

# 2022 RACGP curriculum and syllabus for Australian general practice

## Musculoskeletal presentations

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### Rationale

#### Instructions

This section provides a summary of the area of practice for this unit and highlights the importance of this topic to general practice and the role of the GP.

Musculoskeletal conditions include more than 150 different conditions involving bones, ligaments, connective tissue and joints. They represent the most common chronic conditions in Australia, accounting for 13% of the total disease burden.<sup>1,2</sup> Musculoskeletal conditions can result from hereditary, congenital or acquired pathologic processes. They can be caused by infectious, inflammatory or degenerative processes; traumatic or developmental events; or neoplastic, vascular or toxic/metabolic diseases.<sup>3</sup> Musculoskeletal symptoms affect all age groups and presentation can vary from acute to chronic and simple to complex.<sup>1</sup>

Low back pain is the most common musculoskeletal condition globally, followed by fractures, osteoarthritis, other injuries, neck pain, amputations and rheumatoid arthritis.<sup>4</sup> Back pain and problems, which include disc disorders, sciatica and other conditions which result from injury or degenerative conditions,<sup>1</sup> are a large contributor to illness and disability in Australia, accounting for 4.5% of the total disease burden.<sup>2</sup> Osteoarthritis is reported to be experienced by one in 11 Australians and is the most common cause of hip and knee replacement in Australia.<sup>5</sup> Aboriginal and Torres Strait Islander peoples have a slightly higher incidence of osteoarthritis.<sup>5,6</sup>

Risk factors for musculoskeletal conditions include age, being overweight or obese, physical inactivity, occupation (involving manual labour or joint loading) and history of joint trauma and injuries.<sup>1,7</sup> Chronic musculoskeletal conditions can have a profound impact on quality of life and can result in the limitation of social, community and occupational activities.<sup>8,9</sup> They are highly associated with significant mental health decline and deteriorated functioning.<sup>4</sup> Musculoskeletal conditions are also highly comorbid, with the majority of people with a chronic musculoskeletal condition having at least one other chronic condition, for example, cardiovascular disease and mental health conditions.<sup>1</sup>

The prevalence of musculoskeletal conditions increases with age, from 1% among people aged one to 14 to 72% among people aged 75–84.<sup>1</sup> Older people with chronic musculoskeletal conditions are generally less active in comparison with those without musculoskeletal conditions. Musculoskeletal conditions can greatly increase older patients' risk of functional decline and can result in their reduced ability to manage comorbid conditions. They also increase all-cause mortality in people admitted to hospitals.<sup>2-11</sup> Very remote areas also have the highest rate of total disease burden due to musculoskeletal conditions.<sup>12</sup>

General practitioners (GPs) play a crucial role in the prevention of musculoskeletal conditions, including through obesity management to limit osteoarthritis development and educating patients on injury prevention strategies.<sup>13</sup> GPs are also well placed to negotiate a management plan to improve and maintain functioning, delay disease progression and facilitate return to work or activity in patients presenting with musculoskeletal conditions. Some GPs will choose to develop extra skills in the area of sports medicine, but all GPs will manage injuries and other conditions incurred as a result of exercise. This is especially so in rural areas where access to other services may be limited.

For patients with multiple chronic conditions including a musculoskeletal condition, treatment and management can become more complex and require a broader and integrated approach, ranging from interventions like strengthening exercises and stretches, to involvement of other health professionals like physiotherapists, exercise physiologists and rehabilitation physicians. Comorbidities can also make it more difficult for patients to self-manage their conditions. GPs therefore need to facilitate a patient-centred, whole-person care, chronic disease approach. Interdisciplinary teamwork is also an important feature in managing acute and chronic presentations involving musculoskeletal presentations.

## References

1. Australian Institute of Health and Welfare. Musculoskeletal conditions and comorbidity in Australia. Canberra: AIHW, 2019. (<http://www.aihw.gov.au/reports/chronic-musculoskeletal-conditions/musculoskeletal-conditions-comorbidity-australia/contents/table-of-contents>) [Accessed 14 September 2021].
2. Australian Institute of Health and welfare. Australian Burden of Disease Study 2018 – Key findings. Canberra: AIHW, 2021. (<http://www.aihw.gov.au/reports/burden-of-disease/burden-of-disease-study-2018-key-findings/contents/about>) [Accessed 13 October 2021]
3. National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Health Care Services; Committee on Identifying Disabling Medical Conditions Likely to Improve with Treatment. Selected health conditions and likelihood of improvement with treatment. Chapter 5, Musculoskeletal disorders. Washington, DC: National Academies Press (US); 2020. (<http://www.ncbi.nlm.nih.gov/books/NBK559512/>).
4. World Health Organization. Musculoskeletal conditions. WHO: 2021. (<http://www.who.int/news-room/fact-sheets/detail/musculoskeletal-conditions>) [Accessed 13 October 2021]
5. Australian Institute of Health and Welfare. Arthritis. Canberra: AIHW, 2020. (<http://www.aihw.gov.au/reports/chronic-musculoskeletal-conditions/arthritis/contents/arthritis>) [Accessed 14 September 2021].
6. Arthritis Australia. Evidence to support the national strategic action plan for arthritis. Sydney: Arthritis Australia, 2019. ([https://arthritisaustralia.com.au/wordpress/wp-content/uploads/2019/06/190612-Final\\_Evidence-to-Support-the-NSAPA\\_Word-Refs.pdf](https://arthritisaustralia.com.au/wordpress/wp-content/uploads/2019/06/190612-Final_Evidence-to-Support-the-NSAPA_Word-Refs.pdf)).
7. O'Brien P, Bunzli S, Lin J, et al. Tackling the burden of osteoarthritis as a health care opportunity in Indigenous communities—A call to action. J Clin Med 2020;9(8):2393. (<https://doi.org/10.3390/jcm9082393>).
8. Briggs AM, Cross MJ, Hoy DG, et al. Musculoskeletal health conditions represent a global threat to healthy aging; A report for the 2015 World Health Organization World Report on Ageing and Health. The Gerontologist 2016;56(Suppl 2):S243–255. (<https://doi.org/10.1093/geront/gnw002>).
9. Cooper R, Kuh D, Hardy R, Mortality Review Group, FALCon and HALCyon study teams. Objectively measured physical capability levels and mortality: Systematic review and meta-analysis. BMJ 2010;341:c4467. (<https://doi.org/10.1136/bmj.c4467>).
10. Barbour KE, Lui LY, Nevitt MC, et al. Hip Osteoarthritis and the risk of all-cause and disease-specific mortality in older women: A population-based cohort study. Arthritis & Rheumatology 2015;67(7):1798–1805. (<https://doi.org/10.1002/art.39113>).
11. Zeltzer J, Mitchell RJ, Toson B, Harris IA, Ahmad L, Close J. Orthogeriatric services associated with lower 30-day mortality for older patients who undergo surgery for hip fracture. Med J Aust 2014;201(7):409–11. (<https://doi.org/10.5694/mja14.00055>).
12. Australian Institute of Health and Welfare. The burden of musculoskeletal conditions in Australia. Canberra: AIHW, 2017. (<http://www.aihw.gov.au/getmedia/eed9f208-1d28-439c-aeb8-93509641fc72/20908.pdf.aspx?inline=true>).
13. de Melo L, Hunter D, Fortington L, et al. National Osteoarthritis Strategy brief report: Prevention of osteoarthritis. Aust J Gen Pract 2020;49(5):272–75.

## Competencies and learning outcomes

### Instructions

This section lists the knowledge, skills and attitudes that are expected of a GP for this contextual unit. These are expressed as measurable learning outcomes, listed in the left column. These learning outcomes align to the core competency outcomes of the seven core units, which are listed in the column on the right.

Communication and the patient–doctor relationship	
Learning outcomes	Related core competency outcomes
The GP is able to:	
<ul style="list-style-type: none"> <li>communicate empathically the possible outcome of an injury or serious inflammatory condition, its associated complications and sequelae</li> </ul>	1.1.4, 1.1.5, 1.1.6, 1.2.1, 1.4.1, 1.4.3

<b>Communication and the patient–doctor relationship</b>	
<ul style="list-style-type: none"> <li>effectively communicate with non-GP specialists, allied health professionals and other stakeholders involved in the recovery and ongoing care of patients with musculoskeletal conditions</li> </ul>	1.1.3, 1.4.2

<b>Applied knowledge and skills</b>	
Learning outcomes	Related core competency outcomes
The GP is able to:	
<ul style="list-style-type: none"> <li>elicit a thorough history to investigate a range of musculoskeletal conditions in patients of all ages</li> </ul>	2.1.1
<ul style="list-style-type: none"> <li>perform a targeted physical examination to the condition or body part affected</li> </ul>	2.1.2, 2.1.5, 2.1.6, 2.1.7, 2.1.8
<ul style="list-style-type: none"> <li>identify yellow and red flags and explore for potential complications including neurological or multisystem involvement</li> </ul>	2.1.1, 2.1.3, 2.1.4, 2.1.10, AH2.1.2, 2.3.3
<ul style="list-style-type: none"> <li>identify and manage acutely unwell (eg infective arthritis) or injured patients</li> </ul>	2.1.3, 2.1.8, AH2.1.2, 2.3.1, 2.3.3
<ul style="list-style-type: none"> <li>establish a management plan based on all findings including history, examination and investigation</li> </ul>	2.1.8, 2.2.2, 2.3.1
<ul style="list-style-type: none"> <li>support patients, and their families, who have sustained an injury to navigate and access services and appropriate aids</li> </ul>	2.3.1, 2.3.2, 2.3.4, RH2.3.1, AH2.3.2

<b>Population health and the context of general practice</b>	
Learning outcomes	Related core competency outcomes
The GP is able to:	
<ul style="list-style-type: none"> <li>detect and screen high-risk population groups for underlying musculoskeletal conditions</li> </ul>	3.1.1, 3.1.3
<ul style="list-style-type: none"> <li>promote preventive strategies and behaviour change for those at risk of injury or chronic musculoskeletal disorders</li> </ul>	3.1.4

<b>Professional and ethical role</b>	
Learning outcomes	Related core competency outcomes
The GP is able to:	
<ul style="list-style-type: none"> <li>confidently refer patients to allied health professionals for treatment and management of musculoskeletal conditions</li> </ul>	4.1.1, 4.1.5
<ul style="list-style-type: none"> <li>maintain self-awareness of strengths and limitations of procedural skills and seek opportunities to strengthen their skillset, for example, joint aspirations and injections</li> </ul>	4.2.1, 4.2.2

<b>Organisational and legal dimensions</b>	
Learning outcomes	Related core competency outcomes
The GP is able to:	

Organisational and legal dimensions	
<ul style="list-style-type: none"> <li>ensure recall systems are in place for chronic musculoskeletal and rheumatological conditions</li> </ul>	5.1.3, AH5.1.1, AH5.1.2
<ul style="list-style-type: none"> <li>complete accurate documentation related to musculoskeletal conditions, including workers' compensation documents and medical certificates in a timely manner</li> </ul>	5.2.3, 5.2.4
<ul style="list-style-type: none"> <li>fulfil legal requirements when prescribing Schedule 8 and Schedule 4 medications in the treatment of musculoskeletal conditions</li> </ul>	5.1.1, 5.2.3, 5.2.4
<ul style="list-style-type: none"> <li>discuss prohibited substances and therapeutic use exemptions for patients who engage in competitive sports</li> </ul>	5.2.3, 5.2.4

## Words of wisdom

### Instructions

This section includes tips related to this unit from experienced GPs. This list is in no way exhaustive but gives you tips to consider applying to your practice.

**Extension exercise:** Speak to your study group or colleagues to see if they have further tips to add to the list.

1. 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, pauci or polyarticular, symmetrical or asymmetrical will help you narrow down the differential diagnosis.
2. A limping child with fever is an emergency: septic arthritis must be ruled out.
3. Groin and thigh pain is usually referred from the hip, and gluteal pain from the lumbar spine.
4. 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.
5. Think of compartment syndrome when a patient is in a cast and complains about pain, despite being on pain killers.
6. Early intervention of inflammatory joint conditions with disease-modifying anti-rheumatic drugs will prevent and limit permanent joint damage

## Case consultation example

## Instructions

1. Read this example of a common case consultation for this unit in general practice.
2. Thinking about the case example, reflect on and answer the questions in the table below.

You can do this either on your own or with a study partner or supervisor.

The questions in the table below are ordered according to the [RACGP clinical exam assessment areas](https://www.racgp.org.au/getmedia/f93428f5-c902-44f2-b98a-e56d9680e8ab/Clinical-Competency-Rubric.pdf.aspx) (<https://www.racgp.org.au/getmedia/f93428f5-c902-44f2-b98a-e56d9680e8ab/Clinical-Competency-Rubric.pdf.aspx>) and domains, to prompt you to think about different aspects of the case example.

Note that these are examples only of questions that may be asked in your assessments.

**Extension exercise:** Create your own questions or develop a new case to further your learning.



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.

Questions for you to consider		Domains
How would you empathically assess the impact of Ivan's back pain on his day-to-day life? How would your approach differ if Ivan were an Aboriginal or Torres Strait Islander?	1. Communication and consultation skills	1,2,5
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?	2. Clinical information gathering and interpretation	2
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?	3. Making a diagnosis, decision making and reasoning	2

Questions for you to consider		Domains
<p>How would you manage Ivan's back pain if he were consuming alcohol at unsafe levels or if he were using recreational drugs?</p> <p>Would you consider referring him to any other health professional?</p> <p>How would you manage his back pain if you were working in a remote community?</p>	4. Clinical management and therapeutic reasoning	2
<p>What advice would you give to Ivan to prevent this injury happening again?</p> <p>If Ivan were an Aboriginal or Torres Strait Islander, would you consider managing him differently?</p> <p>What supports would you consider for Ivan's recovery?</p>	5. Preventive and population health	1,2,3
<p>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?</p> <p>If your return-to-work plan and Ivan's expectations don't match, how would you proceed?</p>	6. Professionalism	4
<p>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?</p> <p>What plans would you put in place if you were planning to prescribe opiates for his pain?</p>	7. General practice systems and regulatory requirement	5
<p>What exercises could you teach Ivan for the longer term to prevent future back injuries?</p>	8. Procedural skills	2
<p>If Ivan's recovery does not progress as you expect, what factors would you explore?</p> <p>If Ivan insists on being given a narcotic medication, how would you manage this?</p> <p>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?</p>	9. Managing uncertainty	2
<p>If Ivan presents with symptoms suggestive of spinal cord compression, how would you assess and manage this?</p> <p>If he presented acutely unwell with back pain and fever, how would you assess and manage him?</p>	10. Identifying and managing the significantly ill patient	2

## Learning strategies

### Instructions

This section has some suggestions for how you can learn this unit. These learning suggestions will help you apply your knowledge to your clinical practice and build your skills and confidence in all of the broader competencies required of a GP.

There are suggestions for activities to do:

- on your own
- with a supervisor or other colleague
- in a small group
- with a non-medical person, such as a friend or family member.

Within each learning strategy is a hint about how to self-evaluate your learning in this core unit.



#### On your own

Randomly select 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/practise? Can your supervisor suggest some opportunities for you to learn them?*

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 general practice clinical meeting 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 with a colleague. A 45-year-old factory worker comes to see you with a twisted ankle from lifting a heavy load at work. 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?*



### 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?

## Guiding topics and content areas

### Instructions

These are examples of topic areas for this unit that can be used to help guide your study.

Note that this is not a complete or exhaustive list, but rather a starting point for your 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/or 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
  - 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
  - ulnar nerve subluxation
  - fracture.
- Identify, evaluate and manage wrist and hand pain:
  - carpal tunnel syndrome
  - De Quervain's tenosynovitis
  - ganglion cyst
  - extensor carpi ulnaris tendinopathy
  - trigger finger
  - fractures.
- 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 symphysis
    - 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 tendinitis
  - osteoarthritis
  - hindfoot pain:
    - plantar fasciitis
    - heel pad syndrome

- midfoot pain:
  - tarsometatarsal fracture/dislocation
  - midfoot arthritis
- forefoot pain:
  - Morton's syndrome
  - bunion
- other:
  - stress fractures.
- 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 (ENA) 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
  - 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.
- 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.
- Manage patients presenting with non-specific undifferentiated musculoskeletal pain.
- Evaluate and manage patients presenting with non-accidental injuries:

- domestic violence victims
- child abuse victims.

## Learning resources

### Instructions

The following list of resources is provided as a starting point to help guide your learning only and is not an exhaustive list of all resources. It is your responsibility as an independent learner to identify further resources suited to your learning needs, and to ensure that you refer to the most up-to-date guidelines on a particular topic area, noting that any assessments will utilise current guidelines.

### Journal articles

This issue gives an overview of rheumatology presentations in general practice.

- [Rheumatology \(http://www1.racgp.org.au/ajgp/2021/may\)](http://www1.racgp.org.au/ajgp/2021/may). Aust J Gen Pract 2021;50(5).

This issue discusses issues related to exercise in general practice.

- [Exercise \(http://www1.racgp.org.au/ajgp/2020/april\)](http://www1.racgp.org.au/ajgp/2020/april). Aust J Gen Pract 2020;49(4).

This issue gives an overview of sports-related injuries in athletes.

- [The Athlete \(http://www1.racgp.org.au/ajgp/2020/january-february\)](http://www1.racgp.org.au/ajgp/2020/january-february). Aust J Gen Pract 2020;49(1–2).

This issue gives a good insight into musculoskeletal conditions of the upper limb.

- [Upper Limb \(http://www1.racgp.org.au/ajgp/2019/november\)](http://www1.racgp.org.au/ajgp/2019/november). Aust J Gen Pract 2019;48(11).

How to manage tendon injuries in general practice.

- Paoloni J. [Tendon injuries: Practice tips for GPs \(http://www.racgp.org.au/AFP/2013/april/tendon-injuries\)](http://www.racgp.org.au/AFP/2013/april/tendon-injuries). Aust Fam Physician. 2013;42(4):176–80.

### Textbooks

A good overview of autoimmune diseases.

- Murtagh J, Rosenblatt J, Coleman J, Murtagh C, editors. [Connective tissue disease and the systemic vasculitides \(https://murtagh.mhmedical.com/content.aspx?bookid=2471&ionid=198745131\)](https://murtagh.mhmedical.com/content.aspx?bookid=2471&ionid=198745131). In: John Murtagh's General Practice, 7th edn. Sydney: McGraw Hill, 2018.

A comprehensive guide to interpreting common rheumatological investigations. Register for free using your GP provider number.

- Sonic Edu. [Sonic Pathology Handbook \(http://www.soniceducation.com.au/clinical-resources/sonic-edu\)](http://www.soniceducation.com.au/clinical-resources/sonic-edu).

### Online resources

A practical approach to a limping or non-weight bearing child.

- The Royal Children's Hospital, Melbourne. [Clinical Practice Guidelines: The limping or non-weight bearing child \(http://www.rch.org.au/clinicalguide/guideline\\_index/Child\\_with\\_limp\)](http://www.rch.org.au/clinicalguide/guideline_index/Child_with_limp).

The musculoskeletal chapter provides some excellent non-drug interventions for these conditions.

- The Royal Australian College of General Practitioners. [The Handbook of Non-Drug interventions \(HANDI\) \(http://www.racgp.org.au/clinical-resources/clinical-guidelines/handi\)](http://www.racgp.org.au/clinical-resources/clinical-guidelines/handi).

This is a collaborative learning website providing information on orthopaedics and fracture management.

- [Orthobullets \(http://www.orthobullets.com\)](http://www.orthobullets.com).

### Learning activities

- The Royal Australian College of General Practitioners. [gplearning \(http://www.racgp.org.au/education/professional-development/online-learning/gplearning\)](http://www.racgp.org.au/education/professional-development/online-learning/gplearning):
  - An overview of workplace injuries.
    - ◦ AJGP Clinical challenge – August 2018 – Workforce issues in general practice
  - Assess your knowledge of musculoskeletal injuries in general practice.
    - ◦ Common musculoskeletal injuries in general practice MCQs

- Assess your knowledge of musculoskeletal problems in general practice.
  - o check, unit 569, March 2020: Musculoskeletal problems
- The assessment of musculoskeletal conditions in general practice.
  - o check, unit 553, September 2018: Musculoskeletal
- Management of osteoarthritis of the knee.
  - Knee osteoarthritis in general practice

## Other

A comprehensive resource for paediatric musculoskeletal problems.

- Victorian Government Department of Health. [Paediatric orthopaedic resources for health professionals \(http://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/specialist-clinics/specialist-clinics-program/vpon/resources-health-professionals\)](http://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/specialist-clinics/specialist-clinics-program/vpon/resources-health-professionals).

## This contextual unit relates to the other unit/s of:

- [Child and youth health \(https://www.racgp.org.au/curriculum-and-syllabus/units/child-and-youth-health\)](https://www.racgp.org.au/curriculum-and-syllabus/units/child-and-youth-health)
- [Disability care \(https://www.racgp.org.au/curriculum-and-syllabus/units/disability-care\)](https://www.racgp.org.au/curriculum-and-syllabus/units/disability-care)
- [Emergency medicine \(https://www.racgp.org.au/curriculum-and-syllabus/units/emergency-medicine\)](https://www.racgp.org.au/curriculum-and-syllabus/units/emergency-medicine)
- [Military and veteran health \(https://www.racgp.org.au/curriculum-and-syllabus/units/military-and-veteran-health\)](https://www.racgp.org.au/curriculum-and-syllabus/units/military-and-veteran-health)
- [Occupational and environmental medicine \(https://www.racgp.org.au/curriculum-and-syllabus/units/occupational-and-environmental-medicine\)](https://www.racgp.org.au/curriculum-and-syllabus/units/occupational-and-environmental-medicine)
- [Older person's health \(https://www.racgp.org.au/curriculum-and-syllabus/units/older-person-s-health\)](https://www.racgp.org.au/curriculum-and-syllabus/units/older-person-s-health)
- [Pain management \(https://www.racgp.org.au/curriculum-and-syllabus/units/pain-management\)](https://www.racgp.org.au/curriculum-and-syllabus/units/pain-management)