Guidance to recognise serious pathology as a cause of musculoskeletal symptoms requiring urgent or emergency referral to secondary care.

As clinicians we all have general responsibilities in relation to coronavirus and for these we should seek and act on national and local guidelines. We have a responsibility that essential musculoskeletal care continues with minimal burden on the NHS. This guidance is to help primary or community care practitioners recognise serious pathology which requires urgent or emergency referral to secondary care when patients present with new or worsening musculoskeletal symptoms.

Serious pathology as a cause of musculoskeletal conditions is considered rare but needs to be managed either as an emergency or as urgent onward referral as directed by local pathways.

Any part of the musculoskeletal system can be affected.

Consider serious pathology as a differential diagnosis if a person presents;
- With escalating pain and progressively worsening symptoms that do not respond to conservative management or medication as expected,
- Systemically unwell (fever, weight loss),
- With night pain that prevents sleep due to escalating pain and/or difficulty lying flat.

Emergency conditions
The following serious pathologies must be dealt with on the day as an emergency.

**Cauda equina syndrome (CES)** - People presenting with spinal pain and leg pain with neurological symptoms and with any suggestion of changes in bladder or bowel function or saddle sensory disturbance, should be suspected of CES. The link below outlines the symptoms to be concerned about and these cards can be used to facilitate communication about sensitive symptoms. They can also be given to people who are at risk of CES and need to be warned on what to look out for and the action to take should they develop symptoms. [https://www.eoemskservice.nhs.uk/advice-and-leaflets/lower-back/cauda-equina](https://www.eoemskservice.nhs.uk/advice-and-leaflets/lower-back/cauda-equina)

**Metastatic spinal cord compression (MSCC)** - MSCC occurs as a consequence of metastatic bone disease in the spine. It can lead to irreversible neurological damage. Symptoms can include spine pain with band like referral, escalating pain and gait disturbance. The link below outlines symptoms to look out for. [https://www.christie.nhs.uk/media/1125/legacymedia-1201-mscc-service_education_mscc-resources_red-flag-card.pdf](https://www.christie.nhs.uk/media/1125/legacymedia-1201-mscc-service_education_mscc-resources_red-flag-card.pdf)

**Spinal Infection** – may present with spinal pain, fever and worsening neurological symptoms consider risk factors (e.g immunosuppressed, primary source of infection, personal or family history of tuberculosis).

**Septic arthritis** - if the person presents who is unwell, with or without a temperature, with a sudden onset of a hot swollen painful joint, with multidirectional restriction in movement, septic arthritis should be expected until proven otherwise. This is particularly important in children, where this may not present as hot swollen painful joint but instead as painful limp or loss of function in the upper limb.

Laura Finucane, Consultant Physiotherapist
David Cumming, Consultant Spinal Surgeon, Chair Specialised Spinal Clinical Reference Group
Bridget Griffiths, Consultant Rheumatologist, Chair Specialised Rheumatology Clinical Reference Group
Andrew Bennett, National Clinical Director MSK Conditions
Urgent conditions
The following require an onward urgent referral

**Primary or secondary cancers** - Metastatic disease as a consequence of primary cancers such as breast, prostate and lung cancer can metastasise to the spine. May present with escalating pain, night pain and may describe symptoms as being unfamiliar, eventually becoming systemically unwell. **If becomes systemically unwell needs to be escalated to local emergency pathway.**

**Insufficiency fracture** - Commonly presents with sudden onset of pain, mostly located in the thoraco-lumbar region following low impact trauma. The pain varies in presentation, but is often severe, and mostly localised to the area of the fracture. Consider risk factors associated with osteoporosis, however exclusion of a more serious pathological cause may be indicated

**Major spinal related neurological deficit** – Commonly with spinal pain and associated limb symptoms. A person with new onset or progressively worsening limb weakness, present for days/weeks, less than grade 4 on the oxford scale associated with 1 or more myotome. See the following link re the Oxford muscle grading scale:
https://www.csp.org.uk/documents/approx-5-oxford-muscle-grading-scale

**Cervical spondylotic myelopathy (CSM)** - In rare cases cervical spondylosis can progress to this condition. Consider CSM if patients present with pain getting worse, lack of co-ordination e.g. trouble with tasks like buttoning a shirt, heaviness or weakness in arms or legs, pins and needles and pain in arms, problems walking, loss of bladder or bowel control

**Acute inflammatory arthritis and suspected rheumatological conditions** – Refer any person to rheumatology with;

- persistent synovitis (i.e. hot swollen joints), particularly if the small joints of the hands (MCPs or PIPs) and/or feet are affected, and patient reports joint early morning stiffness lasting more than 30 minutes, even if the acute phase response (CRP or ESR) is normal and cyclic citrullinated peptide antibody (anti-CCP) or rheumatoid factor (RF) are negative. The person may have rheumatoid arthritis or psoriatic arthritis,
- a suspected new onset autoimmune connective tissue disease (e.g. lupus, scleroderma) or vasculitis, symptoms include extra-articular manifestations such as a rash, Raynaud’s (colour change with hands and/or feet turning white blue and/or red in the cold), mouth ulcers and/or sicca symptoms (dry eyes/mouth) in association with their new inflammatory arthritis,
- myalgia which is not secondary to a viral infection or fibromyalgia but worse proximally i.e. affects the shoulder and pelvic girdles in a symmetrical pattern, is worse in the morning and associated with more than 30 minutes of stiffness and accompanied by a raised acute phase response (ESR or CRP). They could have;
  - polymyalgia rheumatica (PMR) - patient usually aged over 50 - **refer urgently to GP,**
  Or
  - myositis - any age, usually accompanied by some weakness and raised CK- **refer urgently rheumatology service,**
- new onset headache predominantly in temples with or without associated symptoms such as jaw claudication, proximal girdle pains, visual symptoms AND accompanied by a raised acute phase response (ESR or CRP) in patients usually aged over 50. The patient may have giant cell arteritis (GCA).
- Suspected inflammatory spinal pain, patient may report prolonged early morning stiffness, pain radiating to buttocks and/or night pain. They may or may not have associated psoriasis, inflammatory eye disease (uveitis, iritis) and/or inflammatory bowel disease. For further information see the link https://www.esht.nhs.uk/wp-content/uploads/2018/07/Msk-Think-SpA-NICE-guidance-on-recognition-and-referral-of-Spondyloarthritis.pdf