A Long, Hard Battle Over 25%

Dr. Artur Binda, a bariatric surgeon from the Orłowski Independent Public Teaching Hospital in Warsaw, discusses bariatric surgery procedures, frequently the only treatment for patients with life-threatening obesity.

ACADEMIA: **What is obesity?**

ARTUR BINDA: Obesity should be considered a chronic disease that requires treatment. Just like every chronic disease, it may have remissions and relapses. These often occur in the course of conservative treatment – that is, lifestyle and dietary changes as well as regular physical activity. Weight loss doesn't mean that the patient has been cured. Instead, we should say the patient has achieved a remission. Such a person should continue to follow the recommendations for maintaining reduced body weight. Refusal to adhere to the recommendations related to lifestyle and dietary changes as well as physical activity is the most frequent cause of renewed weight gain. Once you become obese, you may experience the problem your whole life.

You use the word "disease." In the eyes of the public, however, obesity is as a result of overeating, or refusal to take responsibility for one's own health.

Obesity is considered a disease. It reduces life expectancy and usually co-occurs with other diseases, which are largely the result of obesity, such as type 2 diabetes, hypertension, lipid disorders, as well bone and joint problems.

What causes obesity? Maybe a penchant for junk food and sugar?

Of course, obesity is caused by an excess of energy intake over energy expenditure. Such situations are not rare these days, and I don't just mean fast food. The first factor conducive to a rapid increase in the number of obese people is very easy access to food in general. In ancient times, you had to run around for 15 hours to eat one meal a day. Today, we run for just 15 minutes and eat all day long. Another thing is that we use a lot less energy to carry out the same activities as our recent ancestors. We take the elevator to the fourth floor, we drive to work by car or by public transport. Daily life does nothing to force us to engage in physical activity and we eagerly take advantage of this fact.

Another element is time. Those who are professionally active rarely finish work before 4 pm, so they practically have no time left for themselves. Looking after your health often requires time. I'm not talking about low-calorie meals, because making them usually takes little time. Rather, it's difficult to squeeze physical activity into a busy schedule. And, finally, there is stress. There is more stress today than in the past and consuming too many calories may be the easiest way to cope with stress. Genetics plays a major role, too. Some people are predisposed to store excess calories as body fat, others are not. Also, there is a theory that the microbial composition of the flora in the large intestine matters. Certain microorganisms may cause faster breakdown of nutrients and increase glucose absorption, which results in greater storage of sources of energy. If the flora in the large intestine is not conducive to this process, simple sugars are not absorbed excessively, so excess calories are not stored as fat. To make a long story short, there is no single cause of obesity.

In 2015, the National Food and Nutrition Institute published studies showing that excess body weight affects 22% of students in primary and lower secondary schools, 49% of women and 64% of men. Back in the 1970s, those rates were in the single digits. What has happened to the Poles?

Forty years ago, very few people in Poland had cars. Over two decades, we have become more and more similar to highly developed countries. Of course, that has its advantages, but there are plenty of disadvantages as well. The United States and such European countries as the UK are obese countries. By saying that, I don't mean that we earn more, so we eat more. On the contrary, the less we earn, the less healthy our diet is. A hot dog in a shopping mall or at a gas station costs very little, giving us the impression that we can eat a decent meal for just a few dollars. Instead, we should learn to use good products. A tasty fish meal can be made for a similar sum. And what's the point of eating a whole bar of chocolate at once?

What prompts obese patients to seek help?

There are three possibilities. First, patients take the initiative and seek help when they realize that their quality of life has deteriorated so much that they have trouble with the activities of daily living. For example, they can't squat to pick up an item they've dropped or tie their shoelaces. They get tired so easily that they practically can't move. Such problems are coupled with mental disorders, because obese people are prone to depression and report poor self-esteem. In some cases, patients realize that obesity is a disease that shortens their life expectancy, that surgical treatment can lead to weight loss and the resolution of obesity-related comorbidities. Second, patients may be referred by their primary care physician, who realizes that obesity is a disease that needs to be treated. Third, patients may be encouraged by the positive results of a bariatric surgery that a friend or a relative underwent.

But is a patient's willingness to receive treatment enough?

No, it's not. Although there are no legal provisions regulating eligibility for surgical treatment, certain guidelines do exist and bariatric surgeons are strict about following them. Bariatric treatment is recommended for patients with a body mass index (BMI) of 35–39.9 kg/m^2 and at least one obesity-related comorbidity, or for those with a BMI of more than 40 kg/m^2. In some countries, patients are obliged to take part in a series of courses, officially signing in to confirm their attendance. Most centers require a reduction in body weight in the pre-operative period to reduce the risk of complications. In the United States, some insurance companies even refuse to cover the costs of treatment unless this condition is met.

You also advise your patients to lose weight before surgery.

Yes. That's a test. I need to know if they are disciplined enough to follow the recommended guidelines after surgery. If I have serious doubts, I disqualify such patients. I can see no need to risk a serious surgical procedure if the results are likely to be uncertain. It is necessary to weigh the risks against the expected benefits, because such procedures are related to certain dangers. Compilations are rare, but when they occur, they are severe and require long-term treatment. Also, they may be linked to mortality, in the order of tenths of a percent, but that's still a risk of mortality. Meanwhile, many patients believe that the period before the surgery is the last moment they can eat as much as they want, so they ultimately report for the procedure weighing even more than when they were qualified for surgical treatment. Operating on a patient that gained weight, or at least didn't lose weight before surgery is associated with a higher risk of com-

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plications. The procedure takes longer and, despite the surgeon's best efforts, it is technically less perfect. That impacts on the long-term results of the surgery. The more precisely a procedure is performed, the better the results in the form of reduced body weight. And that is important.

What is the course of the treatment?

During the first consultation, the patient is informed about the type of procedure. There are two options: restrictive procedures and mixed procedures. The former include sleeve gastrectomy, the latter – gastric bypass. Patients with a history of numerous abdominal surgeries and, say, large abdominal hernias are more likely to be candidates for restrictive procedures. Those who eat a lot of sweets are eligible for mixed procedures, which cause malabsorption. Mixed procedures result in improvements in type 2 diabetes, so they are by definition better for patients with this disease.

In a restrictive procedure, around 70–90% of the stomach is surgically removed and a narrow pouch is created that can hold around 100–150 ml of food. That's because this procedure mainly works by reducing the amount of food that can be consumed. Also, patients after such surgery can't eat too fast, especially solid foods. Otherwise, they experience nausea, pain, and vomiting. Neurohormonal mechanisms also play a role by reducing the secretion of ghrelin. Ghrelin, colloquially referred to as "the hunger hormone, " is responsible for appetite. It is produced by cells that are located chiefly in the fundus of the stomach, which is the part that is surgically removed. The lower the level of ghrelin, the less you want to eat. However, this mechanism doesn't work in all patients. Patients sometimes have hunger pangs, but these are rather psychological in their nature, because they can't eat as much as they would like to.

The Roux-en-Y gastric bypass, or mini-gastric bypass, is a mixed procedure that involves creating a pouch from the upper part of the stomach (the exact volume of the pouch differs depending on surgery) and bypassing around 1.5–2.5 m of the intestines, which means excluding this segment from absorption and digestion. We may reroute the intestines to stop digestive enzymes from going through one segment and food from passing through another segment, ultimately connecting the bypassed portions further down the gastrointestinal tract. That's where the enzymes mix with the food and so digestion and absorption begin. Such surgical treatment offers a better chance for greater weight loss. The patient is less affected by non-adherence to recommended dietary guidelines. Unfortunately, this treatment is linked to complications in the long-term, chiefly deficiencies of microminerals and vitamins caused by malabsorption. Also, this means more changes in the anatomy of the gastrointestinal tract. A less-invasive restrictive surgery is sometimes a better solution.

What happens after the treatment option is chosen?

After initial qualification, the patient is referred to a dietician who gradually reduces daily caloric intake down to 800 kcal before surgery, thus helping the patient lose weight. The dietician also instructs the patient on what to eat after surgery. Psychological evaluation is also necessary, because a psychologist must assess the patient's general mental health and understanding of the consequences of surgery, awareness of what will be done.

So psychological assessment is the final step before surgery.

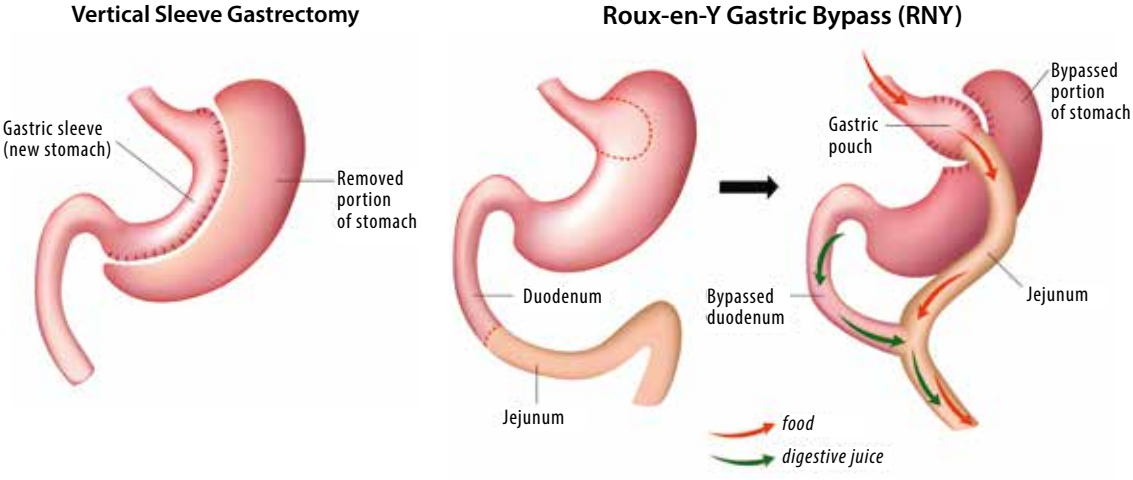
Not exactly. We send the patient to hospital for four days to rule out general medical contraindications. We carry out full diagnostic tests related to the circulatory and respiratory system, a chest X-ray, an abdominal ultrasound, and a gastroscopy. If the psychologist and the internist have agreed, the patient has regularly visited a dietician and has lost weight, we qualify him or her for surgery. Patients who don't meet such conditions are disqualified. Treating obesity doesn't mean simply cutting out a piece of the human body. It is a process that never stops. Bariatric patients remain afflicted their whole life. And that's essentially how long the treatment should last. Follow-up visits are routinely scheduled every three months in the first year after surgery, every six months for up to two years, and after that once a year. These visits are aimed at disciplining patients, too. Studies show that they help improve the results of the treatment. I always tell my patients that they deserve half of the credit for satisfactory weight loss.

What do you mean by "satisfactory?"

There is no specific definition of the success of bariatric treatment, but we assume that it involves weight reduction to a BMI below 35, which means class I obesity, especially in patients with an initial BMI of 40 or even more than 50. Another criterion involves reducing initial body weight by at least 25%. There is the question of the permanence of the results. Around 60–70% of patients maintain a good result for 5–7 years. Improvements in obesity-related comorbidities, chiefly diabetes and hypertension, are equally important. In this field, the figures are similar: the results of lab tests are within normal limits and no medications are needed in 60–70% of patients. And the final aspect: the level of patient satisfaction in various spheres: at work, at home, sex life, self-sufficiency, and so on. Most patients are satisfied.

Can you monitor what is happening to all of your patients?

In Poland, the process essentially involves surgical treatment and the procedure is performed by a surgeon. In countries where bariatric treatment is more



A mixed surgery is sometimes necessary after a restrictive procedure. "Two-step treatment is possible if weight loss is not satisfactory or the patient gains weight again. That happens only in 10–15% of patients. But it is necessary to decide if such treatment is justified. Most failures are caused by non-adherence to post-surgery recommendations," Dr. Artur Binda says.

popular – in the United States, Norway, and Belgium – a team of a dozen specialists looks after the patient before and after surgery: an internist, a psychologist, a dietician, a nutritional therapist, a physiotherapist, and specialized nurses. A surgeon sees the patient before, during, and after surgery, then never again, unless there are complications. Further care is in the hands of the other specialists on the team. We work in a system that enables us to monitor 200 patients after surgery, but this is no longer possible when you've operated on 1,000 people. We would have to stop performing these surgeries. Another thing is that some patients miss follow-up visits. In many cases, this is because the treatment doesn't bring the expected results. But patients who do not report satisfactory weight loss require special care, which should be provided by the team that supervises the treatment.

Do their stomachs stretch, because they eat too much?

In bariatric surgery, I would not attribute the lack of satisfactory results to a "stretched" stomach. Patients may gain weight again, because the surgery was not radical enough. For example, this is what happens when a sleeve gastrectomy fails to remove a sufficient portion of the stomach. We don't achieve the desired results, in other words reduced food consumption. Also, failure may result from the patient being qualified for the wrong procedure: we may perform a restrictive surgery, but it turns out that a mixed procedure would have been a better option. However, most failures are indeed caused by non-adherence to post-surgery recommendations. Patients who are not likely to cooperate after surgery should not be candidates for surgery.

What recommendations should bariatric patients follow?

First of all, they need to follow a dietician's recommendations regarding the composition and frequency of meals. Secondly, to engage in physical exercise for at least 45 minutes up to 1 hour three times a week. And this brings us back to the issue of time. Many patients would like to undergo surgery and lose weight between their daily tasks, without changing their lifestyle. That is practically impossible. They must find a sport that they enjoy. If they are forced to do something, the chances of success are close to nil. Third, patients must avoid sweets and sweetened beverages. They shouldn't allow themselves a sweet treat more often than once a week. Fourth, they must be constantly in contact with the team of doctors who supervise the treatment. Patients are eager not to miss appointments before surgery, but their willingness to meet with a dietician drops after surgery. And that is a mistake.

Is bariatric treatment very costly?

It definitely costs less than untreated obesity. The costs of hospitalization in connection with obesity-related comorbidities, drugs expenses, sick leave, and disability pensions are huge. Surgery is a better option. It is not a life-saving procedure, but it does offer such patients a chance for a better quality of life, a longer life, and, from the perspective of health care providers, at a lower cost.

Some people are reluctant to admit to having bariatric surgery. Why?

For the reasons you mentioned at the beginning of our conversation: obesity is still treated in Poland as a result of carelessness, laziness, and overeating. But some people talk about it and that is a good thing, because the largest group of my patients consists of people who have heard about such treatment from someone else who received it. Awareness of surgical treatment of obesity if conservative methods fail is slowly growing thanks to the mass media and the Internet. Bariatric surgery is very popular in highly-developed countries, where such procedures have been performed for several decades. More and more bariatric surgeries are being performed in Poland as well. Unfortunately, that's because there is demand for them.

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