**Cerebral Palsy**

**Definition**
- Group of non-progressive neurodevelopmental conditions
- Characterized by impairments in motor function that limit activity
- Caused by a disturbance to developing fetal or infant brain

**Classification**

<table>
<thead>
<tr>
<th>Gross Motor Function Classification System (GFMCS) Levels:</th>
<th>Affected Limb(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Walk without limitations (least functional impact)</td>
<td>Hemi-plegia</td>
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<tr>
<td>II. Walk with limitations</td>
<td>Mono-plegia</td>
</tr>
<tr>
<td>III. Walk using handheld mobility device</td>
<td>Diplegia</td>
</tr>
<tr>
<td>IV. Self-mobility with limitations</td>
<td>Quadriplegia</td>
</tr>
<tr>
<td>V. Manual wheelchair (most functional impact)</td>
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</tbody>
</table>

**Motor Types:**
- spastic, dyskinetic, ataxic, mixed

**Etiology**
- Genetic
- Birth asphyxia (eg. hypoxic ischemic encephalopathy) (≤10%)
- White matter injury
- Intraventricular hemorrhage
- Perinatal stroke
- Infection (TORCH, meningitis)

**Clinical Red Flags**
- Hand preference <12 months
- Stiffness in legs <12 months
- Inability to sit by 9 months
- Making fists continuously after 4 months
- Other motor or posture delays

**Significant Risk Factors**
- Premature birth
- Low birthweight

**Diagnosis**

**History**
- Inquire about risk factors
- Motor development and milestones
- Comorbidities: epilepsy, learning difficulty, sensory impairments, hip subluxation, scoliosis

**Physical Exam**
- Hypertonia or hypotonia
- Hyperreflexia
- Persistent primitive reflexes: moro, asymmetric tonic neck
- Spasticity

**Investigations**
1. Neuroimaging (MRI) for correlation with clinical exam
2. If normal MRI, consider metabolic screen and/or genetic testing

**Supportive Management**
- Allied Health: Occupational therapy, physical therapy, speech language pathology
- Spasticity: Botulinum Toxin (focal tone), Benzo-diazepines / Baclofen (general tone)
- Cerebral Palsy (CP)
- Caregiver Support: Parent education, respite, mental health resources
- Orthopedic Support: Braces (ankle foot orthoses), hip X-rays (monitoring), surgical options
- Wellness: Physical (modified activities), mental (counselling), social (family, friends)
- Manage Comorbidities: Chronic pain, seizures, vision, development, hearing

Published March 2021
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