-specific undifferentiated musculoskeletal pain
- proactively consider the potential complications of a condition or treatment and opportunities to reduce the risk of them
- discuss prohibited substances and therapeutic use exemptions for patients who engage in competitive sports.

Key areas of learning

Assess and manage a patient presenting with an injury.

Identify, evaluate, and manage neck conditions:

- acute neck pain
- cervical spondylosis
- acute torticollis
- whiplash – accelerated hyperextension
- cervical disc disruption.

Identify, evaluate, and manage shoulder pain:

- impingement syndrome
- rotator cuff tendinosis / tear
- biceps tendinitis and rupture
- labral tear related to overuse or trauma
- shoulder instability
- acromioclavicular joint arthritis
- frozen shoulder or adhesive capsulitis.

Identify, evaluate, and manage shoulder weakness:

- axillary nerve mononeuropathy
- suprascapular nerve palsy
- long thoracic nerve injury
- cervical radiculopathy
- spinal accessory nerve injury.

Classify causes of back pain, and use a biopsychosocial approach to investigate and manage them:

- mechanical:
    - myofascial or soft tissue injury or disorder
    - facet joint dysfunction / degeneration
    - spondylosis
    - spondylolysis
    - spondylolisthesis
    - neural foraminal narrowing with radiculopathy and sciatica
    - spinal canal stenosis
- congenital and deformities:
    - kyphosis
    - scoliosis
    - congenital spinal deformity
    - spina bifida

- tumours:
    - multiple myeloma
    - metastatic disease
- other:
    - discitis
    - sacro-ileitis
    - metabolic bone disease, such as osteoporosis
    - referred pain.

Identify, evaluate, and manage elbow pain:

- olecranon bursitis
- medial and lateral epicondylitis
- fracture
- ulnar nerve subluxation
- nerve entrapment near elbow including cubital, radial, or median nerve.

Identify, evaluate, and manage wrist and hand pain:

- carpal tunnel syndrome
- De Quervain's tenosynovitis
- ganglion cyst
- extensor carpi ulnaris tendinopathy
- trigger finger
- fractures
- Dupytren's contracture.

Identify, evaluate, and manage hip pain:

- intra-articular / anterior:
    - hip fracture
    - avascular necrosis
    - septic arthritis/transient synovitis
    - osteoarthritis
    - femoroacetabular impingement
    - labral tear
- extra-articular / posterior:
    - iliopsoas bursitis
    - pubic symphysitis
    - muscle and tendon injuries
- postero-lateral:
    - greater trochanteric pain syndrome
    - piriformis syndrome.

Identify, evaluate, and manage knee pain:

- anterior:
  - patellofemoral syndrome
  - patellar tendinopathy
  - pre-patellar bursitis
  - patellar dislocation
- posterior:
  - distal hamstring tendinopathy
  - ruptured baker's cyst
- medial / lateral:
  - pes anserine bursitis
  - ilio-tibial band syndrome
- intra-articular:
  - ligamentous injuries – collateral and cruciate
  - meniscal injuries – medial and lateral
  - osteoarthritis
  - gout and pseudo-gout
  - septic arthritis.

Identify, evaluate, and manage ankle and foot pain:

- ankle sprain and associated ligamentous injuries
- Achilles tendinitis and rupture
- tarsal tunnel syndrome
- posterior tibial tendonitis
- osteoarthritis
- stress fractures
- hindfoot pain:
  - plantar fasciitis
  - heel pad syndrome
- midfoot pain:
  - tarsometatarsal fracture / dislocation
  - midfoot arthritis
- forefoot pain:
  - Morton's syndrome
  - bunion.

Identify, evaluate, and manage shin pain:

- shin splints
- compartment syndrome
- stress fractures.

Identify presentations of musculoskeletal symptoms (with may be persistent or recurrent and non-specific) where immunologically medicated causes should be considered, such as:

- rheumatoid arthritis
- ankylosing spondylitis
- Sjogren's syndrome
- scleroderma
- psoriatic arthritis.

Interpret common rheumatological investigations for recurrent non-specific musculoskeletal symptoms, such as myalgia and arthralgia:

- positive ANA, anti-dsDNA antibodies
- HLA-B27
- rheumatoid factor, anti-CCP antibodies
- role of C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR)
- extractable nuclear antigen (EBA) antibody profile
- bilateral hand X-rays.

Classify and manage different types of crystal deposition arthritis in a patient presenting with acute pain and swelling of a joint (gout or pseudo-gout).

Identify the infectious causes of polyarthritis and polyarthralgia in a patient presenting with systemic symptoms such as fever and multiple joint involvement:

- rheumatic fever
- Ross River virus fever
- Barmah Forest virus fever
- glandular fever
- other viral infections.

Identify, evaluate, and manage a patient presenting with symptoms like Raynaud's phenomenon, suggestive of systemic sclerosis and scleroderma.

Identify, evaluate, and manage a patient with hypermobility including Ehlers Danlos syndrome.

Evaluate and manage a patient with fibromyalgia and chronic fatigue syndrome / myalgic encephalomyelitis, using a biopsychosocial approach.

Identify, evaluate, and manage musculoskeletal and rheumatological conditions in children:

- transient synovitis
- Legg-Calve-Perthes disease
- Osgood-Schlatter disease
- slipped capital femoral epiphysis
- malignancies:
    - osteosarcoma
    - neuroblastoma
    - leukaemia
- juvenile idiopathic arthritis
- growing pains
- bowed legs
- knock knees
- scoliosis
- pulled elbow
- torticollis.

Identify, evaluate, and manage patients presenting with red flag symptoms involving musculoskeletal systems:

- osteomyelitis
- fractures, including growth plate injuries in children
- septic arthritis
- dislocations
- vertebral injuries and instability
- cauda equina syndrome.

Opportunities for learning

Words of wisdom

- When assessing a patient who presents with joint symptoms, history and examination are very important. Having a good understanding of anatomy and biomechanics will often help you identify the issue on history alone. Also, deciding if the condition is inflammatory or non-inflammatory, mono or polyarticular, symmetrical or asymmetrical will help you narrow down the differential diagnosis. Early intervention of inflammatory joint conditions with disease-modifying, anti-rheumatic drugs will prevent and limit permanent joint damage.

- A limping child with fever is an emergency: septic arthritis must be ruled out.

- Groin and thigh pain is usually referred from the hip, and gluteal pain from the lumbar spine.

- The majority of sports medicine presentations are chronic overuse-type injuries, often relating to biomechanics or load rather than a specific injury, and often present with non-specific symptoms. These can occur with any amount of exercise and not only in athletes. It is important to address these issues, often with a multidisciplinary approach, as they often discourage people from exercising.

- Think of compartment syndrome when a patient is in a cast and complains about pain, despite analgesia.

Learning strategies

On your own

Identify 10 patients from your practice database who have been diagnosed with gout. Look for guidelines for managing gout. Compare your management against the guidelines.

- *How many patients were managed according to the guidelines? In patients who were not managed according to the guidelines, identify the reasons why.*
- *Do a literature search on the treatment of patients with management uncertainties.*

Audit 10 of your patients with a diagnosis of osteoarthritis of the knee joint. Compare their management with the recommended guidelines.

- *How did you manage cases where the diagnosis was uncertain? How did you manage the situation when your management suggestions and the patient's expectations were different?*
- *When your management was different from the recommended guidelines, what were the reasons?*

Audit five children who you have seen with growing pains. Read about how to manage growing pains.

- *How will you apply the principles to your practice?*

- *Identify areas you are uncertain about. Search for guidelines or commentary on how you would manage these uncertainties.*
- *Reflect on the exercise.*

With a supervisor

Learn to give a cortisone injection or do a joint aspiration with your supervisor. Read about the indications as well as the limitations and contraindications for these procedures.

- *Discuss the indications and limitations, as well as the contraindications of steroid injections with your supervisor. What are the current recommendations?*
- *Observe your supervisor giving the injection or undertaking a joint aspiration. Describe the steps to your supervisor.*
- *Select an appropriate patient to undertake either of these procedures on. Ask the patient and your supervisor to give you feedback.*
- *Are there any other procedures you would like to learn or practise? Can your supervisor suggest some opportunities for you to learn them?*
- *Some clinics may have access to point-of-care ultrasound for these procedures. Ask your supervisor, another GP with specific interest, or a sports physician to demonstrate injection under ultrasound guidance.*

Prepare a presentation to your supervisor on overuse injuries. This might be a tendinopathy, bursitis, or stress fracture.

- *What are the common overuse injuries? How do they present? How can they be prevented? How can they be managed once they do occur?*
- *What allied health or other team members should be involved in management?*
- *What are the consequences of overuse injuries?*

With your supervisor, role-play a counselling session for a patient recently diagnosed with chronic fatigue syndrome / myalgic encephalomyelitis.

- *Explain the diagnosis of chronic fatigue syndrome. Justify the reasons for making the diagnosis. Explore the patient's concerns and expectations.*
- *How would you create a patient-centred management plan?*
- *Ask for feedback from your supervisor and reflect on the session.*

In a small group

Have a case discussion about the last case of gout you saw.

- *How did you make the diagnosis? What resources did you use to manage the patient? Was there anything you were uncertain about? How did you manage your uncertainty?*
- *Reflect on the discussion.*

Plan an education session for your stable small group on how to approach an acutely swollen joint in a child.

- *Identify the educational objectives of your teaching session. What teaching methods will you use? Will you use any interactive activities? What resources will you use?*
- *Following the session, ask the group for feedback and any suggestions for what else you might have included.*
- *Is there anything you learnt from preparing the session or from the group that you will include in your future practice?*

Role-play the following scenario. A 45-year-old factory worker comes to see you with a twisted ankle from lifting a heavy load at home. Perform an ankle examination. After assessing the injury, you make a provisional diagnosis of a simple ankle sprain.

- *Discuss with your colleagues how to manage the injury.*
- *What advice do you give the patient?*
- *When might you involve a physiotherapist?*
- *If the injury had occurred at work, would this change your management. What else may you consider or need to do?*

With a friend or family member

Have a discussion with a friend or family member who has osteoarthritis of the knee or hip. How do they rate their pain? How does the problem affect them in their day-to-day life? What impact does it have on their mood? How are they managing the pain? Have they modified their day-to-day life because of their osteoarthritis?

- *How does this activity help your understanding of the impact of osteoarthritis on patients? How can this help you in your approach to communicating with patients with osteoarthritis?*

Explain Osgood Schlatter disease to a family member or friend who is an adolescent or who has an adolescent child who plays a field sport like football, soccer, or netball.

- *Explain the diagnosis, including when they should be worried about symptoms. Discuss how you would manage it.*
- *Ask for feedback on how well they understood your explanation and their thoughts about your management plan.*
- *What could you change next time?*

Case example

Ivan is a 44-year-old man who presents with ongoing back pain for the past six weeks. He works in the local abattoir as a forklift driver, which involves loading 50 kg pallets onto a truck. The back pain started when he twisted his back trying to load a pallet on his own.

In a case-based discussion, questions relating to each role could be:

Communicator

- How would you assess, with empathy, the impact of Ivan's back pain on his day-to-day life?
- How would your approach differ if Ivan identified as Aboriginal or Torres Strait Islander?

Clinician

- What red flag symptoms would you look for?
- What information do you want to gather about Ivan's back pain?
- How would you explore the biopsychosocial aspects of Ivan's back pain?
- What other information would you need to clarify the aetiology of his back pain?
- What differential diagnosis would you consider for Ivan?
- If Ivan were a 70 year old with a history of prostate cancer, what would be your approach?
- What if there were no history of injury?
- How would you manage Ivan's back pain if he were consuming alcohol at unsafe levels or if he were using recreational drugs?
- Would you consider referring him to any other health professional?
- How would you manage his back pain if you were working in a remote community?
- What exercises could you teach Ivan for the longer term to prevent future back injuries?
- If Ivan's recovery does not progress as you expect, what factors would you explore?
- If Ivan insists on being given a narcotic medication, how would you manage this?
- If Ivan's recovery is complicated by psychosocial factors such as depression due to his chronic pain or because he has lost his job, how would you manage the situation?
- If Ivan presents with symptoms suggestive of spinal cord compression, how would you assess and manage this?
- If he presented acutely unwell with back pain and fever, how would you assess and manage him?

Health advocate and leader

- What advice would you give to Ivan to prevent this injury happening again?
- If Ivan identified as Aboriginal or Torres Strait Islander, how would you approach this clinical scenario to ensure cultural safety?
- What supports would you consider for Ivan's recovery?
- You have started Ivan on an opioid. You are going on planned leave the next day. How would you plan continuity of care for Ivan?
- What plans would you put in place if you were planning to prescribe opiates for his pain?

Professional

- Your assessment is Ivan has recovered completely. As it is the end of the year, Ivan doesn't want to waste his sick leave. He asks you to write a certificate for a few more days' leave. How would you manage this situation?
- If your return-to-work plan and Ivan's expectations don't match, how would you proceed?

Scientist, educator and researcher

- What guidelines may be relevant to the presentation?
- If Ivan came to the second appointment requesting an MRI because his AI tool suggested he needed one, how would you approach providing an evidence-informed response to his question.

Learning resources

The curriculum website includes learning resources within each unit.

Assessment

Content in this unit will be assessed in a variety of ways.

Workplace based assessments

Mini-CEX	RCA	MSF	CBD	Reflective exercise	Audit	Mid and end term assessment

Fellowship examinations

AKT	KFP	CCE

KEY

- Expected to be assessed here always
- Often assessed here but not in every example / case / assessment
- May at times be here or contribute to the assessment

ABBREVIATIONS

Mini-CEX – Mini-clinical evaluation exercise
RCA – Random case analysis
MSF – Multi source feedback
CBD – Case-based discussion
AKT – Applied knowledge test
KFP – Key feature problem
CCE – Clinical competency exam