Background on MS relapse

• The diagnosis of MS relapse is predominantly clinical, and can be difficult as many other causes/factors can mimic a relapse

• According to the McDonald Criteria a relapse “is defined as a patient-reported or objectively observed event typical of an acute inflammatory demyelinating event in the CNS, current or historical, with duration of at least 24 hours, in the absence of fever or infection.”

• A relapse typically develops over hours or days until a plateau is reached, which may last days or weeks, followed by complete or incomplete recovery at varying rates

• Most relapses (~70%) are monofocal (i.e. involve one site); the largest study of relapse phenotype suggests the commonest relapse phenotype is sensory (48%), followed by weakness (34%) and problems with visual acuity (20%)

• Relapse symptoms can vary greatly and are similar to the presenting symptoms of MS

Differential diagnosis of MS relapse

• Pseudo-relapse - an exacerbation of previous symptoms occurring in the context of elevation of body temperature (heat, exercise, or fever) or systemic inflammatory activity (infection or another ongoing systemic illness); unlike relapses, pseudo-relapses are always exacerbations of previous symptoms, are typically transient, and their onset and resolution roughly coincide with the triggering situation

• Day to day fluctuations - Day to day fluctuations in chronic symptoms are common in MS and may be misinterpreted as relapses. This is usually indicated by their stereotypical nature, and a disproportionate frequency of reported relapses, higher than expected when considering the patient's disability progression

• Functional relapse - Non-organic “relapses” are well documented, and functional overlay during genuine relapses may inflate severity. It is important to recognise the unconscious needs underlying this presentation

• Other neurological conditions - new neurological symptoms and signs in a person with MS are sometimes due to other unrelated neurological conditions

• Chronic progression of the disease

Management of MS relapse

• Rule out infection and other potential causes above before considering treatment - commonest sources of infection are UTI and respiratory

• ALL relapses should be discussed with a specialist before treatment:
  ○ Not all relapses need treating and can be difficult to diagnose in primary care
  ○ Even if not treated relapse rate may affect disease modifying treatment

• Treatment if appropriate is high dose steroids - either oral methylprednisolone 0.5mg (500mg) OD 5 days or IV methylprednisolone 1g daily for 3-5 days

• Patient information - evidence suggests that steroid treatment reduces the duration of relapses by an average of 13 days, and may reduce severity, but does not affect long term outcome; good info on relapses from MS Society - [click here](https://www.msforsociety.org)