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PUBLIC POLICY RELATED TO THE INCREASED INCIDENCE OF CHILDHOOD OBESITY - A NEED FOR CHANGE

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Misconceptions about childhood obesity

It is generally assumed that children become overweight because they eat unhealthy foods and are too sedentary -- and that getting children to eat healthy foods and be more physically active will prevent childhood obesity. However, the research evidence suggests this isn't true.

Relative to healthy eating and childhood obesity, consider:

- These trends over the last 30+ years:
 - Fat consumption has decreased from over 36% to less than 33% of calories (between 1971 and 2000).¹
 - Consumption of fruit and vegetables per capita has increased 24% (between 1970 and 1997).²
- The conclusions from a comprehensive literature review article on childhood dietary predictors of adult obesity.³
 - "The discussion is hampered by the small sample sizes, paucity of data spanning childhood to adulthood, and difficulty in measuring childhood dietary intake. ... Nonetheless, the studies identified here provide little evidence to suggest a relationship between any aspect of childhood diet and fatness in adulthood."
 - "Overall, despite the prominent role that diet is presumed to play in promoting adiposity, the current review found no consistent evidence that infant or childhood diet is related to later fatness."
- The results of a major study of 196 girls, 8 to 12 years old, who were evaluated over a four-year period to determine the relationship between consumption of energy-dense foods (baked goods, ice cream, chips, sugar-sweetened soda, and candy) and relative weight change during adolescence. The researcher's conclusion? - "overall energy-dense food consumption does not seem to influence weight status or change over the adolescent period."⁴
- The conclusion from a study of adolescent eating habits -- "These data offer no evidence to support the widespread notion that obese adolescents eat more 'junk food' than non-obese adolescents."⁵

Relative to sedentary behavior and obesity, consider:

 - According to national surveys conducted over the last several decades, population-wide physical activity among men, women and older adolescents has increased -- at the same time the incidence of childhood obesity has gone up.⁶
- A 2006 study⁷ in which 545 children with an average age of 4.2 years were split into two groups. One group were given enhanced physical activity in the nursery (three 30 minutes sessions per week over 24 weeks) plus home based health education aimed at increasing physical activity through play and reducing sedentary behavior. No curriculum changes were made with the other group. The result? -- after 6 and 12 months, there was no significant difference in body mass index between the two groups.
- The inconsistencies in the scientific literature about the correlation between physical activity and obesity in children. Some studies show no association and, in those studies that do, almost all use television viewing time as a proxy for activity levels, which may not be correct.

In a 2007 study⁸ 18,882 10-15 year old boys and girls were evaluated over a four year period to determine if television viewing, and other sources of sedentary behavior, are associated with leisure-time moderate/vigorous physical activity. The researchers found no association. According to the study's authors this result is consistent with most "cross-sectional studies in children and adolescents" and "almost all studies of television viewing and physical activity among adults." (So, why the frequently-cited correlation between TV watching and childhood obesity? It could be due to the excessive consumption of calories during the TV watching period).

The more likely cause of childhood obesity

If unhealthy eating and sedentary behavior are not the primary causes of the rising incidence of childhood obesity, then what is the reason? Extensive (but frequently ignored) scientific research over the last two decades suggests a more likely cause is the rapidly increasing occurrence among U.S. children of real or imagined food restriction (for a more in-depth discussion of this cause, see "Public Policy Related to the Increased Incidence of Overweight and Obesity - A Need for Change" by Allen Oelschlaeger) - which exists in several forms.

Weight-loss diets are one form. Due to societal pressures to be thin and health concerns about being overweight, more and more children are being put on self-, parent-, or physician-imposed weight-loss diets.⁹ This is occurring despite the overwhelming evidence that such diets create more weight problems than they help^{10 11 12 13 14}

Another form of real food restriction is "food insecurity" caused by inadequate financial resources to purchase

enough food. From 1999 to 2005 the number of Americans living in households considered to be food insecure has increased from 31 million to 35.1 million. Just like with weight-loss diets, there is substantial evidence that food insecurity leads to problems with obesity.^{15 16 17 18 19 20 21 22}

The third food restriction is where children are subjected by their parents, nutrition educators and others to:

- Pushing "healthy" foods
- Labeling foods as "good" or "bad"
- Limiting portions
- Using low-calorie foods
- Hiding certain foods
- Deliberately running out of a child's favorite food
- Questioning food choices ("are you sure you want that?")

These three forms of real and imagined food restriction result in children being afraid that:

- Food might not be available the next time they're hungry.
- The specific food available now won't be available again.
- There won't be enough food to provide satisfaction when they next eat.

These fears cause children to become preoccupied by food, lose touch with their regulatory eating signals and overeat when given the opportunity - which can occur quite frequently:

- Fast food restaurant where a child can access huge food portions for little money;
- Friends house where a child is away from their parent's eye;
- Local store or vending machine where a child can buy soda and candy with their allowance money;
- Party where a buffet-style meal makes a child's eating invisible to others.
- School where a child can access foods from the ala carte menu.

In today's society, children have plenty of opportunity to abandon whatever explicit or subtle food restrictions are placed on them and "eat when the eating is good."

This phenomenon is widely known among eating specialists due to their own experiences and because it has been demonstrated in so many research studies.^{23 24 25 26 27 28 29 30 31 32 33 34 35 36 37} Here are some excerpts:

"In conclusion, restricting children's access to a palatable food within their eating environment does not promote moderate patterns of intake and paradoxically may actually promote the very behavior its use is intended to reduce. This research supports the view that restricting access can sensitize children to external eating cues while increasing their desire to obtain and consume the restricted food. These findings also suggest that the effects of restriction on children's eating will be particularly pronounced in families in which restriction is consistently in effect."³⁸

"For example, the current obesigenic food environment is characterized by large amounts of inexpensive, readily available, palatable, energy-dense foods. In response to this environment, parents may attempt to limit children's consumption of 'junk' or 'unhealthy' foods by keeping foods out of reach or by placing constraints on when and how much food may be consumed. Experimental studies have shown, however, that restrictive feeding practices increase children's preferences for restricted foods, heighten responsiveness to the presence of palatable foods, and promote overeating when restricted foods are freely available."³⁹

"Even during the preschool period, before any evidence for the emergence of dietary restraint, maternal feeding practices that restrict children's access to palatable foods can promote children's overeating. The use of restrictive feeding practices may occur in middle-class families in response to parental concerns about children's risk for overweight, which is seen as a threat to children's healthy development. However, rather than promoting moderation, these feeding practices can promote disregulated overeating in children."⁴⁰

So, whether the food restriction is due to weight-loss diets, inadequate financial resources, or subtle impositions by parents and nutrition educators, the result is the same -- a child overeating when given the opportunity rather than acting upon their bodies natural regulatory eating signals of hunger, appetite, and satiety.

If, instead, children were fed reliably and without restrictions food would become less of a preoccupation and they would eat according to their natural regulatory eating signals.

"In treating children or adults who have lost touch with their ability to know when they are full, it is both a huge relief and very scary for them when I recommend that we eliminate the rules defining too much food. Most are sure that they will eat the entire house and more without these rules. In reality, many do eat excessive amounts for a short while -- stocking up as their psyches wait nervously for the next restrictive diet to be imposed. But if such individuals can maintain their courage and continue to fill up with a reasonable selection of wholesome foods, eventually their subconscious minds register what is happening; they are free to eat according to their own internal hunger. At this point, something almost magical happens (or so it seems to those who have come to see themselves as insatiable). Suddenly, because they no longer need to eat in anticipation of the time when they will be cut off, they no longer need to eat it all right now. They begin to notice when they are full. They begin to trust that they can save some for later or can share their food, knowing they can get more if they choose."⁴¹

In other words, the very best approach to the prevention of childhood obesity is to implement programs that ensure children feel 100% confident they'll be fed:

- When they're good and hungry.
- Foods they like.
- Enough food.

Correct "feeding" is the key to childhood obesity prevention

There are three primary approaches to giving children the confidence they'll be adequately fed.

1. Adequately fund government food-assistance programs so the poor don't experience periods of food insecurity.
2. Train parents in a "division of responsibility" approach to feeding.
3. Train children to re-connect with their natural regulatory eating signals of hunger, appetite and satiety.

The first approach is a matter of government priorities and won't be addressed here.

The second approach is based on the work over the last two decades of Ellyn Satter - a Registered Dietician with masters degrees in both nutrition and social work, author of several books on child feeding ("Secrets of Feeding a Healthy Family" - 1999, "Child of Mine: Feeding with Love and Good Sense" - 2000, "Your Child's Weight: Helping Without Harming" -- 2005), and an internationally recognized authority in nutrition and feeding.

Ellyn Satter promotes an approach called "division of responsibility" where parents do the what, when and where of feeding, and children do the how much and whether of eating. In other words, the recommendation is for parents to serve regular meals of healthy foods but then leave it up to their children to decide if they're going to eat what is in front of them and how much. Although not well known, this approach has been widely practiced by dieticians throughout the world with great success.

In addition, several studies have shown the style of parenting recommended by Ellyn Satter leads to a lower incidence of obesity. In one such study,⁴² moms of 4 ½ year olds were classified into one of four parenting styles based on analysis of completed questionnaires and video tapes of the mother and child interacting. Then, two years later, the height and weight of the children was measured. The researchers then determined the percentage of the children who were overweight by parenting style.

The "authoritative" parenting style (as labeled by the researchers) had the lowest incidence of overweight (3.9% versus 9.8%, 9.9% and 17.1% for the other styles)

Ellyn's "division of responsibility" approach towards feeding is an example of this "authoritative" parenting where parents take strong leadership with family meals, but trust children to pick and choose from what is on the table and eat as much or as little as they like. This approach is in contrast to:

- "Authoritarian" parents (17.1% incidence), who likely dictate to their children what and how much to eat, creating feelings of food deprivation.

- "Permissive" parents (9.8% incidence), who likely only serve foods the child readily accepts or makes substitutes if the family food doesn't happen to please the child.
- "Neglectful" parents (9.9% incidence), who likely take little responsibility for feeding their child.

An often stated concern of the "division of responsibility" approach to feeding is that children will not get adequate nutrition. However, research on this approach consistently demonstrate that children do just fine nutritiously. If served nutritious meals, children seem to be programmed to consume - over time - a diet with perfectly adequate nutrition.

The third approach to giving children the confidence they'll be adequately fed is to train them in regulatory-signal-based eating. Such training should replace the "good-food, bad-food" focus of most child nutrition education -- which probably creates more harm than good by imposing underlying feelings of food restriction. With regulatory-signal-based eating education, the emphasis isn't on what foods to eat or not eat. Instead, it's on learning to pay attention to and act upon the body's signals of hunger, appetite and society.

There are several published research studies which have demonstrated success in teaching regulatory-signal-based eating. One of the best of these studies was published in 2000. The article begins with this introduction:

"Parents are clearly concerned about how much their children should be eating (both on the enough and the too much ends of the spectrum) and they are frustrated by children's reluctance to consume healthy foods. Because of these concerns, some parents view decisions about children's eating and nutrition as residing under adult purview rather than being shared with the personal domain of the child. In attempts to improve children's eating patterns, parents often use child-feeding strategies that are power-assertive and coercive. Although they are effective in the short-term, these strategies are counterproductive to building desirable long-term eating habits. Satter has long argued that parents must understand and practice a critical division of responsibility in child-feeding. According to her model, it is the parents' job to provide a healthy array of foods at regularly scheduled opportunities; it is the child's choice to decide how much and whether they will consume the food that is offered. As much as health professionals have advocated for this division of responsibility in child-feeding, parents remain unclear regarding their adult tasks and their young child's abilities."⁴³

In this study, the researchers worked with 31 children over a six-week period in a preschool setting. They devoted some time at the beginning of the study introducing the children to ideas of hunger (rumbling in the stomach), fullness (stomach extension, satisfaction), and the signals associated with overeating (stomach distention and discomfort). Then, one day per week, the researchers spent

a bit of time with each child using doll play to help them identify internal cues of hunger and satiety and to relate these feelings to decisions about how much to eat at snack and lunch. Finally, the children were prompted twice during snack time to check in and see if they were still hungry and whether they wanted to eat more.

At the end of the six-week period, the children were tested to determine if their eating regulation improved from a baseline test performed at the beginning of the study.

Here is how the author summarized her findings:

"Our findings support the concept that internal cues of hunger and satiety, when presented in a developmentally appropriate manner, can be used by young children to make decisions regarding how much to eat. ... That significant improvements in children's ability to self-regulate occurred as a result of the intervention is suggested both by their change in compensation scores and also by anecdotal evidence that indicates children began to relate the doll play to their own eating during snack time. After several weeks, during snack time when we would prompt the children to tune in and see how hungry/full they were, children spontaneously began to respond with comments like: 'I'm not hungry any more so I'm going to stop eating' or 'My stomach's getting full.' This provides further confirmation that children understood the concepts and were able to apply them to their snack time eating. These research findings substantiate Ellyn Satter's long-held clinical opinion that when children's internal cues are encouraged and attended to by parents, and when control over eating is shared, children are capable of controlling the *how much* of eating. This evidence does not give any credence, however, to the notion that children are capable of making healthy food choices without adult guidance. Parents and caregivers must still be gate-keepers of the kinds of foods that are offered and it is the parent's responsibility to ensure a healthy variety of foods are available, to provide a structured eating environment, and to serve as role models for appropriate eating habits."⁴⁴

Health policy recommendations

In her book "Your Child's Weight" Ellyn Satter says this about the current state of health policy recommendations relative to childhood obesity:

"In the flutter of solutions to the 'epidemic,' I see clinicians, policy makers, program planners, researchers, and even legislators making the same mistakes and doing the same harm that I did 30 years ago. Moreover, they are doing it in a far more public and far-reaching way, with far less opportunity to do damage control.

Today's schools are being given the job of slimming children down. Because of the obesity "crisis," they are being rallied to weigh and measure children, to send home BMI measurements and overweight diagnoses,

limit calories in school lunches, and teach children nutrition and exercise in the name of slimming.

Such interventions don't help, and they do harm. They single children out, shame them, and nonverbally pin targets on them to make them the object of other children's scorn. Those interventions harm schools as well. Schools *educate*, they do not do *treatment*. The school's job is to understand each child's capabilities, characteristics, and limitations and help children to be all they can be. It is *not* the school's job to try to resolve childhood weight issues. Like intellect and learning style, a child's size and shape must be regarded as a given and the school's role as helping the child to make the most of what nature has provided."⁴⁵

So, what would help? Here are some recommendations based on the above analysis:

- Get the food companies to drop all food advertisements targeting children. Parents should decide what food to put on the table, not their kids.
- Change the curriculum of school health classes to emphasize regulatory-signal-based eating and the dangers of any form of eating deprivation (dieting) - rather than the current focus on the Dietary Guidelines and the food pyramid.
- Change the curriculum of parent health education to emphasize parent's appropriate role in child feeding (Ellyn Satter's "division of responsibility") - rather than the current focus on the Dietary Guidelines and the food pyramid.
- Change the curriculum of school gym classes to expose kids to a wide variety of activities, especially those having lifetime application, and emphasize fun instead of weight loss.
- Require that all teachers receive diversity training with an emphasis on people's worth irrespective of differences in physical size and shape. And, certainly, the growing practice of measuring and reporting on the BMI of their students should stop.

Summary

With all the advice about dealing with childhood obesity, possibly the best comes from Dr. Henry Anhalt, a pediatric endocrinologist and director of the Kids Weight Down Program at Maimonides Medical Center in Brooklyn, NY.

"And what does he think parents should do or say to their fat kid? 'I believe that if you don't have something positive to say, keep your mouth shut,' he says firmly. 'Because you're not going to do a blessed thing otherwise.'"⁴⁶

That's what Abby Ellin heard from a parent in doing the research for her book, "Teenage Waistland":

"Maybe parents' - and our culture's - anxiety about obesity is part of what keeps kids fat, and ultimately, after we've provided all the health information, maybe the best

thing we can do for our kids is to truly accept them as they are, and let them go,' she says."⁴⁷

It's also what Anne Fletcher heard in interviewing the parents of 104 teenagers who had lost weight and kept it off -- for her book, "How Teens Lose Weight and Keep It Off - and What They Wish Parents Knew".

"When I asked the parents, 'What approaches did not work well when your child was trying to lose weight?' an overwhelming response was 'getting on teens' back.' The most unhelpful strategies were nagging, preaching, complaining, criticizing and trying to control food choices."⁴⁸

Parents can't control their child's weight, so they shouldn't try. Instead, all they can do is decide what food will be in front of their children, when meals and snacks will be served, and where in their home their children will be allowed to eat. Then, they should leave it up to their children to determine how much to eat (or whether they're hungry enough to eat at all) so they can grow and develop to the size and shape that's best for them.

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