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Evidence-Informed Milestones for Developmental Surveillance Tools

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The Centers for Disease Control and Prevention's (CDC) Learn the Signs Act Early program, funded the American Academy of Pediatrics (AAP) to convene an expert working group to revise its developmental surveillance checklists. The goals of the group were to identify evidence-informed milestones to include in CDC checklists, clarify when most children can be expected to reach a milestone (to discourage a wait-and-see approach), and support clinical judgment regarding screening between recommended ages. Subject matter experts identified by the AAP established 11 criteria for CDC milestone checklists, including using milestones most children ($\geq 75\%$) would be expected to achieve by specific health supervision visit ages and those that are easily observed in natural settings. A database of normative data for individual milestones, common screening and evaluation tools, and published clinical opinion was created to inform revisions. Application of the criteria established by the AAP working group and adding milestones for the 15- and 30-month health supervision visits resulted in a 26.4% reduction and 40.9% replacement of previous CDC milestones. One-third of the retained milestones were transferred to different ages; 67.7% of those transferred were moved to older ages. Approximately 80% of the final milestones had normative data from ≥ 1 sources. Social-emotional and cognitive milestones had the least normative data. These criteria and revised checklists can be used to support developmental surveillance, clinical judgment regarding additional developmental screening, and research in developmental surveillance processes. Gaps in developmental data were identified particularly for socialemotional and cognitive milestones.



Comparison of Pelvic Floor Muscle Training With Connective Tissue Massage to Pelvic Floor Muscle Training Alone in Women With Overactive Bladder: A Randomized Controlled Study

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OBJECTIVE: The purpose of this study was to compare the effects of a 6-week program of pelvic floor muscle training (PFMT) plus connective tissue massage (CTM) to PFMT alone in women with overactive bladder (OAB) symptoms on those symptoms, pelvic floor muscle strength, and quality of life. **RESULTS:** In both groups, pelvic floor muscle strength increased, whereas OAB symptoms and PPIUS and KHQ scores decreased after treatment ($P < .05$). Although the OAB-V8, PPIUS, and KHQ scores decreased at week 3, frequency, OAB-V8, and PPIUS scores, in addition to some parameters of the KHQ, decreased after treatment in the PFMT+CTM group compared to the PFMT group ($P < .05$). **CONCLUSION:** Compared to PFMT alone, PFMT+CTM achieved superior outcomes in reducing OAB symptoms in the early and late periods.



Chiropractic Care for the Pregnant Body

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Chiropractic care is a commonly used treatment modality for musculoskeletal pain in pregnancy. Low back pain, pelvic pain, and other neuromuscular complaints are prevalent in pregnancy and contribute to significant maternal discomfort in many women. Nonpharmacologic therapies to relieve pain are increasingly important during pregnancy because of the opioid epidemic. Chiropractic treatment is one of the potential therapies that offers intervention without medications. This article provides an evidence-based review of the epidemiology of chiropractic use in obstetrics, commonly treated conditions, related physiology of pregnancy, and safety of spinal manipulation.

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Identifying potential treatment effect modifiers of the effectiveness of chiropractic care to infants with colic through prespecified secondary analyses of a randomised controlled trial

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DOI: <https://doi.org/10.1186/s12998-021-00373-6>

A recent trial identified large variation in effect of chiropractic care for infantile colic. Thus, identification of possible effect modifiers could potentially enhance the clinical reasoning to select infants with excessive crying for chiropractic care. Therefore, the aim of this study is to identify potential treatment effect modifiers which might influence the effect of chiropractic care for excessive crying in infancy.



The effect of chiropractic care on infantile colic: results from a single-blind randomised controlled trial

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Chiropractic & Manual Therapies 2021 April 19, 29 (1): 15

<https://chiromt.biomedcentral.com/track/pdf/10.1186/s12998-021-00371-8.pdf>

This is a multicenter, single-blind randomized controlled trial conducted in four Danish chiropractic clinics, 2015-2019. Information was distributed in the maternity wards and by maternal and child health nurses. Children aged 2-14 weeks with unexplained excessive crying were recruited through home visits and randomized (1:1) to either chiropractic care or control group. Both groups attended the chiropractic clinic twice a week for 2 weeks. The intervention group received chiropractic care, while the control group was not treated. The parents were not present in the treatment room and unaware of their child's allocation. The primary outcome was change in daily hours of crying before and after treatment. Secondary outcomes were changes in hours of sleep, hours being awake and content, gastrointestinal symptoms, colic status and satisfaction. All outcomes were based on parental diaries and a final questionnaire.



Is foot reflexology effective in reducing colic symptoms in infants: A randomized placebo-controlled trial

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<https://doi.org/10.1016/j.ctim.2021.102732>

Infantile colic and its accompanying crying represent a major source of stress and have negative physiological, emotional and psychological effects on infants and parents. The aim of this study was to examine the efficacy of foot reflexology for reducing symptoms of infantile colic. The study was conducted as a single-blind, randomized, placebo-controlled trial with a sample population of 45 infants diagnosed with infantile colic.



Dietary modifications for infantile colic

Morris Gordon, Elena Biagioli, Miriam Sorrenti, Carla Lingua, Lorenzo Moja, Shel Sc Banks, Simone Ceratto, Francesco Savino

Cochrane Database of Systematic Reviews 2018 October 10, 10: CD011029

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6394439/pdf/CD011029.pdf>

Infantile colic is typically defined as full-force crying for at least three hours per day, on at least three days per week, for at least three weeks. This condition appears to be more frequent in the first six weeks of life (prevalence range of 17% to 25%), depending on the specific location reported and definitions used, and it usually resolves by three months of age. The aetiopathogenesis of infantile colic is unclear but most likely multifactorial. A number of psychological, behavioural and biological components (food hypersensitivity, allergy or both; gut microflora and dysmotility) are thought to contribute to its manifestation. The role of diet as a component in infantile colic remains controversial. OBJECTIVES: To assess the effects of dietary modifications for reducing colic in infants less than four months of age.



Non-pharmacologic approach to pediatric constipation

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Complementary Therapies in Medicine 2021, 59: 102711

<https://doi.org/10.1016/j.ctim.2021.102711>

Functional constipation (FC) is a pervasive problem in pediatrics. Although pharmaceuticals are commonly used for FC, parents and patients show reluctance or find dissatisfaction with available medications at times. Further, patients often have interest in utilizing nutraceutical supplements and botanicals that are available over the counter. This literature review aims to summarize research studies performed on non-pharmacologic approaches to constipation and to evaluate the safety and efficacy of these modalities. Overall data on non-pharmacologic treatments for childhood constipation were sparse, and though some studies were available for adult populations, pediatrics studies were generally limited, lacking or flawed. Certain supplements, such as prebiotics, probiotics and fiber, are safe and are without significant side effects. Though fiber supplements such as glucomannan, green banana mass, cocoa husk and various fiber blends have emerging evidence in children, evidence for psyllium, cellulose and flaxseed only have supportive studies in adults. Other than senna, studies of botanicals indicate significant safety concerns (in particular with Aloe vera with aloin and Cascara sagrada) and insufficient evidence. For patients with a significant behavioral or anxiety component to their FC and exhibit dyssynergia, mind-body interventions (e.g. diaphragmatic breathing, biofeedback, cognitive behavioral therapy, and behavioral modifications) are certainly safe and effective. Finally, movement and manipulative interventions such as abdominal massage, reflexology, acupuncture and transcutaneous nerve stimulation show promise in the field of pediatric constipation, and data is accumulating for efficacy.

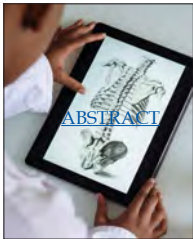
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Clinical efficacy and safety of acupuncture treatment of TIC disorder in children: A systematic review and meta-analysis of 22 randomized controlled trials

Chen Lu, Li-qun Wu, Hongwen Hao, Xinting Kimberly Leow, Fang-wei Xu, Pan-pan Li, Dong-sheng Wang, *Complementary Therapies in Medicine*, Volume 59, 2021, 102734, ISSN 0965-2299, <https://doi.org/10.1016/j.ctim.2021.102734>.

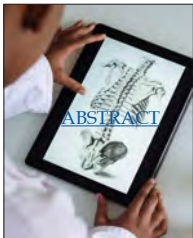
To systematically evaluate the clinical efficacy and safety of acupuncture in the treatment of Tic Disorders (TD) in children, and to clarify the current evidence regarding the clinical application of acupuncture in the treatment of TD. Randomized controlled trials (RCTs) comparing acupuncture treatment with pharmaceutical treatment for TD were included in this review. Conclusion: Acupuncture treatment alone is more effective in the treatment of TD than pharmaceutical treatment, as seen in the reduction of YGTSS scores, fewer adverse effects and lower recurrence rates.



Effectiveness of chiropractic manipulation versus sham manipulation for recurrent headaches in children aged 7-14 years - a randomised clinical trial

Susanne Lynge, Kristina Boe Dissing, Werner Vach, Henrik Wulff Christensen, Lise Hestbaek *Chiropractic & Manual Therapies* 2021 January 7, 29 (1): 1
DOI: <https://doi.org/10.1186/s12998-020-00360-3>

To investigate the effectiveness of chiropractic spinal manipulation versus sham manipulation in children aged 7-14 with recurrent headaches. RESULTS: Chiropractic spinal manipulation resulted in significantly fewer days with headaches (reduction of 0.81 vs. 0.41, $p=0.019$, NNT=7 for 20% improvement) and better global perceived effect (dichotomized into improved/not improved, OR=2.8 (95% CI: 1.5-5.3), NNT=5) compared with a sham manipulation procedure. There was no difference between groups for pain intensity during headache episodes. Due to methodological shortcomings, no conclusions could be drawn about medication use.



Physical activity and low back pain in children and adolescents: a systematic review

Agnieszka Kedra, Magdalena Plandowska, Przemyslaw Kedra, Dariusz Czaprowski *European Spine Journal* 2021, 30 (4): 946-956
<https://link.springer.com/content/pdf/10.1007/s00586-020-06575-5.pdf>

Due to a high prevalence of low back pain (LBP) among children and adolescents, it is significant to seek effective prevention and therapeutic procedures. One idea for the programmes is a potential relation between the occurrence of LBP and the level of physical activity. The aim of this review was to analyse the current knowledge regarding the association between physical activity and LBP among children and adolescents. CONCLUSION: There is moderate evidence for the association between physical activity and LBP in children and adolescents. The results highlight the need for continued research. It seems that for clear evaluation of the analysed association the prospective cohort studies should be conducted.



Diagnosis and Management of Hypermobility Spectrum Disorders in Primary Care

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PMID: 34312277 DOI: [10.3122/jabfm.2021.04.200374](https://doi.org/10.3122/jabfm.2021.04.200374)

Hypermobility spectrum disorders (HSDs) encompass an array of connective tissue disorders characterized by joint instability and chronic pain. Fatigue and other systemic symptoms that affect daily functioning may occur, as well. Accurate data on incidence and prevalence of HSDs is hampered by lack of awareness of these conditions and the wide heterogeneity of their clinical presentation. Identifying which type of HSD is present is important in guiding appropriate care. In particular, making the diagnosis of hypermobile Ehlers-Danlos syndrome (hEDS) is important, as individuals with hEDS may be at risk for more significant multisystem involvement. Diagnostic criteria for hEDS include measures of joint hypermobility, skin and other connective tissue findings, and lack of evidence of a different type of Ehlers-Danlos syndrome. Beyond accurate diagnosis, HSDs pose many challenges for primary care providers, as ongoing patient education, patient empowerment, and coordination of a multidisciplinary treatment team are integral to proper care. This article describes the incidence and prevalence, pathophysiology, diagnosis, and management of HSDs, including clinical cases exemplifying how joint hypermobility might present within a primary care setting.

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The safety of spinal manipulative therapy in children under 10 years: a rapid review

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PMID: 32093727 PMCID: PMC7041232 DOI: [10.1186/s12998-020-0299-y](https://doi.org/10.1186/s12998-020-0299-y)

The safety of spinal manipulative therapy (SMT) in children is controversial. We were mandated by the College of Chiropractors of British Columbia to review the evidence on this issue. We conducted a rapid review of the safety of SMT in children (< 10 years). We aimed to: 1) describe adverse events; 2) report the incidence of adverse events; and 3) determine whether SMT increases the risk of adverse events compared to other interventions. Conclusion: The risk of moderate and severe adverse events is unknown in children treated with SMT. It is unclear whether SMT increases the risk of adverse events in children < 10 years.
