Ick Schneider remembers the day he stepped on the scale and it read 412 pounds. The nurse recording his weight warned him that he would die if he didn’t have bariatric surgery. He was 22 years old.

Seven years later, the boy who was last to be picked for teams in gym class is training for a triathlon. Rather than sustaining himself with Big Macs, he eats three ounces of lean protein at each of his five daily meals. Hanging in Schneider’s closet is a pair of pants with a 58-inch waist—a relic of his former self.

“The most exciting part of this whole process was buying my first shirt that didn’t have any ‘Xs’ on the label,” says Schneider, who lost 200 pounds after undergoing open gastric bypass surgery in 2008.

“I go to a restaurant now and I don’t feel like people are looking at me saying, ‘He doesn’t need to eat.’ I’m at my sixth-grade weight.”

For Schneider and thousands of Western New Yorkers, bariatric surgery is the option of last resort—a drastic measure to bring body mass index into a healthy range while potentially reversing diabetes, hypertension and other comorbid conditions that constitute obesity’s heaviest burdens.

Epidemic Proportions

For Schneider and thousands of Western New Yorkers, bariatric surgery is the option of last resort—a drastic measure to bring body mass index into a healthy range while potentially reversing diabetes, hypertension and other comorbid conditions that constitute obesity’s heaviest burdens.

Although weight-loss surgery carries risks of short- and long-term complications, it’s in great demand. According to the American Society for Metabolic and Bariatric Surgery (ASMBS), the rate of patients having such procedures doubled in a six-year period, with 220,000 performed in the United States in 2008.

Several factors are contributing to the demand. The refinement of minimally invasive surgical techniques makes weight-loss surgery attractive to patients reluctant to undergo open procedures. Intense marketing campaigns for the surgery—one of the rare procedures on which hospitals can make a profit—have brought it to the public’s attention, as has the buzz created by celebrities’ experiences, including those of American Idol judge Randy Jackson and TV personality Star Jones.
**ENDORSED** by a federal advisory panel in 1991, bariatric surgery today costs between $20,000 and $25,000. In recent years it has been covered by an increasing number of health insurance providers, as well as Medicare and Medicaid, for patients who qualify.

And millions do. ‘The nation’s heft has reached epidemic proportions, with about 30 percent of Americans classified as obese and 3 percent as morbidly obese, defined as having a body mass index of 40 or higher. Although obesity rates have remained constant for several years, experts warn that the plateau is hardly cause for celebration. Rather, it may be an indication that we’ve reached the biological limit to how fat we can get.

Locally, some bariatric surgeons report waiting lists of patients seeking the surgery. Perhaps that should come as little surprise in a city whose culinary claim to fame is the chicken wing. Other factors conspiring against Western New York’s collective waistline include the region’s protracted winter, the rich cuisine native to many of the area’s ethnic groups, the high ratio of restaurant to residents and the significant level of poverty, an economic factor often implicated in overweight.

UB physicians who perform bariatric surgery say the primary reason the procedures are so popular here, and elsewhere, is simple: they work. “It’s pretty dramatic to see someone who’s gone from 340 pounds to 180, but we don’t do any of this for cosmetics,” says Aaron Hoffman, MD ’98, assistant professor of surgery. “It’s to extend life. And second only to stopping smoking, nothing extends life more than bariatric surgery for these patients.”

Cardiovascular disease and diabetes are prevalent in this town, and the medical doctors are at the end of their abilities,” Hoffman says. “All of the insulin they’re giving their patients is not getting to the root of the problem. Unlike most doctors, we can say that we actually cure diabetes 85 percent of the time. We can cure sleep apnea, hypercholesterolemia, hypertension. These are the ravages of obesity, and these are the reasons that we do it.”

**RISKS TO WEIGH**

Expectedly, critics of bariatric surgery are not enthusiastic about the growing number of bariatric surgery programs nationwide—or forecasts that it may become the next front in the fight against pediatric obesity. They consider it a radical procedure whose risks outweigh the benefits for the majority of patients who undergo it. Complications from bariatric surgery may occur acutely, in the short term or years later. In gastric bypass problems can range from diarrhea and vomiting to abdominal hernias, anastomotic leaks and neurologic disorders, including myopathy and encephalopathy. Vomiting is also a reported complication with gastric banding, as is band dilation, displacement, and erosion, sometimes resulting in reoperation. In both procedures, food intolerance may develop among patients. “Many people can’t eat meat or they have to put meat tenderizer on it and cut it into very tiny pieces,” says Paul Ernsberger, PhD, associate professor of nutrition at Case Western Reserve University. “Trying to get enough fiber can be a real problem after gastric bypass because you’re limited in the amount you eat, and any fiber is delivered deep into the intestine, which can cause painful distension.”

Ernsberger, who favors conservative medical treatment of obesity, says weight-loss surgery is neither as safe nor as effective as it is touted to be. “I have talked to a great many people [after surgery] who are close to their starting weight and have severe complications,” he says. “They really have the worst of both worlds: they don’t have the thin body they were promised and they don’t have improved health—they have worse health.”

A researcher in genetic obesity and the role of nutrition in cardiovascular disease, Ernsberger is particularly concerned that the procedure alters the way the body absorbs nutrients, which can result in an array of nutritional deficiencies. “Until gastric bypass became popular, conditions like beriberi and pellagra and kwashiorkor were unheard of outside Third World countries,” Ernsberger says. “Outside Ethiopia and Sudan, you wouldn’t see these things. Now they’re endemic.”

Ernsberger believes bariatric surgery may be suitable for the sickest patients; for example, a man with a BMI of more than 50 who has unmanageable diabetes. However, only a minority of patients who choose bariatric surgery fall into that category.

“The typical patient is a 35-year-old white middle-class woman with a BMI of 35 who doesn’t have severe disease. This profile precisely correlates with people getting cosmetic surgery. The demographics track exactly.”

**GOOD OPTION OF LAST RESORT**

Weight-loss surgeries fall into two categories: those that are malabsorptive and those that are restrictive. Gastric bypass surgery, a malabsorptive procedure, redesigns the anatomy of the normal digestive process in the stomach and intestines to reduce food intake and the amount of calories the body absorbs. With this type of surgery, a patient typically loses the majority of weight within a year to a year and a half. Restrictive procedures, such as adjustable gastric banding, make the stomach smaller so patients feel full faster. Patients shed the majority of pounds in the first two to three years after this procedure.

To be eligible for bariatric surgery under guidelines established by the National Institutes of Health, a patient should be at least 18 years old and have a BMI of greater than 40—which averages about 100 pounds overweight for a man and 80 pounds for a woman—or greater than 35 if comorbid conditions like sleep apnea or heart disease are present. Additionally, individuals are expected to demonstrate that efforts at dieting have been ineffective. “You basically have to be a failure—you have to be a failure at years of medical weight-loss attempts, many times physician-supervised,” says Joseph A. Caruana, MD, clinical associate professor of surgery. “It’s hard to go through life with that kind of label.”

Caruana is medical director and surgeon at Synergy Bariatrics, Catholic Health System’s bariatric surgery practice at Sisters of Charity Hospital, where he has been performing open gastric bypass surgery since 2000. In that time, he says, the skepticism he initially encountered from primary care physicians lessened. “It’s hard to go through life with that kind of label.”

Nick Schneider weighed more than 460 pounds by the time he was in his early 20s. Since performing bariatric surgery in 2008, he has lost 200 pounds and is now at his seventh-grade weight. Today, he is training for his first triathlon.
AT EVERY TABLE, participants shared stories of triumph and heartache. The mother of a 7-year-old boy recalled the humiliation of having to get off a rollercoaster when the seatbelt wouldn’t fit over her stomach. “I was embarrassed for my son,” she said. “I don’t want to be that mom anymore—the one who has to sit out and say, ‘I can’t do it, honey.’”

Cheers broke out when another woman shared her latest fitness milestone: 20 minutes on an elliptical trainer. Still another was applauded after announcing that her latest fitness milestone: 20 minutes on an elliptical trainer.

RIGOROUS ELIGIBILITY
In the eight months after his open gastric bypass surgery, Schneider lost nearly 100 pounds, a number that suggests such procedures are a quick fix for the morbidly obese.

Bariatric surgeons warn that they’re anything but. “Anybody who expects that weight-loss surgery is the be-all and end-all—that the weight’s going to come off and it’s going to be easy—is going to fail,” says Alan Posner, MD, assistant professor of surgery and medical director of Kaleida Comprehensive Weight Loss & Bariatric Surgery Program.

“It’s not a perfect solution. Weight-loss surgery is a tool. It makes it harder to eat a lot, and it makes you lose weight to begin with. But it doesn’t keep the weight off—a low-glycemic index diet and exercise does.”

To ensure optimal weight loss after bariatric surgery, patients at Buffalo General and Sisters hospitals—both designated Centers of Excellence by the ASMBS—undergo a rigorous prescreening protocol, much of it required for insurance coverage.

Extensive tests are conducted, including tests to rule out medical causes of obesity, such as thyroid disease. Patients must consult with a dietician, who puts them on a specialized diet in the weeks before surgery and advises them to continue eating sensibly for the rest of their lives.

In the long run, if patients don’t maintain a healthy lifestyle they won’t sustain a desirable weight, surgeons say. In fact, it’s estimated that between 10–20 percent of patients regain a significant amount, or all, of the weight they lost postoperative.

“Over time, the body becomes better at absorbing nutrients,” explains Posner, a fellowship-trained laparoscopic surgeon. “It doesn’t reverse the effects of the bypass completely, but people get to the point where they can cheat. And with time, people become complacent. So, our goal is to get them to change. We want people to change their eating habits before surgery because, if they don’t learn how to do it then, what makes us think they’re going to do it afterward?”

A mother of a freshman 50. The sophomore 70 followed.

When he started his undergraduate studies at Daemen College, Schneider didn’t gain the freshman 15, but the sophomore 90. The sophomore 70 followed.

“One day my mom looked at me and said, ‘You need to lose weight because you’re not walking right anymore,’” he recalls. “My thighs were so big that it looked wrong when I walked. My reply was, ‘At least I’m still walking.’”

These days, Schneider does a lot more. To prepare for his first triathlon, he logs 10 miles of cardiovascular exercise a day. “I don’t care if I’m the last person to complete it,” he says. “I’ve met my goal and overcome every-thing if I finish.”

Since his surgery, Schneider has religiously followed the high-protein, low-carbohydrate regimen that Caruana recommends. “I don’t even crave greasy food because it makes me sick. I tried sugar one day and I had bad stomach cramps and sweating. I thought giving up bread was going to kill me,” says Schneider, who routinely added a third slice to sandwiches. “I don’t miss it.”

Earlier this year, Schneider experienced reactive hypoglycemia, low blood sugar that usually occurs one to three hours after eat-ing. The condition, which the Mayo Clinic describes as typical in people who have gastric bypass surgery, caused him extreme lightheadedness and numbness in his legs. Since modi-fying his intake of carbohydrates and protein, he has not experienced a recurrence.

Asked whether he worries about more— and more serious—complications in the future, Schneider answers this way: “They have been doing this procedure for more than 25 years now. In 25 years, I’ll be 53. Between the depression I had because of the weight and the high blood pressure, I don’t think I would have seen 40 without the surgery.”

--JOSEPH A. CARUANA, MD
CHASE wasn’t always that way. An athletic child and teen, she began struggling with extra weight in her 20s, after the birth of her son. When he was eight months old, she was hit by a drunk driver and had to undergo back surgery, requiring a lengthy sedentary recovery. Then, in 1998, she was diagnosed with multiple sclerosis.

To comfort herself through trying periods, she ate. And to lose weight, she dieted. “Jenny Craig … Weight Watchers … the popcorn diet … the Mayo Clinic diet … the vanilla ice cream diet … the Atkins diet … the cabbage soup diet,” she says, trying to remember them all.

Since the surgery, Chase has renounced dieting in favor of eating small portions of nutrient-rich food while allowing herself the occasional treat. “Here I was losing weight, and I still couldn’t see the skinny girl in the mirror,” she explains. “I was upset that I wasn’t seeing what I thought I should see, when the whole time I was doing it.”

Shedding pounds has been relatively easy, she says, now that she reaches satiety sooner. The bigger challenge has been coming to terms with her slimmer physique. For several years after the surgery, Chase worked with a counselor to develop a healthy body image.

“For patients who struggle emotionally with weight loss— and weight loss—Chase would like to see a stronger emphasis on the psychology of obesity incorporated into the pre- and post-op phases of bariatric surgery. “When you’re the fat girl for so long,” she says, “the stigma stays with you.”

RESEARCH YIELDS CLUES

As the nation’s BMI has escalated, researchers have stepped up their efforts to understand the complex interplay of factors—genetic, behavioral, socioeconomic and environmental—that contribute to obesity, with the goal of developing better strategies for prevention and treatment.

According to bariatric surgeons, weight-loss operations have yielded important clues in the investigation. “By studying patients who have this procedure we’re learning so much more about obesity,” says Caruana. “Just in the past few years there has been some very exciting work looking at the effect of removing the food stream from the duodenum. There seems to be a direct effect of bypassing this area and the correction of type 2 diabetes.”

“It’s said that five different and separate interventions are accomplished during gastric bypass,” he adds. “Doing this procedure causes very significant, sustained weight loss in probably 90 percent of patients who have it. To say that it happens only because the stomach is smaller and people can’t eat as much is much more simplistic than it really is.”

In the October 2009 issue of the journal Surgery, Caruana co-wrote an article describing the protocol he established to reduce the incidence of pulmonary embolism after gastric bypass, the leading cause of postoperative death in patients. Recently, he has been collaborating with Scott Monte, PhD.

“For patients who struggle emotionally with weight gain—and weight loss—Chase would like to see a stronger emphasis on the psychology of obesity incorporated into the pre- and post-op phases of bariatric surgery.”

There are so many biochemical changes that occur in the body during gastric bypass that we don’t know about. What most of the medical researchers are trying to do is look at how gastric bypass affects the body and determine how we can chemically induce a lot of those effects so we don’t have to operate.”

—ALAN POSNER, MD

“For patients who struggle emotionally with weight gain—and weight loss—Chase would like to see a stronger emphasis on the psychology of obesity incorporated into the pre- and post-op phases of bariatric surgery.”