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Can a Pediatrician Effectively Treat a 9-Year-Old Obese Girl?

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Martin T. Stein, MD*†

CASE: Maria is a 9-year-old Latina girl who was followed up by her pediatrician since birth with normal developmental milestones, good school achievement, and without significant medical problems. She was not in the pediatric office for the past 3 years. At the age of 9 years, she presented for a health supervision visit. Her pediatrician looked at her growth chart–90 pounds (95th percentile) and height 52 inches (50th percentile)–that confirmed a clinical impression of obesity on physical examination. Her body mass index was 23.4 (>95th percentile for age).

During 10 years in primary care pediatric practice, the pediatrician typically prescribed a management plan for obese school-aged and adolescent patients that started with parent and child education about potential health problems associated with obesity followed by a recommendation to decrease the caloric intake and encourage active exercise each day. She then arranged for follow-up visits to monitor weight and adherence to the management plan. However, a moment of self-refection suggested that most of her patients did not follow her advice in a sustained way. Obesity persisted in most cases. The pediatrician wondered if there was an alternative—better yet, evidence-based—approach to pediatric obesity that might provide a better outcome.

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DISCUSSION

Kyung (Kay) Rhee, MD, MSc

It is commendable that this pediatrician calculated Maria's body mass index. It should be standard practice at every well-child visit to recognize trends in weight status earlier. However, counseling a family regarding weight control measures can be difficult for many reasons—fear of offending the parent and making the child self-conscious of his/her weight status, lack of knowledge on how to address this issue tactfully, lack of time or ability to discuss behavioral changes, or personal discomfort with the subject.

As physicians, we often link behaviors with medical consequences—diabetes, hypertension, heart disease, and orthopedic problems. But parents and children are often not motivated by these health problems, particularly because these do not exist now and seem too far away to be of concern. As an alternative approach, I would suggest using behavior change talk[1] to first determine the parent's level of awareness on the child's weight status and then gauge their level of interest and ability to make a change.

The next case is posted at www.jdbp.org for discussion on the Clinical Conversations blog.

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Assuming that all parents are ready and able to make changes at home is a misconception that often results in difficult and frustrating conversations with the family and fewer attempts at addressing this issue with patients. You may find that the parent does not recognize or want to admit that the child's weight is a problem. In this case, it would be too early and futile to discuss healthy eating and activity strategies. Discussing how the parent views obesity and why he or she does or does not recognize it as a problem would be helpful to determine how best to approach the issue. Determining whether the parent is interested or able to make changes at home will also be important. You may find that the parent is interested but feels too overwhelmed to make any changes. Conversely, the parent may feel capable of making changes but is just not interested. Each situation would require a different counseling tactic ranging from building self-confidence by helping them pick one behavior they might be able to do at home to talking further about why the parent is not interested in making a change at this time. These discussions can provide clinicians and parents a better sense of the personal factors and home environment that act as barriers to change. Talking about the pros and cons of making behavior changes may also help parents realize their own personal barriers and help them begin to consider what they can do to help their child.

Once families are ready to make a change, there are several cognitive-behavioral strategies that can be useful.

- First step: have the parent and child *self-monitor* or *record* everything they eat.[2,3] This process allows

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them to recognize what and how much they are truly eating. If they skip this step, it is often difficult to identify what eating behaviors and food choices need to change.

- Pick a behavior that the parent and child are motivated to change and feel that they could be successful in carrying out. A useful strategy is to help parents *change the home environment* to make it less tempting for the child to eat unhealthily or be sedentary. Parents can set up the home environment so that *healthy food options are now readily available and accessible*, e.g., place a bowel of fruit on the counter and remove chips and cookies or place cut carrots or fruit on a lower shelf in the refrigerator so that children can easily reach it.
- Parents can also make it harder to engage in sedentary activities—remove the TV from the kitchen and bedroom, get rid of the remote control, and put video games in a closet. These small changes around the home make it harder to engage in old behaviors and force new habit formation.
- Work with parents to verbalize a *clear, attainable goal* and outline the steps they need to take.
- Encourage the parent to engage in healthy behaviors with the child. *Modeling* has been shown to be a strong predictor of child success in weight loss programs.[3] Parents who eat vegetables, drink water, limit their portion sizes and snacking, and engage in physical activity with their children are more likely to have children who engage in these behaviors because they are essentially teaching by example.
- When families come back, *problem solve* around why some behaviors are working and some are not. Identify steps that can be taken to overcome or remove barriers, steps they feel like they can successfully implement.
- Help parents evaluate their efforts at each follow-up visit by identifying and linking the behaviors that led to weight loss or continued weight gain. This process of *self-regulation* (tying behaviors with changes in weight) will help them realize the direct connection between what they do and their weight and allow them to make adjustments as needed.[4,5]
- *Praise and encourage* the behaviors that help parents and children lose weight. This support will reinforce and help solidify those behaviors into their repertoire.

Although it may seem daunting to initiate this process during a busy clinical schedule, remember that these steps can be taken over multiple visits. It is important to support the family in their efforts and build a relationship such that they are motivated and willing to come back for further assistance. Ideally, there are referral centers in the area that provide comprehensive behavioral weight loss treatment. But short of that, with practice, health care providers can engage in effective behavior change counseling in the office.

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Kerri Boutelle, PhD

The pediatrician is correct in her assessment that childhood obesity is hard to manage in a pediatric office. There will be some families who respond to interventions provided in pediatric offices, but there are vast more who will not respond. For those children, family-based behavior therapy for childhood obesity is recommended.

Empirically based treatment programs for childhood obesity provide family-based behavior therapy to both parents and child.[1] These programs have been tested with preadolescent children (7–12 years) and are provided in parents and child separate groups with parent/child behavioral coaching. Programs are typically provided weekly and taper to biweekly over 4 to 6 months. The underlying conceptual model is that obesity is the result of positive energy balance due to excessive caloric intake and decreased activity. Empirically based programs include dietary changes, activity changes, and behavior therapy techniques. Most physicians can provide advice regarding dietary and physical activity changes necessary to lose weight. However, many families need more intensive training in techniques that provide the structure and skills to implement these recommendations at home. Ten-year longitudinal data show that one third of children treated by this modality are no longer overweight in adulthood,[2] which is a significant improvement when compared with interventions for adult obesity.[3]

In family-based behavioral therapy, dietary changes for preadolescents are achieved by using the Traffic Light Diet.[4] The Traffic Light Diet classifies food into red (stop), yellow (caution), and green (go) based on caloric density and sugar content. Children and parents are taught to count and decrease their red foods and increase their green foods over time. Physical activity changes are achieved through a combination of planned moderate to vigorous physical activity, lifestyle activity, and decreases in sedentary activity. Children and parents are taught to increase planned moderate and vigorous physical activity and lifestyle activity. Families are also provided a structure to decrease sedentary activity outside of schoolwork.

Behavior therapy techniques are based on basic science regarding behavior change and are integrated with

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diet and exercise components to improve outcomes. Behavior therapy techniques include stimulus control, contingency contracting, self-monitoring of caloric intake and weight, praise, and parenting skills. Stimulus control refers to decreasing cues in the environment that promote overeating and sedentary behaviors, such as providing only green foods for snacks, sitting down at a table for meals, and keeping television and computer games out of sight and out of reach. Contingency contracting refers to the use of a "motivation system," where the child earns points for engaging in behaviors that will improve weight loss, such as self-monitoring caloric intake and weight. Parents are also taught to use praise to reinforce their children's behaviors that will improve weight loss. Finally, general parenting skills on behavior management and parent modeling of behaviors promote implementation of these recommendations at home.

Although one third of children treated by this modality will no longer be overweight in adulthood, two thirds of children do not respond. In response, a number of different methods are currently being evaluated to treat children who are overweight. There are preliminary data to suggest that motivational interviewing techniques can improve outcomes in pediatric offices.[5,6] In addition, appetite awareness training and cue exposure treatment have also showed preliminary efficacy in reducing overeating,[7] although more studies are clearly needed. If this provider would like to be more effective in her office interventions, it might be useful for her to learn more about motivational interviewing as a starting place.

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Martin T. Stein, MD

For most of my career as a primary care pediatrician, I was not aware of the core principles of behavior change. I assumed that, when I saw an obese child or adolescent patient, obesity education, listing "good and bad" foods, and encouraging exercise were sufficient when conveyed with an upbeat and positive demeanor. I eventually became aware of the limitations of this approach. A mid-adolescent boy, who I saw several years ago, showed me an effective pathway to weight reduction. He agreed to share his experience with the readers of the *Journal*.

Matthew McKenna, AB

I was overweight from a very young age. I was the youngest in a big family, and my parents spoiled me in more ways than one. I got a lot of junk food. I grew up in a neighborhood that had few kids around and so I was not a physically active child (I watched a lot of TV and movies). By the time I was 15, I was tall, almost 6′5″, but I also weighed more than 350 pounds. I was tired of being fat and carrying around the burden of being uncomfortable in public and always feeling self-conscious about being so grossly overweight. Also, there was the growing knowledge that I was probably never going to get a girl to even look at me if I did not do something. Also, that year, I had been cast in a couple of plays at school. I found a calling in the arts and thought that if I was not so rotund, I could get some different parts. That was a minor reason compared with the others though, but still there.

I made the decision in the summer of '96 to get serious about losing weight, as much as I could. I felt uncomfortable about joining a gym, so my mom agreed to pay for training sessions with a personal trainer. I got a young 20-something trainer who I really bonded with. Not only was he a young cool guy into things I was into like movies and comedy, he was a very fat kid too when he was an adolescent. Seeing how fit and happy he was in his more slender adult life motivated me further; I wanted to get to where he got to. So I pushed myself and he pushed me too, not terribly so, but he did so in a way that told me he was really rooting for me.

That summer I slowly started eating less and became more interested in eating healthier and exercising vigorously every day. The work paid off, as pounds shed significantly each week. I was building muscle mass with weightlifting and in turn that muscle I grew combined with the cardio (running on a treadmill and track, interval training, Stairmaster, stationary bike) really was making me see results. I lost about 60 pounds over those 3 plus months. In the next 5 months, I lost around 60 more pounds. That is because I kept at it, and I still do today. I kept exercising because it makes me feel good. There is a high you get after pushing yourself when you exercise. You feel better about yourself for doing hard work. And more importantly, you feel physically better afterward; you feel relaxed, you feel centered, you feel like… a weight has been lifted.

Martin T. Stein, MD

Childhood obesity is endemic in the United States, other developed countries, and in developing countries where the western, high-calorie/high-fat diets have be-

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come popular. As this case and the commentaries point out, good intentions by pediatric clinicians who limit their treatment to nutrition education and increased physical activity typically have a limited effect on sustained weight loss.

Drs. Rhee and Boutelle outlined practical cognitive-behavioral strategies that pediatricians can discuss with parents and older children with obesity. I plan to tack it on the wall of our clinic. However, before talking to parents and children about these strategies, they emphasized that we cannot assume that all parents and kids are ready and able to make changes at home. Exploring a patient's readiness for change is a basic principle when initiating a motivational interview (MI). MI may be therapeutic in my experience. MI is a strategy to help patients think differently about their behavior and to consider what might be gained through change.

Motivational interviewing is based on 4 general principles[1]:

1. *Express empathy*: clinician shares with patient their understanding of the patient's perspective.
2. *Develop discrepancy*: help patient to appreciate the value of change by exploring the discrepancy between how she or he wants their life to be versus how they currently are. Change is motivated by a perceived discrepancy between present behavior and the patient's goals or values.
3. *Roll with resistance*: clinician helps patient to accept their reluctance to change as natural rather than pathological.
4. *Support self-efficacy*: recognize the patient's autonomy (even when the choice is to not change) and help the patient move toward change successfully and with confidence.

MI can be learned but it usually requires a good teacher and completing several interactive sessions. MI workshops for pediatricians have been scheduled at the annual meeting of the American Academy of Pediatrics. Additional articles in the pediatric literature are useful for learning about MI.[2,3]

I want to thank Matthew McKenna for his frank and articulate statement about his self-motivated strategy for sustained weight loss and significantly improved self-esteem.

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ERRATUM

Tourette Syndrome-Associated Psychopathology: Roles of Comorbid Attention-Deficit Hyperactivity Disorder and Obsessive-Compulsive Disorder: Erratum

In the article that appeared on page 413 of volume 30, issue 5 of the *Journal of Developmental & Behavioral Pediatrics*, the author's name should have been listed as Hilla Ben-Pazi.

REFERENCE:

1. Pollak Y, Benarroch F, Kanengisser L, et al. Tourette syndrome-associated psychopathology: Roles of comorbid attention-deficit hyperactivity disorder and obsessive-compulsive disorder. *J Dev Behav Pediatr.* 2009; 30:413–419.

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