



Journal Review

KPJ Journal Rounds

Vikram Sakleshpur Kumar

Department of Pediatrics, Subbaiah Medical College, Shivamogga, Karnataka, India.

*Corresponding author:

Vikram Sakleshpur Kumar,
Professor, Department of
Pediatrics, Subbaiah Medical
College, Shivamogga,
Karnataka, India.

vikramskumar@yahoo.co.in

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Source: Hauta-Alus HH, Holmlund-Suila EM, Kajantie E, Rosendahl J, Valkama SM, Enlund-Cerullo M, Andersson S, Mäkitie O. *The Effects of Vitamin D Supplementation During Infancy on Growth During the First Two Years of Life*. The Journal of Clinical Endocrinology & Metabolism. 2020 Dec 21., dgaa943, <https://doi.org/10.1210/clinem/dgaa943>

In this randomized, double-blinded intervention study, researchers sought to examine how maternal and child 25-hydroxyvitamin D (25(OH)D) and Vitamin D supplementation impact growth during the first 2 years of life. The authors discovered that toddlers born to mothers with pregnancy 25(OH)D >125 nmol/L were at 2 years lighter and thinner compared with the reference group with 25(OH)D 50–74.9 nmol/L. Toddlers in the highest quartile of 25(OH)D were shorter, lighter, and thinner compared with the lowest quartile. There may be an inverse U-shaped relationship with Vitamin D and early childhood growth.

Source: Yilmaz Bayer O, Turktas I, Ertoy Karagol HI, Soysal S, Yapar D. *Neuropsychiatric adverse drug reactions induced by montelukast in children with asthma impair the quality of life*. Journal of Asthma. 2020 Dec 8:1-4. <https://doi.org/10.1080/02770903.2020.1861626>

In patients taking montelukast due to asthma, the researchers sought to detect the neuropsychiatric adverse drug reactions (ADRs) that occurred in real time and to test the impact of these ADRs on quality of life (QoL). Patients aged 3–18 years who first took montelukast and their parents were included. The neuropsychiatric complaint assessment questionnaire and the KINDL QoL scale were administered to patients and their parents at the beginning of the study and at the end of the 2nd week of treatment. Multivariable logistic regression tested the impact of ADRs on the decrease in QoL. In 78 (62.4%) of 125 patients who recovered when the drug was withdrawn, neuropsychiatric ADRs were reported. Compared with pre-treatment, temperamental behavior, nightmares, and sleep disorders occurred significantly more often in both groups. Significant decreases were found in both child and parent proxy-reported QoL total/sub-scores compared with pre-treatment in both groups, except in the child-reported family relationships subscale in the school-age group. Neuropsychiatric ADRs induced by montelukast are more common than recorded in the literature and negatively affect the QoL of children.

Source; Auger N, Soullane S, Luu TM, Lee GE, Wei SQ, Quach C. *Association of Cesarean Delivery with Childhood Hospitalization for Infections before 13 Years of Age*. The Journal of Pediatrics. 2020 Dec 21: ARTICLE IN PRESS. <https://doi.org/10.1016/j.jpeds.2020.12.036>

Researchers conducted a longitudinal cohort study of 731,803 children born between 2006 and 2016 at all hospitals in Quebec, Canada, with the aim to examine the correlation between cesarean delivery and childhood infection up to 13 years of age. Relative to non-operative vaginal delivery, cesarean delivery is correlated with 1.07 times the risk of otitis media, 1.15 times the risk of respiratory infection, and 1.13 times the risk of infectious enteritis at 3–4 years of age.

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Observations revealed correlation of cesarean delivery with infection hospitalization before but not after 5 years of age. However, operative vaginal deliveries also exhibited the associations, which suggests that mechanisms other than exposure to maternal vaginal flora explain the relationship.

Source: O’Keeffe LM, Frysz M, Bell JA, Howe LD, Fraser A. *Puberty timing and adiposity change across childhood and adolescence: disentangling cause and consequence*. Human Reproduction. 2020 Dec;35(12):2784-92. <https://doi.org/10.1093/humrep/deaa213>

Researchers examined if earlier puberty is more likely a result of adiposity gain in childhood than a cause of adiposity gain in adulthood through performing a prospective birth cohort study of 4176 individuals born in 1991/1992 with 18,232 repeated estimates of fat mass from age 9 to 18 years. Repeated measures of height from 5 to 20 years were employed to determine puberty timing (age at peak height velocity) and repeated measures of directly measured fat mass from age 9–18 years, from a contemporary UK birth cohort study, were used to model fat mass trajectories by chronological age and by time before and after puberty onset. Findings support correlation of prepubertal fat mass with earlier puberty timing but there appeared no correlation of puberty timing with post-pubertal fat mass change. Among females, earlier puberty timing is more frequently a result of adiposity gain in childhood than being a cause of adiposity gain in adulthood. In males, disparities in fat mass after puberty are driven partially by tracking of adiposity from early childhood as well as by higher gains in post-pubertal adiposity in males earlier to puberty. Overall findings support implementing interventions aimed at lowering levels of childhood adiposity as valuable to avert earlier puberty, adult adiposity, and their adverse health outcomes in both females and males.

Source: Chong PF, Kira R, Torisu H, Yasumoto S, Okumura A, Mori H, Tanaka-Taya K, Sato T, Kanazawa A, Suzuki K, Toyofuku E. *Three-year longitudinal motor function and disability level of acute flaccid myelitis*. Pediatric Neurology. 2020 Dec 3. ARTICLE IN PRESS. <https://doi.org/10.1016/j.pediatrneurol.2020.11.019>

In a cluster of pediatric patients with acute flaccid myelitis (AFM) associated with the enterovirus D68 (EV-D68) outbreak in 2015, researchers sought to describe the long-term motor outcome and disability level. At the acute (nadir), recovery (6 months), and chronic (3 years) stages, clinical data, including the motor function (manual muscle strength

test) and other neurological symptoms, were gathered for this nationwide follow-up questionnaire analysis study. Clinical data were available for 33 AFM patients (13 females, 20 males; median age = 4.1 years). Among patients with tetraplegia or triplegia, paraplegia, and monoplegia at the acute stage, 2/7, 4/13, and 2/13 showed complete recovery without paralysis, out of those 5/7, 8/13, and 2/13 who noted improvement with lesser limb involvement at the chronic stage, respectively. AFM has a high rate of persistent motor deficits of 1–2 limb paralysis. However, disability level of patients with AFM usually improved at 3 years.

Source: Lukomskyj, N, Shi, Y, Allman-Farinelli, M, Rangan, A. *Associations between breakfast consumption from childhood to adulthood and cardiometabolic health: A systematic review*. *Nutrition & Dietetics*. 2020; 1–18. <https://doi.org/10.1111/1747-0080.12647>

This systematic review examined data from cohort studies on the relationships between childhood to adulthood breakfast consumption and cardiometabolic health. Seven databases have been searched; eligible records covered analyses assessing breakfast consumption in childhood and adulthood, and type 2 diabetes, cardiovascular disease, obesity, or related clinical risk factors. Six eligible articles, representing four cohort studies from two countries, have been reviewed. Most articles found important connections between breakfast consumption in childhood and adulthood and cardiometabolic benefits, but the quality of evidence was low. Childhood and adulthood breakfast intake were each correlated with cardiometabolic benefits, and breakfast consumption over both life stages was related to greater benefits. Increased breakfast intake from childhood to adulthood has also been associated with cardiometabolic benefits.

Declaration of patient consent

Patient’s consent not required as there are no patients in this study.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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