EARLY DIAGNOSIS – CEREBRAL PALSY

MRI findings and motor impairment severity

CLINICAL FACT SHEET

A correlation often exists between the location, size and extent of the injury and the severity of the child's motor impairment. Infants with brain malformations and cortical/ subcortical lesions generally exhibit more severe motor impairments and have the highest risk for being non-ambulatory.





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Non-ambulant cerebral palsy is more likely following:

- Bilateral parenchymal haemorrhages (Grade IV)
- Bilateral cystic periventricular leukomalacia (cPVL) (Grade III)
- Brain maldevelopment (although ambulation is possible in some cases)
- Basal ganglia injury (although ambulation is possible in some cases)

Children with periventricular white matter lesions generally exhibit milder motor impairments and often less associated impairments. However, infants with more severe white matter injury may have more long-term motor and developmental concerns than those born at term age.



Ambulant cerebral palsy is more likely following:

- Unilateral lesions (Grade IV haemorrhage, perinatal arterial ischemic stroke)
- Periventricular leukomalacia (PVL) (non-cystic)
- Moderate/severe white matter injury.

Adapted with permission from: Novak et al 2017. Early, Accurate Diagnosis and Early Intervention in Cerebral Palsy. *JAMA Pediatr.* 2017;171(9):897-907. doi:10.1001/jamapediatrics.2017.1689 Available from: http://jamanetwork.com/journals/jamapediatrics/article-abstract/2636588

