weight, corrected for age. There were associated benefits to health and quality of life.

Commentary In this randomized, controlled trial investigating the impact of laparoscopic banding procedures on adolescents, those receiving laparoscopic banding procedures had impressive amounts of weight loss and substantial improvement in medical comorbidities. What was most interesting, however, was that the group receiving intensive medical therapy also demonstrated substantial improvement in medical comorbid diseases, although there was very little weight loss. This trial was not a clear victory for surgery because a quarter of the laparoscopic banding patients required revisional operations. This revision rate was much higher than in adults and might reflect compliance problems typical of teenagers undergoing bariatric surgery. Although surgery was effective, it came at a high price and required a great deal of extra intervention. O'Brien's study clearly demonstrated that intensive medical treatment for adolescent obesity is worthwhile. It also showed that one needs to exert caution before advising bariatric surgery for children. Children do not have the emotional maturity required to comply with post–bariatric surgery dietary needs. Because good results can be obtained with laparoscopic banding procedures, it is inadvisable to pursue operations that permanently alter anatomy and physiology such as gastric bypass and other more aggressive approaches in children. Obese children who are relatively healthy can have the laparoscopic banding approach while they are young; they can have a gastric bypass performed when they are older and more emotionally prepared to comply with the operation's requirements and can make their decision to permanently change their gastric anatomy when they are legally allowed.

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Deformational plagiocephaly delays motor skill development in 6-month-old infants

Speltz ML, Collett BR, Stott-Miller M, Starr JR, Heike C, Wolfram-Aduan AM, et al. Case-control study of neurodevelopment in deformational plagiocephaly. *Pediatrics* 2010;125:e537-42.

Question Among infants with deformational plagiocephaly (DP), is there a difference in the neurodevelopment at an average age of 6 months?

Design Case-control study.

Setting Seattle Children's Hospital, Seattle, Washington.

Participants Two hundred thirty-five infants (diagnosed between the ages of 4 and 11 months) who were referred to the craniofacial center for evaluation of DP. Control subjects were 237 otherwise healthy infants recruited from the community.

Intervention The Bayley Scales of Infant Development III (BSID-III) were administered. Three-dimensional head photographs were randomized and rated for severity of deformation by two craniofacial dysmorphologists who were blinded to case status.

Outcomes Severity of cranial deformation and scores on the Bayley Scales.

Main Results Of the participants, two case subjects with no photographic evidence of DP and 70 control subjects who were judged to have some degree of DP were excluded. With control for age, sex, and socioeconomic status, case subjects performed worse than control subjects on all BSID-III scales and subscales. Case subjects' average scores on the motor composite scale were ~10 points lower than control subjects' average scores ($P < .001$). Differences for the cognitive and language composite scales were ~5 points, on average ($P < .001$ for both scales). In subscale analyses, case subjects' gross motor deficits were greater than their fine motor deficits. Among case subjects, there was no association between BSID-III performance and the presence of torticollis or infant age at diagnosis.

Conclusions DP seems to be associated with early neurodevelopmental disadvantage, which is most evident in motor functions. These data do not necessarily imply that DP causes neurodevelopmental delay; they indicate only that DP is a marker of elevated risk for delays. Pediatricians should monitor closely the development of infants with this condition.

Commentary The prevalence of posterior DP rose dramatically after the introduction of the "Back to Sleep" program in the early 1990s. This report by Speltz et al illuminates a murky area that has been riddled by poorly designed studies and misinformation.[1] In this well-designed case-control study, the authors compared development skills of a group of 6-month-old infants from a DP clinic with a well-matched control group of normal infants who were volunteered at birth by their parents for childhood outcome studies. Both the DP and the control groups had a higher than expected socioeconomic status; because this study was conducted during an economically challenging period, one could argue both groups were not fully representative of the general pediatric population. When cranial shape was compared with neurodevelopmental performance, infants with DP from the craniofacial clinic scored lower on all scales than control infants with a normal cranial shape. The discrepancy was greatest for motor scores. Interestingly, almost one third (70 infants) of the control group had previously undiagnosed DP, which attests to the high prevalence of this condition. Further, those 70 in the original control group who were subsequently identified with DP from photographs also had lower scores than controls with a normal cranial shape. Whether the early developmental delay persists in children who had DP remains unanswered at this point. Because DP has been exceedingly common for almost two decades, it is likely that health care providers and educators would have recognized a persistent decline in neurodevelopment in this

population, if it truly existed. We eagerly await the follow-up data as these study infants become toddlers. In the meantime, this study reinforces the need for neonates and infants to receive supervised prone time while awake to enhance their neurodevelopment as well as their cranial shape. Advising parents of neonates to perform 30 minutes of awake supervised "tummy time" each day to optimize the cranial shape may also have the added benefits of optimizing infant motor skills, and establishing early the daily habit of parental involvement in childhood development.

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Reference

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Parent-initiated treatment with prednisolone can reduce symptoms for children with acute asthma exacerbations

Vuillermin P, Robertson C, Carlin J, Brennan S, Biscan M, South M. Parent initiated prednisolone for acute asthma in children of school age: randomised controlled crossover trial. *BMJ* 2010;340:c843.

Question Among school-age children with an acute asthma exacerbation, does a short course of parent-initiated oral prednisolone reduce asthma symptoms?

Design Randomized, double-blind, placebo-controlled trial.

Setting The Barwon region of Victoria, Australia.

Participants Two hundred thirty children, ages 5 to 12 years, with a history of recurrent episodes of acute asthma.

Intervention A short course of parent-initiated treatment with prednisolone (1 mg/kg per day) or placebo.

Outcomes The primary outcome was the mean daytime symptom score over 7 days. Secondary outcomes were mean nighttime symptom score over 7 days, use of health resources, and school absenteeism.

Main Results Over a 3-year period, 131 (57%) of the participants contributed a total of 308 episodes of asthma that required parent initiated treatment: 155 episodes were treated with parent-initiated prednisolone and 153 with placebo. The mean daytime symptom score was 15% lower in episodes treated with prednisolone than in those treated with placebo (geometric mean ratio, 0.85; 95% CI, 0.74 to 0.98; $P = .023$). Treatment with prednisolone was also associated with a 16% reduction in the night time symptom score (geometric mean ratio, 0.84; 95% CI, 0.70 to 1.00; $P = .050$), a reduced risk of health resource use (odds ratio, 0.54; 95% CI, 0.34 to 0.86; $P = .010$), and reduced school absenteeism (mean difference, −0.4 days; 95% CI, −0.8 to 0.0 days; $P = .045$).

Conclusions A short course of parent-initiated oral prednisolone for children with an episode of acute asthma may reduce asthma symptoms, health resource use, and school absenteeism. However, the modest benefits of this strategy must be balanced against potential side effects of repeated short courses of an oral corticosteroid.

Commentary This valuable study shows that parent-initiated prednisolone in the management of asthma exacerbations in school-aged children confers modest but significant benefit. The study was done in a single center with an estimated 60% of all eligible children in the area included in the trial. All subjects had their eligibility confirmed and their self-management plan explained by a single clinician, the lead author. Randomization was by episode, and outcome ascertainment rates were very high. Self-management advice included use of up to 1200 μg of albuterol at a time but no increase in inhaled steroid dosage. The study thus shows that in well-managed children, advice to use up to 12 puffs of albuterol at a time in treating acute wheeze appeared safe in a series of exacerbations where one third of all episodes were treated without any use of systemic steroids; this is important because many doctors are still reluctant to give this advice. Of note, the study results do not apply to wheezing in preschool children — the group accounting for most hospital admissions. The benefits of prednisolone used in this way may be greater in children whose baseline asthma management is less good than in this study, but use of this treatment modality should be carefully monitored given the possible harms of repeated courses of oral corticosteroids.

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