Overweight Children an Epidemic/Gastric Bypass Surgery for Adolescents
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During a recent Sunday stroll, spring was rising from the ashes of winter on Charleston's azalea-trimmed streets. College students whizzed by on inline skates, sunbathers lay prone on sunny patches of grass, and sticky-fingered children indulged in ice cream cones, a childhood warm-weather rite of passage.

One sticky-fingered child in particular stood out from the sea of pedestrians. Although he was no different than his peers in enjoying a lazy stroll around a mound of chocolate ice cream, he caught the eyes of many passersby.

Cherubic cheeks flushed, the boy abruptly complained that he could walk no further and sat down on the sidewalk, continuing his systematic destruction of the ice cream cone in between deep, panting breaths. In his small body, this elementary-aged boy held roughly the same amount of weight as his adult companion.

Childhood Obesity an "Epidemic"

According to researchers, the United States is currently facing a childhood "obesity epidemic." Overweight children are the newest buzz in the health world—*Pediatric Annals* even devoted the entire January issue of their journal to the problem. In March, the Duke University Foundation of Child Development released the results of their Child Well-Being Index (CWI) project. In the report, the research states, "The major factor that has slowed progress in the health and well-being of children and youth since the mid-1970's is the dramatic increase in the prevalence of obese children."

The Centers for Disease Control, while preferring not to use the adult-oriented term "obese," agree with the Duke findings on children's weight statistics. In their National Health and Nutrition Examination Survey, they report that between the early 1970's and 2000, the prevalence of adolescents (ages 12-17) who were overweight nearly doubled, while the prevalence of overweight children (ages 6-11) quadrupled. All told, approximately 15% of children and adolescents in the United States are seriously overweight, weighing in over the 95th percentile on growth charts. Clearly, the tired Sunday stroller and his extra pounds are not alone.

The fact that children and adolescents are becoming increasingly more overweight should not surprise a nation that nurtures its youth on Big Macs and video games. Debate swirls around the possible explanations for increased numbers of overweight youth—poor diet, overeating, lack of exercise, less adult supervision, genetic disposition, and a generally sedentary lifestyle have all been named as likely contributors to the widening waistbands of America's children.

Dr. Arlene Shawinsky, a pediatrician at Seacoast Pediatrics, has seen a definite increase in the amount of overweight children walking through her clinic's doors. She watches sadly as chubby babies turn into pudgy toddlers and robust children, unable to come up

with a magic solution to halt their growing girth. Although she uses growth charts and diet counseling with families and children, Dr. Shawinsky finds that many parents don't want to admit that they have some role in their child's weight gain. She shakes her head with exasperation as she explains, "Parents will come in and say, 'I want blood tests for my child—I want to know why he is fat."

Medical University of South Carolina (MUSC) dietician Debbie Petitpain echoes the frustration felt by Dr. Shawinsky. In her capacity at the hospital, Petitpain works closely with overweight children and their families, attempting to teach a family approach to maintaining a healthy childhood weight—and attempting to teach parental responsibility for children's eating habits. Petitpain points out, "When you're talking about overweight two-year olds, they're not the ones making decisions about what to eat."

Rather than any genetic or organic cause, Dr. Shawinsky ranks inactivity and overeating—especially when both are coupled with time spent in front of the television—as the main culprits in this disastrous trend of childhood weight gain. When the amounts of calories entering the body are grossly out of proportion to the amounts of calories expended, the body's natural tendency is to gain weight. This effect is multiplied when those calories are coming from unhealthy foods, not unlike the kinds of sugary treats you would find beckoning in any vending machine. Dr. Shawinsky fumes, "They've got these soda machines and snack machines in the schools, and it's all about the money."

In truth, the dilemma of overweight children has a vast and varied etiology, individual to each child. Unlike an ear infection or the chicken pox, there is no set cause for this particular "epidemic." While fingers point in every direction imaginable, medical professionals, researchers, and the general public all agree on one thing—the health risks of this dangerous trend cannot be ignored.

Meet Tyeisha Williams

Tyeisha Williams is a sweet, quiet girl—a North Charleston high school student who enjoys traveling to cheerleading competitions, treasures spending time with her extended family, and harbors hopes of attending college, possibly to pursue a career involving her favorite pastime, the Internet. Her mother, Lillian, absolutely beams when she addresses her youngest daughter, calling Tyeisha "beautiful" and "smart," and wishing her all of the warmth that the world can hold.

Although Tyeisha and her supportive family have made strides to ensure that the metaphoric dots connect in her life, on the cusp of her high school graduation, this teenager is facing one major obstacle to a happy and healthy future—standing 5'6" and weighing 308 lbs., Tyeisha is morbidly obese.

According to her mother, Tyeisha has always been "big-boned." Her current height and weight give her a Body Mass Index (BMI) of 50, which, according to the CDC, classifies her as obese and places Tyeisha at an immense risk for serious health complications. With obesity come dangerous companions—"co-morbidities"—that

include sleep apnea, Type 2 diabetes, high blood pressure, high cholesterol, degenerative arthritis, and cardiac disease.

Tyeisha is feeling the effects of her weight. Suffering from asthma since childhood, Tyeisha began taking Prednisone to discourage the outbreak of asthma attacks that had become quite frequent. The drug, a corticosteroid, helped open her airways, but also caused the teen to pile more weight onto her already oversized body.

In addition, the weight that Tyeisha carries on her frame has caused her to experience unbearable back and joint pain. Pointing to her swollen knees, she explains, “The doctor said that my kneecaps are pulling inward because of all the weight. He just said that it’s going to keep pulling in and then I won’t be able to walk.”

As the soft-spoken teenager explains the toll that her weight has placed on her health since childhood, her mother’s eyes show a hint of sadness. Lillian is proud of her daughter and hopes to see her enter college one day, but fears that Tyeisha may face more serious health problems, including a heart attack, if her weight continues to go unchecked. There is worry in her voice when she says, “I used to cry and say, ‘Lord, please don’t let anything happen to my child.’”

Dr. Shawinsky points out that although most weight-related problems are treatable—with medicine, surgery, or physical therapy—the toll on the child’s health is not an even trade-off. “The children’s lifespan and overall quality of life *will* be diminished,” she explains. Even if attempts are made to treat the complications along the way, if the child continues to gain weight, they will also continue to encounter new, more serious health problems along the way. Petitpain includes even the long-term *mental* health issues of children who are overweight when she says, “They get robbed of having a childhood.”

Overweight in Charleston

In the land of fried chicken and bacon-streaked collard greens, there are scant resources for overweight children and adolescents. Lillian recalls that when she took a younger Tyeisha to the doctor, the physicians’ robotic response was, “She needs to lose weight.” Frightened by her increasing health problems, Tyeisha joined a cheerleading group, began taking walks around her neighborhood, and cut down on her after-school snacking habit. Despite her efforts, she was unable to lose much weight and unable to find a program or resource specifically tailored to her needs and age group.

The support mechanisms that exist in the Lowcountry are nearly nonexistent. If a child is seen by a doctor at MUSC, they will most likely be referred to a dietician, although Nance and Petitpain agree that other than their own nutrition resources, they have little knowledge of outside resources for overweight children. Although programs like Overeaters Anonymous and Weight Watchers do include minors at times, they are food-specific and are geared toward adults.

Dr. Shawinsky is frustrated by the lack of community options for overweight children who are seeking a healthier lifestyle. She laments, "Are there support groups? NO!" The pediatrician remembers that last summer, there was a small summer camp program linked to MUSC, but other than that, she is at a loss.

Louis Yuhasz, owner of Yuhasz Staffing Solutions, has seen the frustration in the community and is hoping that his burgeoning program, "Louie's Kids," may offer an alternative. When his father died of obesity-related illness, Yuhasz started the program in his Virginia hometown to help send overweight children to weight loss camp. He recently held a fundraiser in the I'On community to help raise money—and awareness—toward the need for more positive interventions for children who are carrying extra pounds. Yuhasz also hopes that he can eventually help erase the stigma of being overweight, one child at a time. He looks beyond the weight loss camps when he says, "We need to promote a lifetime of change."

Yuhasz hopes that his efforts at the recent fundraiser will allow him to coordinate with area medical professionals in choosing at least one Charleston-area child to receive a scholarship for a weight loss camp. Financial roadblocks are a reality in the fight against the overweight epidemic—not only are unhealthy foods generally cheaper than healthy foods, but also, many camps, sports programs, and fitness programs are costly, and parents just don't have the money to spend.

If a family *does* have money to spend, Faster Fitness Training Studios offers a family approach to helping children and adolescents stay fit and healthy. Founder and owner Chris McNeil explains, "We do an overall program that involves the parent. It's not going to work unless you get a behavioral shift in the entire family." Faster Fitness offers one-on-one fitness and nutrition counseling for the child and the parent—a well-rounded approach to healthy weight loss for those who can afford it.

Other than these few resources, children and families have to pull together the will and motivation to make a change on their own, and change can be a very difficult task to achieve. Petitpain attributes the lack of affordable, youth-specific programs as indicative of the sudden explosion in childhood obesity counts. Well-versed on the research, she suggests, "It's kind of taken everybody by surprise." Petitpain points out that many people also find the idea of specific supports for overweight children to be unnecessary, falsely thinking that children will "outgrow" extra pounds as they transition into adulthood.

Tyeisha knew that she wasn't going to "outgrow" her weight problem—if anything, she was going to continue to gain weight and her health problems would become exacerbated. Weary of leaving doctors' offices frustrated and dejected, she turned to what she knew best—the Internet. Encouraged by the experience of a family friend, Tyeisha searched for information on bariatric surgery—more commonly known as weight loss surgery—widely considered to be the last resort in the battle of the bulge.

What is Weight Loss Surgery?

Thrust into the spotlight due to high-profile patients like Carnie Wilson and Al Roker, weight loss surgery has become a cultural and medical phenomenon. Performed in several capacities for nearly half of a century, the surgery—in simple terms—affects how much food is eaten and how it is absorbed, and it involves permanently altering a portion of the patient's digestive system.

The most common contemporary bariatric procedure is the Roux-en-Y gastric bypass, which is the type performed at MUSC. This surgery involves creating a much smaller stomach sac by permanently stapling off a section from the upper portion of the stomach and connecting the new pouch to a piece of the small intestine. The greatly reduced stomach size severely limits the amount of food that may be ingested, and in return, the amount of calories that are absorbed.

After the surgery is complete, patients are placed on a restrictive diet for the rest of their lives. Because they now have a much smaller stomach to contend with, patients are limited to a few plain, well-chewed, protein-rich bites of food six times a day. They must also increase their vitamin intake by ingesting a multi-vitamin, Vitamin B12, and calcium citrate supplements daily. These supplements and mini-meals must be timed carefully, so that the tiny amount of gastric juices left in the stomach pouch can process everything individually and as completely as possible to avoid potentially damaging nutrient deficiencies.

Any departure from this incredibly strict regimen will cause complications—some minor, some major. If a patient indulges in a few bites of birthday cake, for example, they will experience a painful side effect known as "dumping syndrome." Because of the loss of gastric juices and the absence of a portion of the upper small intestine, the body quickly imports water to the intestine to aid with the difficult digestion of sugars. Petitpain likens it to the feeling of being hypoglycemic, complete with cramping pain and intense diarrhea.

Other complications can occur both during the operation itself and in the years to follow. Known side effects include wound infection, leaking, ulcers, hernias, gallstones, blood clots, and the ultimate side effect—death. There are very few studies that have measured any long-term results or side effects of bariatric surgery, and at one time, even the National Institutes of Health (NIH) recommended against it, as there were too many unknowns in long-term patient outcomes from the extreme procedure.

Naturally, the screening process for bariatric surgery is intense, although these guidelines vary from hospital to hospital. Generally, to be considered for the operation, the prospective patient must either be morbidly obese (at least 100 pounds overweight), or have weight-related co-morbidities severely threatening their health. Between several rounds with the insurance companies and an extensive (sometimes year-long) pre-op screening process from the psychiatric and medical staff, the prospective patient will have entered a trial of endurance, and only if they pass the strict guidelines set in front of them will they be allowed a try at the holy grail of surgical weight loss.

Risks & Ethics of Adolescent Surgery

Detractors say that because of the possible side effects, any form of weight-loss surgery is a potentially dangerous and life-threatening solution to pure and simple laziness; supporters say that the surgery not only improves the quality of lives, but saves them as well.

These arguments intensify when minors are brought into the equation. Tyeisha feels that she has done enough research over the past six months to fully comprehend the risks. She thinks that she will be able to follow a vitamin regimen, as she already coordinates all three of the medicines that she takes for her asthma. The teen also says that she understands that her diet will have to undergo a massive change. “No more cheeseburgers!” she laughs. Her mother is a bit more serious, recalling the words of a friend who successfully underwent the operation. “She was just saying that the operation would be too hard on Tyeisha, but if she wants it, something to make her happy about herself, I’m there for her.”

Statistics show that the average bariatric surgery patient is at least twice Tyeisha’s age and has researched the procedure for four times as long as Tyeisha has—approximately two years. Tyeisha is at the older end of the teenage spectrum, and if eventually approved for gastric bypass, she would be an adult when the surgery actually occurs.

MUSC dietician Laura Nance suggests that the surgery’s risks definitely increase for younger patients, especially in the realm of nutrition. She describes that before recommending gastric surgery for any adolescent, doctors consider x-rays of bone growth to determine if the child has reached their growth potential. Nance explains, “There are not a lot of studies in bone density after the surgery; that could be a real risk, especially in kids.” If the bone has not yet matured, a lack of nutrients (including calcium) might prevent the bone from growing further, effectively stunting the child’s growth.

Dr. Shawinsky is more blunt than Nance about her fears regarding bariatric surgery on minors, and was surprised that local surgeons have operated on adolescents. She goes through a large checklist of steps that she would first recommend for any parent considering bariatric surgery for their overweight child—more closely (though not obsessively) monitoring the child’s eating habits, eating together as a family, engaging in physical activity with the child, exploring the aid of dieticians and nutritionists, exploring weight loss camps, and participating in behavior modification counseling. She is stern and serious when she says, “Stomach stapling is the last resort.”

In Charleston, there are two surgeons who perform weight loss surgery--Dr. Michael S. Sabback of Carolina Surgical Associates, PA, and Dr. T. Karl Byrne (MUSC’s Department of Surgery). When approached on the issue of gastric bypass as an option for overweight adolescents, Dr. Byrne offered an interview, but had to cancel at the last minute. Several other MUSC staff members, including Dr. Edward Tagge (who is being tapped, as a member of the Department of Pediatric Surgery, to perform gastric bypass

surgery on adolescents in the future) and Dr. Melissa Henshaw (Pediatrics), declined to speak with this writer. Dr. Sabback's office indicated that he did not wish "to participate in this particular subject," and calls to several surgeons and doctors in the tri-state area were met with curt, unfulfilled promises of, "They'll get back to you--*if they can*."

It is no surprise that there is some trepidation when discussing the ultimate weight loss solution—bariatric surgery for *adults* is a controversial topic, and when adolescents are thrown into the mix, it becomes an ethical minefield. While Nance and Petitpain fully explored the nutritional complications that can arise from manipulating the digestive system of minors, there are other questions related to maturity, comprehension, decision-making ability, and family dynamics that further complicate the issue.

Many non-medical arguments against bariatric surgery for minors center on the fact that essentially it is another person who is making a life-altering decision for the young person. Many professionals point out that if the adult is making this drastic choice for the child, why couldn't they have made more appropriate choices before the child's weight ballooned to an unhealthy level. Petitpain's voice grows slightly agitated when she discusses the strict nutritional post-op guidelines and she postulates, "If you're willing to make that change after surgery, why not try to make it *before* surgery?"

Another argument is that adolescents who undergo the surgery may not have the capacity to fully realize the commitment they will have to make to completely altering their eating habits, physical activity levels, and even their social activities. While older adolescents, like Tyeisha, may be more apt to follow a routine, the implications of having to severely monitor their eating habits can be weighty. They will have to contend with fitting six small meals a day into their school routine, into their family life, and into their social life. They will have to time out their vitamins carefully, so each is absorbed without the influence of the other. They will have to deal with the realization that their body is altered for life, due to a decision ultimately made by their caregiver.

Finally, people worry that parents are throwing their children into a maelstrom of unknown results. While research on the outcomes of adult gastric bypass and other bariatric surgeries is rare, such studies on adolescent outcomes are nonexistent, prompting opponents to compare performing bariatric surgery on adolescents to medical experimentation.

For surgeons like Dr. Byrne, the ethical arguments are understood but carefully placed aside in special circumstances. Last year, in an article in MUSC's *Catalyst*, Dr. Byrne countered that while he understands that some people feel bariatric surgery is not appropriate for minors, when weight-related medical complications are endangering the young person's health, it is a necessary final step.

There has been discussion at MUSC, in fact, centered on creating a new bariatric surgery program specifically for adolescents. Several hospital staff confirmed that a potential program would include guidelines and protocol specific to the physical and mental development of adolescents, but were reticent to discuss any other details. The most

common response to inquiries about the potential program was, “Well…it’s kind of controversial.”

Controversial or not, Tyeisha Williams has found what she believes to be her savior from a lifetime of poor health and pain. She struggles to stand from her spot on her living room floor, wincing as the weight increases on her knees with each centimeter she rises. Lillian frowns as she watches her daughter fight to stand up and says quietly, “Don’t worry. We’ll find a way. We’ll keep our hands with God and he’ll send us in the right direction.”