# Management of Hip Displacement in Cerebral Palsy

<table>
<thead>
<tr>
<th>GMFCS¹</th>
<th>Incidence²</th>
<th>Proximal Femoral Geometry³</th>
<th>Impairment</th>
<th>Long-term issues</th>
<th>Surgical Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMFCS Level I</td>
<td>Same incidence as the rest of population</td>
<td></td>
<td></td>
<td></td>
<td>Usually not required</td>
</tr>
</tbody>
</table>
| GMFCS Level II | Diplegia - 15%, slowly progressive  
Hemiplegia (WGH IV⁴) - 1%, develops slowly & may occur late | | Deterioration in walking | Pain and joint degeneration | Surgery for gait correction  
May include: Adductor lengthening, FDO +/- varus |
| GMFCS Level III | 40% | | Deterioration in walking | Pain and joint degeneration | Surgery for gait correction and hip stability  
Adductor release +/- phenol, VDRO  
(+/- procedures at knee and foot/ankle to address gait) |
| GMFCS Level IV | 70% | | Deterioration in standing, walking and sitting posture | Pain & joint degeneration, loss of standing ability | Surgery for sit-to-stand ability and sitting  
Adductor release + phenol  
Reconstructive: VDRO (foot stabilization for some) |
| GMFCS V | 90% | | Deterioration in sitting posture | Pain & joint dislocation, loss of sitting ability, difficulty with care and hygiene | Surgery for comfort and care  
Adductor release + phenol  
Reconstructive: VDRO +/- PO  
Salvage: Excision, valgus osteotomy |

**Abbreviations:** FNA, Femoral neck anteversion; MP, migration percentage; NSA, neck shaft angle; WGH IV, Winter’s Gage & Hicks Type IV; FDO, femoral derotation osteotomy; VDRO, varus derotation osteotomy; PO, pelvic osteotomy

---

Thomason, Willoughby, Khot & Graham, The Royal Children’s Hospital, Melbourne; AACPDM 69th Annual Meeting, Austin, Texas, 2015.
Risk of Hip Displacement by GMFCS²

Hip adductor surgery success by GMFCS⁵

References: