Cerebral Palsy

- Chronic disorders of posture and movement
  - Delayed motor development, evolving CNS signs, learning disability, epilepsy
  - Caused by non progressive CNS lesions, sustained before 2 years of age
  - Most due to antental events unrelated to birth trauma
  - Damage may be: vascular, hypoxic ischaemia, teratogenic, genetic, infection, toxic, metabolic (although in many cases no cause is identified)
- Prevalence
  - 9% if 23 - 27 weeks
  - 6% if 28 - 30 weeks
  - 0.1% if term
- Presentation
  - Risk factors: premature infants, twin births, maternal age > 35, black
  - Suspect with delayed milestones
  - Signs: weakness, paralysis, seizures, language and speech problems, spasticity
  - Diagnosis made by clinical examination - assessment of pattern of tone in limbs and trunk, posture, hand function and gait
  - 3 main clinical types
    - Spastic 70%
      - UMN lesion / damage
      - Limb tone is increased (spasticity) with brisk reflexes
      - Hemiplegia - unilateral involvement of arm and leg; PMH is usually normal with unremarkable birth hsitory
      - Quadriplegia - all four limbs involved usually severely; often associated with seizures, microcephaly and intellectual impairment
    - Ataxic hypotonic 10%
      - Early trunk and limb hypotonia, poor balance and delayed motor development
      - Intention tremor and ataxic gait be evident later
    - Dyskinetic 10%
      - Frequent involuntary movement
      - Intellect may be relatively unimpaired
- Prognosis
  - Those with mild form have a normal life expectancy
  - Only 20 years if quadriplegic
  - Poor prognosis associated with severe quadriplegia, epilepsy, learning difficulties, medical complications (reflux, pulmonary disease)
- Complications
  - Contractions
  - GI symptoms: reflux, oropharngeal muscle disorder (affects swallowing and slaiva clearance)
  - Pulmonary: aspiration pneumonia and bronchopulmonary dysplasia
  - Learning difficulties (30 - 50% of patients)
  - Hearing loss (from hyperbilirubiaemia or exposure to ototoxic drugs)
  - Epilepsy
  - Squints
  - Speech and language difficulties
  - Behavioural disorders
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  - Acute poliomyelitis
  - Becker muscular dystrophy
  - CMT
  - Stroke motor impairment
  - Traumatic brain injury
- Management
  - MDT
    - Physio, TO
    - SaLT, recreational therapists
  - Medical
    - Baclofen - helpful in relieving muscles spasms
    - Usually oral but can be given intrathecally
  - Surgical
    - Repair of scoliosis and hip dislocation
    - Tenden lengthening to decrease imbalance
    - Osteotomy to realign limbs
  - Other
    - Mobility aids (orthotic devices, wheelchairs)
    - Callipers may prevent deformity
    - Botulinus toxin - relief of spasticity for 3 - 6 months