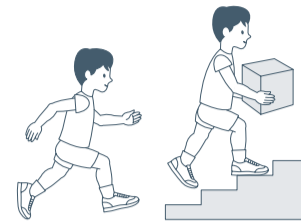


# Australian Hip Surveillance Guidelines for children with Cerebral Palsy 2014

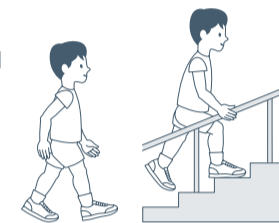
## GMFCS I

- Initial clinical assessment and antero-posterior (AP) pelvic radiograph at 12-24 months of age (or at identification if older than 24 months)
- Review at 3 years of age
  - Verify GMFCS level
  - If GMFCS I is confirmed, repeat clinical assessment. AP pelvic radiograph is **NOT** required
- If GMFCS level has changed, ongoing surveillance according to confirmed classification
- If identified as Winters, Gage and Hicks (WGH) IV hemiplegia, ongoing surveillance according to WGH IV classification
- Review at 5 years of age
  - Verify GMFCS level
- If GMFCS I is confirmed, repeat clinical assessment. AP pelvic radiograph is **NOT** required and if nil other significant signs, discharge from surveillance
- If GMFCS level has changed, ongoing surveillance according to confirmed classification
- If identified as WGH IV hemiplegia, ongoing surveillance according to WGH IV classification



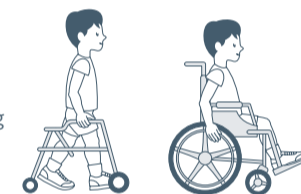
## GMFCS II

- Initial clinical assessment and AP pelvic radiograph at 12-24 months of age (or at identification if older than 24 months)
- Review 12 months later
  - Verify GMFCS level
  - If GMFCS II confirmed, repeat clinical assessment and AP pelvic radiograph
  - If GMFCS level has changed, ongoing surveillance according to confirmed classification
  - If MP is abnormal and/or unstable, continue 12 monthly surveillance until stability is established
  - When MP is stable, review at 4-5 years of age
- Review at 4-5 years of age
  - Verify GMFCS level
  - If GMFCS II confirmed, repeat clinical assessment and AP pelvic radiograph
  - If GMFCS level has changed, or if identified as WGH IV hemiplegia, ongoing surveillance according to confirmed classification
  - If MP is stable, review at 8-10 years of age
  - If MP is abnormal and/or unstable, continue 12 monthly surveillance until stability is established
- Review at 8-10 years of age, prepuberty
  - Verify GMFCS level
- If GMFCS II confirmed, repeat clinical assessment and AP pelvic radiograph
- If GMFCS level has changed, or if identified as WGH IV hemiplegia, ongoing surveillance according to confirmed classification
- If MP is stable, discharge from surveillance
- If MP is abnormal and/or unstable, continue 12 monthly surveillance until stability is established or skeletal maturity
- In the presence of pelvic obliquity, leg length discrepancy or deteriorating gait, continue 12 monthly surveillance



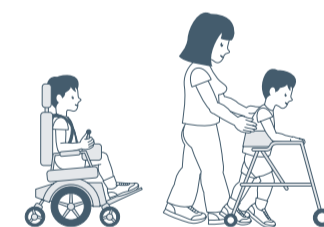
## GMFCS III

- Initial clinical assessment and AP pelvic radiograph at 12-24 months of age
- Review 6 months later
  - Verify GMFCS level
  - If GMFCS III confirmed, repeat clinical assessment and AP pelvic radiograph
  - If GMFCS level has changed, ongoing surveillance according to confirmed classification
  - If MP is abnormal and/or unstable, continue 6 monthly surveillance until MP stability is established
- When MP is stable, reduce frequency to 12 monthly surveillance
- Review at 7 years of age
  - Verify GMFCS level
  - If GMFCS III confirmed, repeat clinical assessment and AP pelvic radiograph
  - If GMFCS level has changed, ongoing surveillance according to confirmed classification
  - If MP is abnormal and/or unstable, continue 6 monthly surveillance until MP stability is established
- If MP is stable, below 30%, and gross motor function is stable, AP pelvic radiographs may be discontinued until prepuberty
- 12 monthly AP pelvic radiographs must resume prepuberty and continue until skeletal maturity
- At skeletal maturity, in the presence of pelvic obliquity, leg length discrepancy or deteriorating gait, continue 12 monthly surveillance



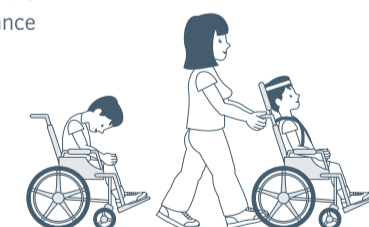
## GMFCS IV

- Initial clinical assessment and AP pelvic radiograph at 12-24 months of age
- Review 6 months later
  - Verify GMFCS level
  - If GMFCS IV confirmed, repeat clinical assessment and AP pelvic radiograph
  - If GMFCS level has changed, ongoing surveillance according to confirmed classification
- If MP is abnormal and/or unstable, continue 6 monthly surveillance until MP stability is established
- When MP is stable, reduce frequency of surveillance to 12 monthly
- Review at 7 years of age
  - If MP is stable, below 30% and gross motor function is stable, surveillance may be discontinued until prepuberty
  - 12 monthly AP pelvic radiographs must resume prepuberty and continue until skeletal maturity
- Independent of MP, when clinical and/or radiographic evidence of scoliosis or pelvic obliquity is present, 6 monthly surveillance is required until skeletal maturity
- At skeletal maturity, if MP is abnormal and progressive scoliosis or significant pelvic obliquity is present continue 12 monthly surveillance



## GMFCS V

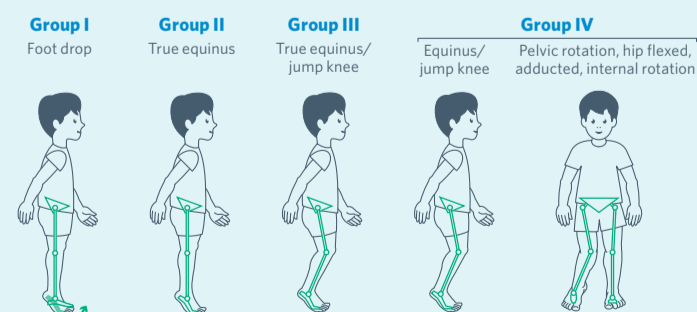
- Initial clinical assessment and AP pelvic radiograph at 12-24 months of age
- Review 6 months later
- Repeat clinical assessment and AP pelvic radiograph
  - Verify GMFCS level
  - If GMFCS V confirmed, continue 6 monthly surveillance until 7 years of age or until MP stability is established
- If GMFCS level has changed, ongoing surveillance according to confirmed classification
- Review at 7 years of age
  - If MP is stable, below 30% and gross motor function is stable, continue 12 monthly surveillance until skeletal maturity
- Independent of MP, when clinical and/or radiographic evidence of scoliosis or pelvic obliquity is present, 6 monthly surveillance is required until skeletal maturity
- At skeletal maturity, if MP is abnormal and progressive scoliosis or significant pelvic obliquity is present, continue 12 monthly surveillance



## Winters, Gage and Hicks hemiplegia group IV (WGH IV)

- WGH IV gait pattern clearly declares itself by 4-5 years of age. The child with a classification of WGH IV has the potential for late onset progressive hip displacement regardless of GMFCS level.
- Review at 5 years of age
    - Verify WGH and GMFCS
    - If WGH I-III, ongoing hip surveillance according to confirmed GMFCS
    - If WGH IV and MP stable, review 10 years of age
    - If MP is abnormal and/or unstable, continue 12 monthly surveillance until MP stability established

- Review at 10 years of age
  - Verify WGH IV
  - If WGH IV confirmed, repeat clinical assessment and AP pelvic radiograph
  - Continue 12 monthly surveillance until skeletal maturity
- At skeletal maturity if significant scoliosis, pelvic obliquity, leg length discrepancy or deteriorating gait, continue 12 monthly surveillance



Gait patterns in hemiplegia (Winters, Gage and Hicks, 1987)