

Learning Outcomes

These learning outcomes were derived from our work to find out the basic knowledge and skills that doctors working with children need to know about paediatric musculoskeletal matters. These learning outcomes are targeted at the level of the graduating doctor.

Clinical Assessment – Learning Outcomes

History Taking

- Describe 'red flags' symptoms for infection (including reactive arthritis), malignancy, significant systemic disease and non-accidental injury.
- Recognise the importance of a travel history to consider infections in endemic areas.
- Recognise that the history may be vague and the site(s) of pathology may not be clear from the history alone; there is need to supplement history with a musculoskeletal examination and assessment starting with pGALS.
- Demonstrate knowledge of the gross motor milestones within childhood development and that normal variants can occur.
- Perform an effective pain history (site, onset, character, radiation, associated features, duration of symptoms, exacerbating and relieving factors, impact on sleep).
- Recognise features within the history that aid in distinguishing mechanical from inflammatory musculoskeletal pathology.

Examination

- Use the pGALS assessment as a basic musculoskeletal examination and recognise that positive findings must lead to more detailed examination (pREMS).
- Describe the leg alignment and foot posture changes that occur with normal growth and recognise normal variants.
- Identify clinical features of an inflamed joint.
- Describe 'red flags' and clinical features suggestive of infections with musculoskeletal features, malignancy and non-accidental injury.
- Recognise that children have increased joint flexibility compared to adults (hypermobility).
- Describe Marfan's and Ehler's Danlos syndromes and their important extra-articular features.
- Be aware that a neurological examination may be indicated in the context of musculoskeletal presentations (e.g., limp, delayed walking) and be aware of proximal myopathy.
- Be aware of the clinical features of muscle disease (e.g., weakness, gait disturbance, abnormal development [delay or regression]).
- Describe the clinical features of muscular dystrophies (e.g., Duchenne, Becker) and myopathies.

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Investigations - Learning Outcomes

- Judiciously use and interpret investigations in the clinical assessment.
- Recognise that investigations may be normal in children with significant pathology (e.g., Juvenile Idiopathic Arthritis) and that clinical concern should always prompt referral to paediatric rheumatology even if investigations are normal.

Limping Child - Learning Outcomes

- Generate a differential diagnosis for a limp.
- Recognise that trauma can be a 'red-herring' and that further assessment may be required in a patient presenting with persistent limp.
- Identify conditions that should not cause limp, including growing pains.
- Recognise the role and limits of clinical assessment and investigations in the evaluation of a limp.
- Identify circumstances when to be concerned and when to seek specialist referral in a limping child (orthopaedics, rheumatology, general paediatrics, or neurology).

Pain By Site - Learning Outcomes

- Describe the spectrum of conditions that can present with regional pain of the back, hip, knee, foot and ankle.
- Recognise that chronic musculoskeletal pain may not have an obvious pathological cause.
- Critically analyse a clinical assessment coupled with selective investigations and their results to generate a differential diagnosis.
- Identify when to be concerned and seek specialist referral.

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Arthritis - Learning Outcomes

- Describe the spectrum of causes of a swollen joint (monoarthritis) and swollen joints (polyarthritis).
- Develop an approach to making a diagnosis with emphasis on clinical skills and careful use and interpretation of investigations.
- Describe the importance of diagnosing of Juvenile Idiopathic Arthritis (JIA) early in the disease course.
- Describe the classification of JIA and its relevance for prognosis and management.
- Recognise the importance of eye screening in JIA and the possibility of JIA-associated uveitis.
- Appreciate the spectrum of multisystem diseases that can present with joint swelling and when to be concerned.
- Outline the approach to management in rheumatic disease.
- Describe the side effects of immunosuppressive medicines.
- Describe the roles of the members of the multidisciplinary team.

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