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Liposuction

I have these deposits of fat where I really hate them, especially on my thighs. Dieting hasn't helped.

—Ginny, 34, secretary

Using surgery to remove fat has long been a quest of cosmetic surgeons, but the journey toward that dream has been slow until recently. About twenty years ago, physicians in Italy scraped out fat through a relatively small incision using a sharp, circular-ended knife called a curette. Because severe complications often resulted, this technique did not gain widespread acceptance.

Seizing on that idea, doctors in France began using a blunt-ended canula, a metal tube with openings along the sides that looks a bit like an oversized straw, to remove fat more gently while preserving the important connections between the skin and muscle. This fat-removal method minimized the chances of damage to surrounding tissue. In a variation on the technique, doctors began infusing into the fat small amounts of saline (salt water), which was identical in composition to the water in our body. This helped break up the fat globules, making them easier to remove.

After the technique was introduced to the United States in 1982, liposuction rapidly gained popularity, though the potential for complications, many related mostly to the use of general anesthesia, remained. Three years later, American dermatologist Jeffrey Klein introduced tumescent anesthesia. The tumescent technique involves injecting low-concentration anesthetic solution (lidocaine) into the fat combined with epinephrine (to reduce bleeding and prolong the anesthetic effect) and saline. Large volumes of this solution are injected into the fat before surgery, thus swelling the area to approximately two to three times its normal size.

This numbs the fat completely, eliminating the need for and risks of general anesthesia. It also makes the fat very firm, so that it is easier for the surgeon to break up and remove the fat globules. With the excellent anesthetic effect and firming of the fat caused by the tumescent technique, the canulas used in liposuction have gotten smaller and smaller over the years, causing much less trauma to the fat and more rapid recovery as well.

As a result of these advances, liposuction surgery has become much more affordable and is reported to be the most common cosmetic procedure done in medical offices today. **Tumescent liposuction has an excellent safety record.** In the very few cases where serious complications developed, it was often because of inadequate physician training or a failure to recognize that the body's fluid status can be knocked out of whack if too much anesthesia is given or too much fat is removed in one session.

There are no clear guidelines on the amount of fat that can be safely removed in one surgical procedure, but the liposuction surgeon does well to be conservative when it comes to fat removal. When too much fat is removed, there is an increased risk of post-operative bleeding and "fluid shifting," which causes dangerous swelling in the affected areas.

Refinements to the tumescent technique continue such as the use of ultrasound to make it safer and more efficient at removing fat. In ultrasound-assisted liposuction, or UAL, the canula inserted into the fat vibrates rapidly. This constant, ultrasonic vibration liquefies the fat, allowing more rapid and even removal. The disadvantage of UAL is that the ultrasonic energy emitted from the canula makes it and the surrounding fat very hot, which can cause burning. The latest generation of ultrasonic liposuction equipment has incorporated cooling systems to allow the inserted tube to remain at a safe temperature while still imparting ultrasonic energy to the fat.

▪ AM I A GOOD CANDIDATE?

Most people mistakenly consider liposuction to be a weight-loss technique. It is definitely not. It is a way to change the body contour or outline. The best candidates for liposuction are not obese or overweight; they are people who have a stable body weight, exercise regularly so that their underlying muscle tone is good, and are at or near their ideal body weight. If you match that description and have small, localized deposits of fat that don't disappear despite diet and exercise, you will likely get good results.

Fat can accumulate in certain areas in disproportion to the rest of the body—the outer thighs (saddlebags), inner thighs, around the knees, the waistline in men (love handles), the chin, and the neck. These are the places most commonly treated by liposuction. People can expect a small weight loss, usually in the three- to five-pound range, but it's the overall contour of the body where the improvement can be quite dramatic.

Liposuction can be performed on larger body areas where more fat needs to be removed, but this larger-volume liposuction must be approached much more cautiously. As I mentioned above, there are limits to how much tumescent fluid can be infused into the fat at one time and how much fat can be removed safely during one surgical session. If a person has a somewhat larger amount of fat to be removed and is otherwise a good candidate for surgery, I recommend the fat should be removed in two to three separate liposuction procedures. This approach, serial liposuction, is safer than ultra-high-volume liposuction, and it allows fine-tuning over time to maximize the contour improvement.

In so-called ultra-high-volume procedures, large amounts of fat (twenty to forty pounds) are removed at once, often under general anesthesia. The infusion of massive amounts of tumescent fluid and intravenous anesthesia simultaneously increases the risk of dangerous complications. In addition, removing so much fat at once tends to leave the skin loose and floppy. This makes for slow healing and prevents skin from adhering to the underlying tissue. Additional surgery may be necessary later to remove the floppy skin. For contour improvement on the abdomen, however, some physicians who do moderate to high-volume liposuction will remove excess skin in a procedure called abdominoplasty, at the same time the fat is removed.

▪ YOUR LIPOSUCTION CONSULTATION

Many physicians who perform liposuction offer free consultations, and you may want to have consultations with several physicians before undergoing the procedure. This “shopping around” for a doctor is a good thing. It gives you the time and information you need to develop an informed opinion as to what can and can’t be realistically accomplished. Liposuction is never an emergency procedure and you will live with the results for the rest of your life, so it behooves you not to rush through the process.

Your physician should be board certified in dermatology or plastic surgery, since these are the two specialties in which doctors have the highest level of training and expertise in liposuction. At a typical consultation your doctor should obtain a detailed medical history, including all current medications, allergies, and adverse reactions to medications or anesthesia, and past surgical procedures. You should also be asked about your pattern of weight loss or gain over the past six to twelve months.

Your physician should then examine you undressed, with specific attention paid to the areas being considered for surgery. These should be seen in several positions, including standing, sitting, lying down, and with your muscles both relaxed and contracted. Your underlying muscle tone, as well as the laxity or tightness of the skin overlying the areas to be treated, must be noted. In the case of abdominal liposuction, old surgical scars must be taken into account, and you should be checked for the presence of hernias both in the groin and around the navel.

At this initial consultation, your doctor will probably outline the procedure to be performed and go over what you will experience on the day of surgery and in the post-operative period. You may be shown before-and-after photographs of areas treated that are similar to those you are considering having done, as well as images of people in the immediate post-operative period, so you can see what the recovery process may entail. Such photographs should not be construed as guarantees of results in your particular case and are for illustration purposes only.

Finally, you should be given detailed written information to read regarding the pre-operative preparations, the procedure itself, and the post-operative routine.

I recommend that people take this material home, review it, and then write down any questions before returning for a second consultation. At that time, if the physician deems you a good candidate for liposuction and

if you decide to have the surgery, pre-operative preparations should be reviewed. Routine pre-operative laboratory work will be ordered.

If you have significant health problems—including cardiac problems, taking multiple medications, or having blood-related conditions—you may still be a candidate for liposuction; you will, however require a physical exam and clearance for surgery by your internist, family doctor, or cardiologist.

Once the lab results have verified that you are an appropriate candidate for surgery, the liposuction will be scheduled. You will be asked to stop taking any aspirin-containing products for at least ten days prior to surgery, and the doctor will prescribe an oral antibiotic to take the day before the big event.

▪ THE PROCEDURE

On the day of surgery you will be weighed to establish safe doses of the tumescent fluid, and you will be premedicated with Valium, Percocet, or similar antianxiety and pain medications. Your surgeon will then design the surgical procedure, drawing on your skin with a surgical marker to make note of both the areas that need the most fat removed and the areas to avoid due to the relative absence of fat, as well as where the small slit-like incisions to insert the canula will be made. There is some flexibility in positioning the incisions, so feel free to discuss the choices with your doctor. For example, you might request that incisions be put in an asymmetrical pattern on the body so that they will be less noticeable as surgical scars and will appear more like traumatic or incidental scars or markings on the skin. In general, by approximately twelve months after the surgery, these small incision sites are often indistinguishable from normal skin, no matter where or how they were made.

Before the procedure, you will be photographed from several angles as a record of the appearance of the areas to be treated.

Your skin is then prepared with an antibacterial surgical scrub. The incision sites are numbed with a local injection of anesthetic, which feels briefly like a bee sting. The incision sites are pierced with a scalpel and then the tumescent fluid is infused into the fat through these slits. The initial amount of fluid placed into the fat may tingle and burn, causing mild discomfort. The fat and overlying skin, however, rapidly become numb, so you will usually be quite comfortable throughout the remainder of the surgery.

As the tumescent fluid is slowly infused into the fat, the affected area will swell to about two to three times its normal size. Once all this anes-

thetic has been infused, you'll be asked to relax for thirty to forty-five minutes until it takes full effect. The surgeon then inserts the canula into the fat through the same incisions that were used to infuse the anesthetic solution. By now the fat is entirely broken up and primed for removal.

The next part of the procedure may last an hour or two, depending on what parts of the body are being treated. Patients are generally quite comfortable during this time. After appropriate and symmetrical amounts of fat have been removed from the areas being treated, excess tumescent fluid will usually be milked out with gentle massage to reduce swelling in the post-operative period.

At this point, some surgeons suture the surgical sites closed and others leave them open, which is a subject of much debate in liposuction surgery. Suturing the incision sites closed stops the excess tumescent fluid from leaking out during the first one to two days after surgery, but there is evidence that this suturing technique leads to more swelling and bruising in the post-operative period. When the surgical slits are not sutured, there is oozing and leaking of fluid over the first day or two, which can be uncomfortable, but there is some evidence that this technique allows for slightly more rapid healing and less initial bruising.

If your incision sites are left open after surgery, absorbent pads are placed over them. The pads must be changed several times a day for the first forty-eight hours to absorb the tumescent fluid that seeps out.

Once the surgery and milking procedure is completed, an adherent surgical tape will usually be placed tightly over all the treated body areas, and a very tight binder, much like a girdle, is placed over it. The tape and "girdle" act in concert to hold the skin firmly against the underlying tissue, helping to start the healing process. They also decrease bruising and swelling and ensure that the skin adheres to the underlying structures for optimal contour.

▪ RECOVERING AT HOME

After liposuction surgery, the surgical tape is usually worn for four to five days, then you remove it yourself at home. The girdle binder is usually worn twenty-four hours a day for the first week after surgery and then twelve hours daily for another three weeks to a month. Don't even think of taking off your girdle before your surgeon says it's okay, since wearing it ensures the best contour when healing is complete.

Immediately after surgery your doctor should give you a list of post-

operative instructions. You'll be told to drink plenty of fluids and to take it easy for the first day or two. After that initial period, you will usually be able to return to work and begin light exercise. Keep in mind, however, that all treated areas will be sore and may bruise significantly, with the bruising lasting up to three weeks.

Your doctor will want to see you for a checkup two to three days after surgery, and then again at one-week intervals for the first month. After that, monthly follow-ups to assess healing and skin retraction remain important.

Don't expect any improvement in contour for at least one month after surgery; in fact, the final results of a single liposuction procedure cannot be gauged completely for three to six months. It takes at least that long for all the swelling to disappear and for the overlying skin to completely heal and retract over the treated area. (You might say another criterion for judging whether you are a good liposuction candidate is your degree of patience—this is not a procedure for someone who wants overnight results!)

At three to six months after surgery, a touch-up procedure can be done if certain areas were not sufficiently contoured during the first treatment. This procedure is usually a small version of the initial procedure and may take sixty to ninety minutes.

▪ COMPLICATIONS

For the vast majority of appropriately selected people who are treated conservatively with the tumescent technique, there are no significant complications and the immediate post-operative period is a relatively benign experience. Indeed many patients have commented that the removal of the adhesive tape four to five days after the surgery was the worst part of the entire process!

Unfortunately, however, a variety of side effects and complications can still occur. It's a good idea for you to be aware of what can go wrong before choosing to undergo liposuction. The most common post-operative problems are:

- Swelling of the treated area and of adjacent sites (for example, liposuction of the abdomen can lead to swelling in the groin and pubic area)
- Bruising, numbness in the area treated, fatigue, discomfort, or soreness

- Scarring at the incision sites
- Minor irregularities or lumpiness in the treated areas

With time, all of these complications slowly improve. Other, less common side effects include persistent swelling in the treated area (this may take months to resolve), persistent numbness, hyperpigmentation (brown discoloration) of the skin overlying the treated area, and localized collections of blood or fluid called hematomas or seromas under the skin which may sometimes need to be drained. You will want to consult your doctor about these persistent problems, but given enough time, they do clear up. More serious complications related to lidocaine toxicity, fluid overload, and bleeding after surgery as mentioned earlier are rare in liposuction surgery.

▪ A WARNING

Liposuction is an increasingly popular procedure and is now being performed by an increasing number of physicians, some of whom are more experienced and more qualified than others. I stress that you must check the credentials of your dermatologist or plastic surgeon and ask as many questions as you can prior to surgery.

You should meet with your surgeon on at least two occasions before actually undergoing the procedure. If you have large areas that need to be treated but are otherwise a good candidate for liposuction surgery, I strongly recommend that you undergo two separate surgical sessions, to be done over a period of time, not one right after the other. This two-step process will likely minimize the side effects of liposuction, which are more common when the surgery addresses a larger area. In addition, the second time you undergo the procedure, you'll know what to expect and, therefore, be better prepared. While it may seem less convenient, I assure you that proceeding cautiously, over a period of time, is safer by far and offers better results.