

State Intervention in Life-Threatening Childhood Obesity

Lindsey Murtagh, JD, MPH

David S. Ludwig, MD, PhD

MANY BIOLOGICAL, PSYCHOSOCIAL, AND BEHAVIORAL factors affect energy balance and, therefore, childhood weight gain, with parents playing an important mediating role. Ubiquitous junk food marketing, lack of opportunities for physically active recreation, and other aspects of modern society promote unhealthful lifestyles in children. Inadequate or unskilled parental supervision can leave children vulnerable to these obesigenic environmental influences. Emotional distress and depression, or other psychological problems arising from abuse and neglect, may exacerbate this situation by leading to disordered eating and withdrawal from sports and other social activities.

Even relatively mild parenting deficiencies, such as having excessive junk food in the home or failing to model a physically active lifestyle, may contribute to a child's weight problem. Typically, the potential harm involves an increased risk for obesity-related chronic disease later in life. Most overweight and obese children have the opportunity to ameliorate these risks through behavior change and weight loss as adults. In this sense, poor parenting is analogous to secondhand smoke in the home—a condition associated with adverse health consequences for the child, but not warranting legal intervention.

Severe obesity, characterized by a body mass index (BMI) at or beyond the 99th percentile, represents a fundamentally different situation. Whereas typical children consume about 100 kilocalories per day more than requirements state, the energy imbalance for severely obese children may exceed 1000 kilocalories per day,¹ suggesting profoundly dysfunctional eating and activity habits. Obesity of this magnitude can cause immediate and potentially irreversible consequences, most notably type 2 diabetes. This complication, reflecting years of progressive metabolic deterioration, carries a dire prognosis. In addition to hyperglycemia, youth with type 2 diabetes typically have severe insulin resistance, low diet quality, sedentary

lifestyle, and poor adherence to medical treatment—risk factors that together could rapidly accelerate development of macrovascular and microvascular diseases.² Without major weight loss, type 2 diabetes usually becomes permanent several years after onset due to irreversible pancreatic beta cell death, which decreases life expectancy significantly. Because of the poor outcome of conventional treatment for pediatric obesity, bariatric surgery has become increasingly considered for adolescents with type 2 diabetes.³ However, the long-term safety and effectiveness of this invasive procedure in adolescents remains unknown, and serious perioperative and long-term morbidity and mortality have been reported.⁴ As an alternative therapeutic approach, placement of the severely obese child under protective custody warrants discussion.

Legal Considerations

Despite a well-established constitutional right of parents to raise their children as they choose, the state may intervene to protect the child's interests. Federal law, which establishes a minimum standard for states, defines child abuse and neglect as “any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm . . . or an act or failure to act which presents an imminent risk of serious harm.”⁵ The seriousness of neglect is judged according to the magnitude or risk of harm and by its chronicity.⁶ Improper feeding practices, causing undernourishment and failure to thrive, have long been addressed through the child abuse and neglect framework. However, only a handful of states, including California, Indiana, Iowa, New Mexico, New York, Pennsylvania, and Texas, have legal precedent for applying this framework to overnourishment and severe obesity.⁷ Nevertheless, mandated reporter laws may obligate physicians to contact child protective services in the cases of children for whom chronic parental neglect has resulted in severe weight-related health complications.

Author Affiliations: Department of Health Policy and Management, Harvard School of Public Health (Ms Murtagh); and Optimal Weight for Life Program, Department of Medicine, Children's Hospital (Dr Ludwig), Boston, Massachusetts.
Corresponding Author: David S. Ludwig, MD, PhD, Children's Hospital, 300 Longwood Ave, Boston, MA 02115. (david.ludwig@childrens.harvard.edu).

State intervention may serve the best interests of many children with life-threatening obesity, comprising the only realistic way to control harmful behaviors. Child protective services typically provide intermediate options such as in-home social supports, parenting training, counseling, and financial assistance, that may address underlying problems without resorting to removal. These less burdensome forms of legal intervention may be sufficient and therefore preferable in many cases. In some instances, support services may be insufficient to prevent severe harm, leaving foster care or bariatric surgery as the only alternatives. Although removal of the child from the home can cause families great emotional pain, this option lacks the physical risks of bariatric surgery. Moreover, family reunification can occur when conditions warrant, whereas the most common bariatric procedure (Roux-en-Y anastomosis [gastric bypass]) is generally irreversible.

The possibility of an unrecognized genetic disease has made these removals especially controversial. A recent study found 5 of 300 severely obese children in the United Kingdom had a newly identified obesity-associated genetic deletion on chromosome 16p11.2; of these, 4 of 5 had received child protective services attention.⁸ Thus, a comparison may be made to osteogenesis imperfecta, a genetic cause of bone fractures often mistaken for physical abuse, resulting in unfair accusations against and stigmatization of the parents. However, a diagnosis of osteogenesis imperfecta provides a new management approach, such as physical therapy, measures to reduce fracture risk, and close fracture surveillance, that does not necessitate removal of the child from the home. In contrast, identifying a genetic cause of obesity (with the extremely rare exception of leptin deficiency) offers no new therapeutic options, requiring instead an intensification of the home-based behavioral interventions that have proven unsuccessful in these families. Psychosocial dwarfism, in which growth arrest results from a complex interplay of biological, psychological, and domestic environmental factors, provides a better comparison. For these children, removal from the home may be necessary to restore normal growth even without evidence of frank abuse and neglect.

In severe instances of childhood obesity, removal from the home may be justifiable from a legal standpoint because of imminent health risks and the parents' chronic failure to address medical problems. Indeed, it may be unethical to subject such children to an invasive and irreversible procedure without first considering foster care. Nevertheless, state intervention would clearly not be desirable or practical, and probably not be legally justifiable, for most of the approximately 2 million children in the United States with a BMI at or beyond the 99th percentile.⁹ Moreover, the quality of foster care varies greatly; removal from the home does not guarantee

improved physical health, and substantial psychosocial morbidity may ensue. Thus, the decision to pursue this option must be guided by carefully defined criteria such as those proposed by Varness et al,¹⁰ with less intrusive methods used whenever possible.

Conclusions

An increasing proportion of US children are so severely obese as to be at immediate risk for life-threatening complications including type 2 diabetes. Some will become candidates for treatment at newly established pediatric surgical weight loss programs throughout the country. As an alternative approach, involvement of state protective services might be considered, including placement into foster care in carefully selected situations. Ultimately, government can reduce the need for such interventions through investments in the social infrastructure and policies to improve diet and promote physical activity among children.

Conflict of Interest Disclosures: Both authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Dr Ludwig reported receiving grants from the National Institutes of Health and foundations for nutrition and obesity-related research, mentoring, and patient care; receiving royalties from a book about childhood obesity; consulting for Brigham and Women's Hospital, the Culinary Institute of America, and the Kripalu Institute; pending grants from the Thrasher Foundation and the New Balance Foundation; and reviewing material about childhood obesity for WebMD.

Funding/Support: Dr Ludwig is supported in part by an endowment from Children's Hospital Boston, and a career award K24DK082730 from the National Institute of Diabetes and Digestive and Kidney Diseases.

Role of Sponsors: Neither Children's Hospital Boston nor the National Institute of Diabetes and Digestive and Kidney Diseases had any role in the preparation, review, or approval of the manuscript.

Disclaimer: The content of this Commentary is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute of Diabetes and Digestive and Kidney Diseases or the National Institutes of Health.

Additional Contributions: We thank Michelle M. Mello, JD, PhD, Harvard School of Public Health, for providing critical comments on a draft of this article. No additional compensation was received in association with contributions to this Commentary.

REFERENCES

1. Wang YC, Gortmaker SL, Sobol AM, Kuntz KM. Estimating the energy gap among US children: a counterfactual approach. *Pediatrics*. 2006;118(6):e1721-e1733.
2. Pinhas-Hamiel O, Zeitler P. Acute and chronic complications of type 2 diabetes mellitus in children and adolescents. *Lancet*. 2007;369(9575):1823-1831.
3. Weiss R. Surgery: bariatric surgery in adolescents—the sooner the better? *Nat Rev Endocrinol*. 2010;6(3):125-126.
4. Treadwell JR, Sun F, Schoelles K. Systematic review and meta-analysis of bariatric surgery for pediatric obesity. *Ann Surg*. 2008;248(5):763-776.
5. CAPTA Reauthorization Act of 2010, Pub L No. 111-320, Title I, Subtitle B, §142(a), 124 Stat 3482 (2010).
6. DePanfilis D. US Department of Health and Human Services Web site. Child neglect: a guide for prevention, assessment, and intervention; 2006. <http://www.childwelfare.gov/pubs/usermanuals/neglect/neglect.pdf>. Accessed May 24, 2011.
7. Murtagh L. Judicial interventions for morbidly obese children. *J Law Med Ethics*. 2007;35(3):497-499.
8. Viner RM, Roche E, Maguire SA, Nicholls DE. Childhood protection and obesity: framework for practice. *BMJ*. 2010;341:c3074.
9. Skelton JA, Cook SR, Auinger P, Klein JD, Barlow SE. Prevalence and trends of severe obesity among US children and adolescents: what could be better? *Acad Peds*. 2009;9(5):322-329.
10. Varness T, Allen DB, Carrel AL, Fost N. Childhood obesity and medical neglect. *Pediatrics*. 2009;123(1):399-406.