



Early detection and motor intervention for infants with Cerebral Palsy or high risk of Cerebral Palsy

A guidelines review

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Aims

To review the inter-professional team approach that is necessary to diagnose cerebral palsy at an early stage

To summarize the strategies of inter-professional early intervention that should follow early diagnosis



WAIT

AND

SEE



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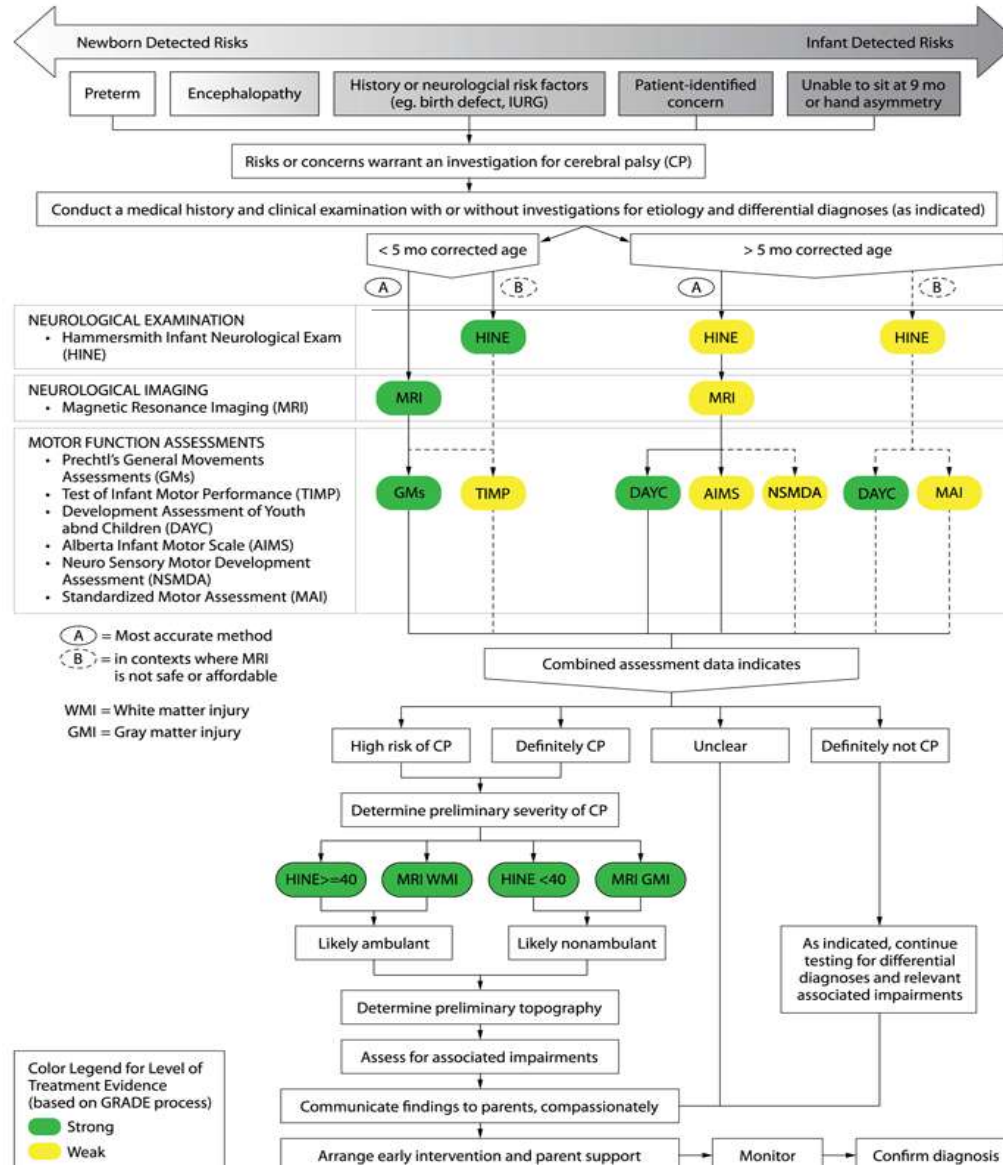
doi: [10.1001/jamapediatrics.2017.1689](#)

Early, Accurate Diagnosis and Early Intervention in Cerebral Palsy Advances in Diagnosis and Treatment

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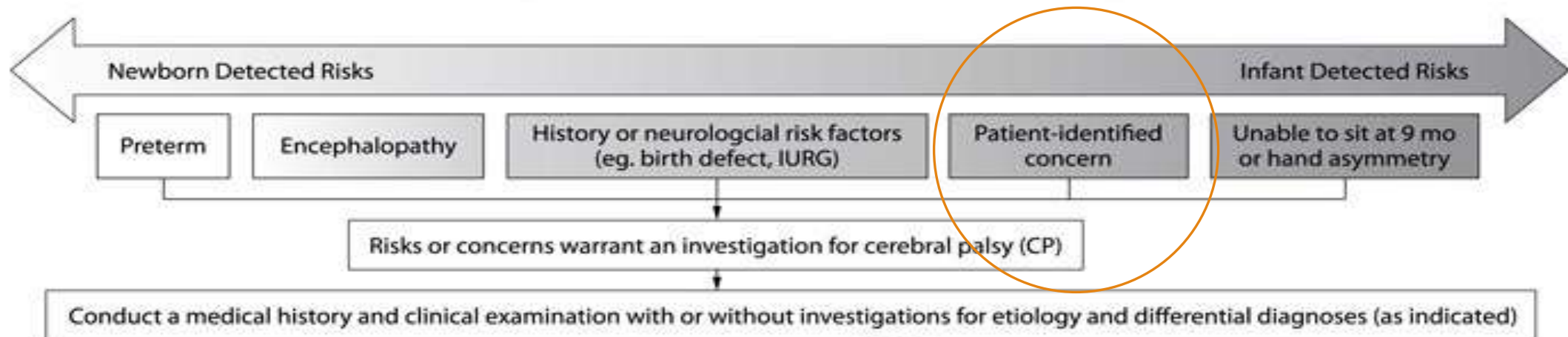
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Flow Diagram for Evidence-Informed Care Pathway for Early Diagnosis of Cerebral Palsy

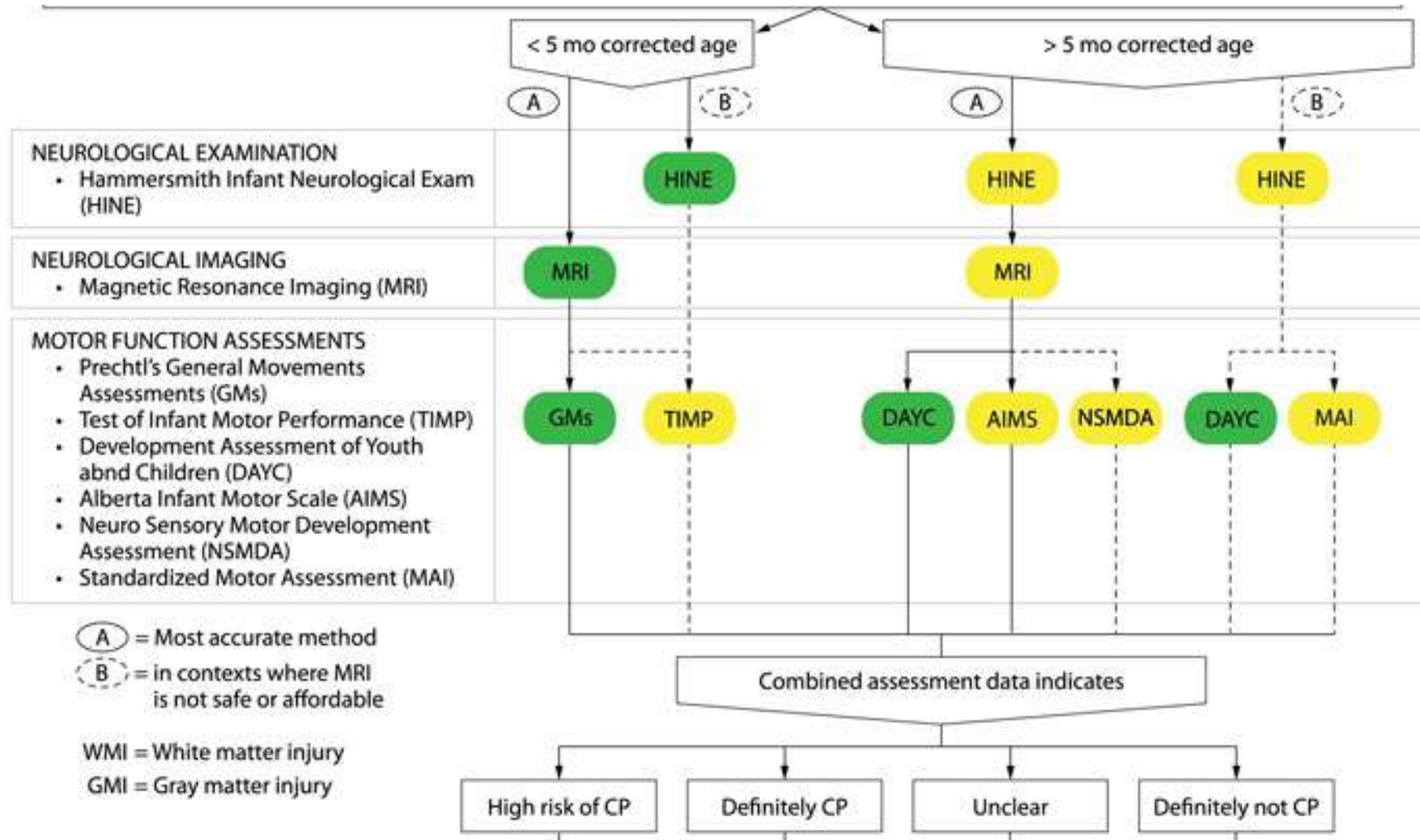


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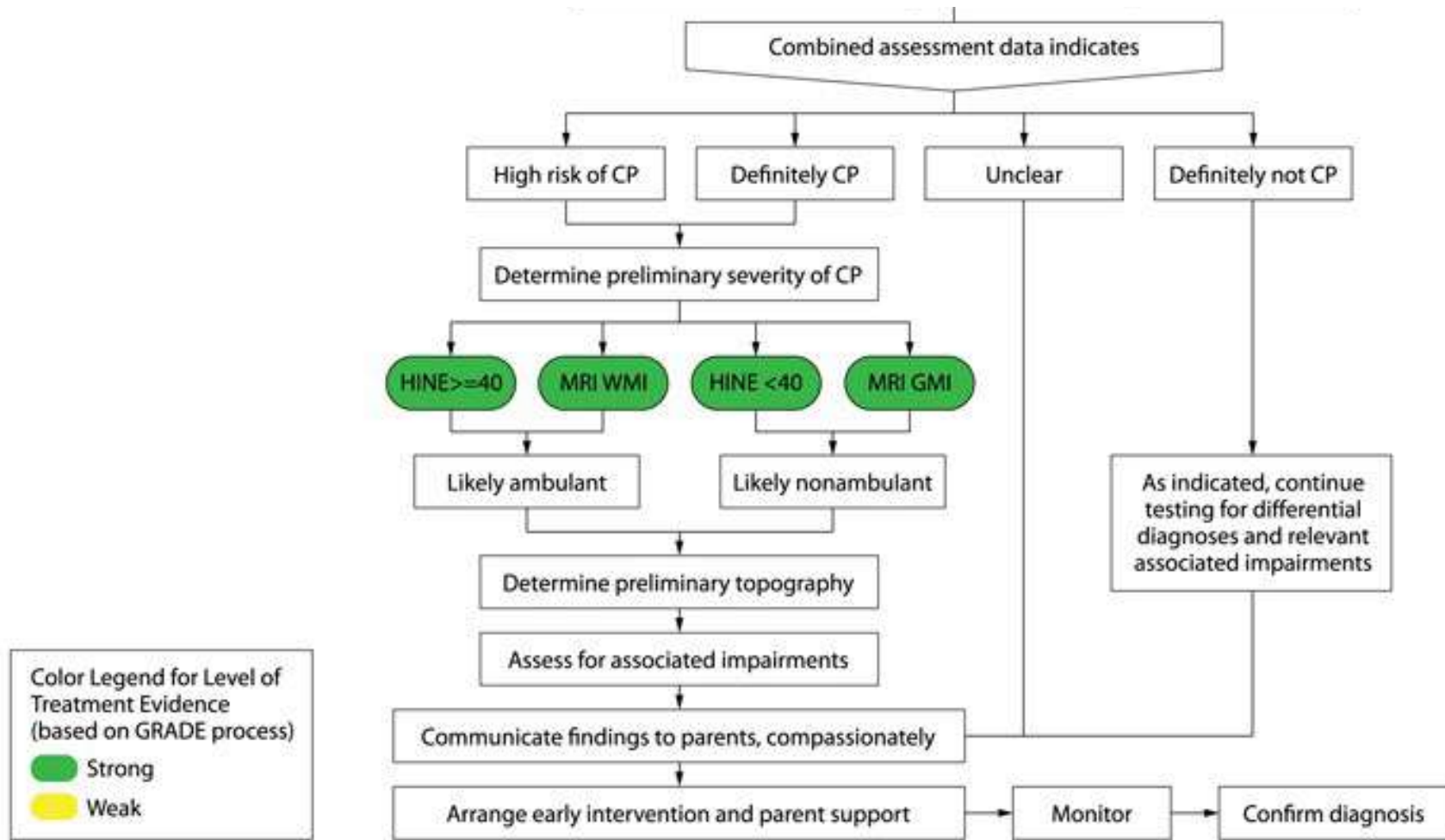
Flow Diagram for Evidence-Informed Care Pathway for Early Diagnosis of Cerebral Palsy



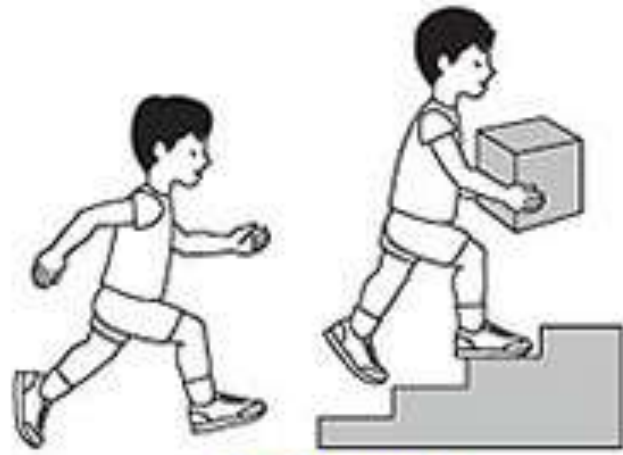
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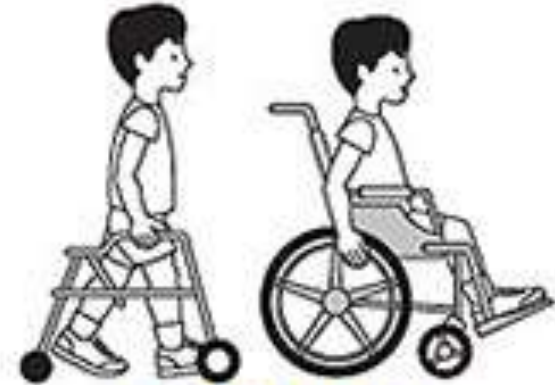
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GMFCS Level I



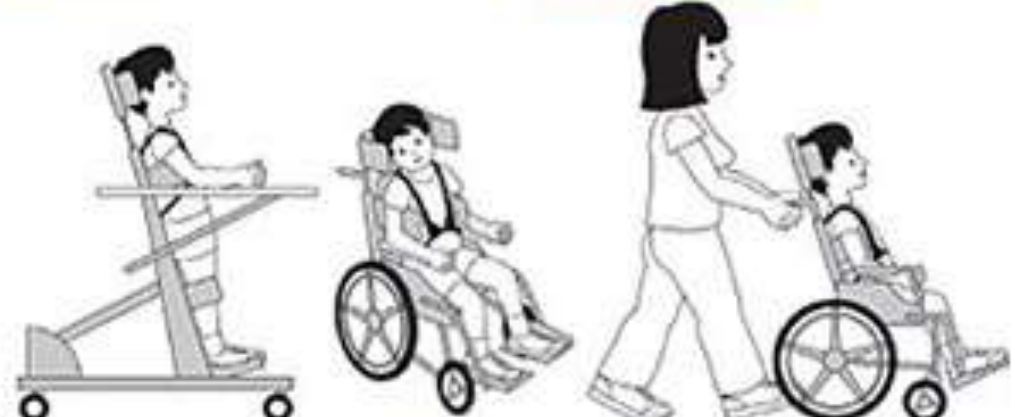
GMFCS Level II



GMFCS Level III



GMFCS Level IV



GMFCS Level V

The importance of a multidisciplinary early diagnosis in Cerebral Palsy

Strengthen caregiver well-being

Prevent secondary complications

Optimize infant cognitive and motor plasticity.

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Early Intervention for Children Aged 0 to 2 Years With or at High Risk of Cerebral Palsy

International Clinical Practice Guideline Based on Systematic Reviews

[Catherine Morgan](#), PhD, [Linda Fetters](#), PhD, [Lars Adde](#), PhD, [Nadia Badawi](#), PhD, [Ada Bancale](#), NPT, [Roslyn N. Boyd](#), PhD, [Olena Chorna](#), CCRP, [Giovanni Cioni](#), MD, [Diane L. Damiano](#), PhD, [Johanna Darrah](#), PhD, [Linda S. de Vries](#), PhD, [Stacey Dusing](#), PhD, [Christa Einspieler](#), PhD, [Ann-Christin Eliasson](#), PhD, [Donna Ferriero](#), MD, [Darcy Fehlings](#), MD, [Hans Forssberg](#), MD, [Andrew M. Gordon](#), PhD, [Susan Greaves](#), PhD, [Andrea Guzzetta](#), PhD, [Mijna Hadders-Algra](#), PhD, [Regina Harbourne](#), PhD, [Petra Karlsson](#), PhD, [Lena Krumlinde-Sundholm](#), PhD, [Beatrice Latal](#), PhD, [Alison Loughran-Fowlds](#), PhD, [Catherine Mak](#), PhD, [Nathalie Maitre](#), MD, [Sarah McIntyre](#), PhD, [Cristina Mei](#), PhD, [Angela Morgan](#), PhD, [Angelina Kakooza-Mwesige](#), PhD, [Domenico M. Romeo](#), PhD, [Katherine Sanchez](#), PhD, [Alicia Spittle](#), PhD, [Roberta Shepherd](#), PhD, [Marelle Thornton](#), DipEd, [Jane Valentine](#), PhD, [Roslyn Ward](#), PhD, [Koa Whittingham](#), PhD, [Alieh Zamany](#), DPT, and [Iona Novak](#), PhD

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feedback

As Soon As Possible



Early intervention. A global and individualized approach

Motor

Cognitive

Communication

Eating and
drinking

Sleep

Vision

Muscle tone

Musculoskeletal

Parent support

Mental health

2. Morgan C, Fetters L, Adde L, Badawi N, Bancale A, Boyd RN, Chorna O, Cioni G, Damiano DL, Darrah J, de Vries LS, Dusing S, Einspieler C, Eliasson AC, Ferriero D, Fehlings D, Forssberg H, Gordon AM, Greaves S, Guzzetta A, Hadders-Algra M, Harbourne R, Karlsson P, Krumlinde-Sundholm L, Latal B, Loughran-Fowlds A, Mak C, Maitre N, McIntyre S, Mei C, Morgan A, Kakooza-Mwesige A, Romeo DM, Sanchez K, Spittle A, Shepherd R, Thornton M, Valentine J, Ward R, Whittingham K, Zaman A, Novak I. Early Intervention for Children Aged 0 to 2 Years With or at High Risk of Cerebral Palsy: International Clinical Practice Guideline Based on Systematic Reviews. *JAMA Pediatr.* 2021 Aug 1;175(8):846-858. doi: 10.1001/jamapediatrics.2021.0878. PMID: 33999106; PMCID: PMC9677545.

Early intervention: Motor development



Physiotherapy



Occupational Therapy

2. Morgan C, Fetters L, Adde L, Badawi N, Bancale A, Boyd RN, Chorna O, Cioni G, Damiano DL, Darrah J, de Vries LS, Dusing S, Einspieler C, Eliasson AC, Ferriero D, Fehlings D, Forssberg H, Gordon AM, Greaves S, Guzzetta A, Hadders-Algra M, Harbourne R, Karlsson P, Krumlinde-Sundholm L, Latal B, Loughran-Fowlds A, Mak C, Maitre N, McIntyre S, Mei C, Morgan A, Kakooza-Mwesige A, Romeo DM, Sanchez K, Spittle A, Shepherd R, Thornton M, Valentine J, Ward R, Whittingham K, Zaman A, Novak I. Early Intervention for Children Aged 0 to 2 Years With or at High Risk of Cerebral Palsy: International Clinical Practice Guideline Based on Systematic Reviews. *JAMA Pediatr.* 2021 Aug 1;175(8):846-858. doi: 10.1001/jamapediatrics.2021.0878. PMID: 33999106; PMCID: PMC9677545.

Early intervention: Musculoskeletal protection



Assistive Devices



Orthotics



Hips surveillance

2. Morgan C, Fetters L, Adde L, Badawi N, Bancale A, Boyd RN, Chorna O, Cioni G, Damiano DL, Darrah J, de Vries LS, Dusing S, Einspieler C, Eliasson AC, Ferriero D, Fehlings D, Forssberg H, Gordon AM, Greaves S, Guzzetta A, Hadders-Algra M, Harbourne R, Karlsson P, Krumlinde-Sundholm L, Latal B, Loughran-Fowlds A, Mak C, Maitre N, McIntyre S, Mei C, Morgan A, Kakooza-Mwesige A, Romeo DM, Sanchez K, Spittle A, Shepherd R, Thornton M, Valentine J, Ward R, Whittingham K, Zamany A, Novak I. Early Intervention for Children Aged 0 to 2 Years With or at High Risk of Cerebral Palsy: International Clinical Practice Guideline Based on Systematic Reviews. *JAMA Pediatr.* 2021 Aug 1;175(8):846-858. doi: 10.1001/jamapediatrics.2021.0878. PMID: 33999106; PMCID: PMC9677545.



The sooner the better

- “Wait-and-see” when parents express concerns is outdated.
- Early diagnosis for Cerebral Palsy can be accurately done between 5 and 6 months corrected age using a combination of neuroimaging, and standardized motor and neurological assessment.
- Early intervention improves caregiver well-being, prevents secondary complications and improves cognitive and motor outcomes.

2. Morgan C, Fetters L, Adde L, Badawi N, Bancale A, Boyd RN, Chorna O, Cioni G, Damiano DL, Darrah J, de Vries LS, Dusing S, Einspieler C, Eliasson AC, Ferriero D, Fehlings D, Forssberg H, Gordon AM, Greaves S, Guzzetta A, Hadders-Algra M, Harbourne R, Karlsson P, Krumlinde-Sundholm L, Latal B, Loughran-Fowlds A, Mak C, Maitre N, McIntyre S, Mei C, Morgan A, Kakooza-Mwesige A, Romeo DM, Sanchez K, Spittle A, Shepherd R, Thornton M, Valentine J, Ward R, Whittingham K, Zamany A, Novak I. Early Intervention for Children Aged 0 to 2 Years With or at High Risk of Cerebral Palsy: International Clinical Practice Guideline Based on Systematic Reviews. *JAMA Pediatr.* 2021 Aug 1;175(8):846-858. doi: 10.1001/jamapediatrics.2021.0878. PMID: 33999106; PMCID: PMC9677545.

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