The difference between an education and an excuse is that an education is told before a procedure and an excuse is told afterward.” This is the phrase I try to live by so that I can optimize patient satisfaction, which obviously translates into my own happiness as well. Unfortunately, many times physicians fail to provide sufficient education before a procedure either due to lack of time or effort or an inability to understand the limitations of a given procedure. The book I wrote about seven years ago, Complementary Fat Grafting, was a bestseller because it was so simple in the recipe of how to perform this procedure in a standardized manner. However, I believe the shortcomings in the book were a lack of emphasis on the requisite artistry needed for the procedure as well as a lack of emphasis on the importance of effective patient communication. This article will attempt to rectify the latter deficiency.

Since October 2010 when I started to use disposable microcannulas to perform injectable fillers in the office, I have seen a dramatic increase in my use of fillers to achieve comparable outcomes to fat transfer. (Figure 1) Accordingly, this article will focus as much on the benefits and limitations of fat transfer as well as fillers because I see these procedures as alternatives and complements to one another, and the patient should be offered this counsel so that he or she can make the most appropriate decision based on desires, budget, recovery time, and personal choice.

**Managing Patient Expectations**

In my experience, fat transfer is still the gold standard in delivering volume to the face and/or hands for the right patient candidate. Who is that right patient? Perhaps it is better to start with who is the wrong or less desired candidate. Fat transfer can provide wonderful rejuvenation; however, because it is a graft, there can be variable absorption of the graft, which can lead to results that can vary between 70 to 90 percent of the desired outcome.

**Bottom Line**

Understanding the limitations and risks of a procedure and communicating that effectively to a patient beforehand can translate into greater patient satisfaction afterward, which is the ultimate goal for all cosmetic facial surgeons.
When I counsel a patient, I start with the risk first and foremost. I find that the risk is typically not overfilling or contour problems but a patient’s possible future weight gain. When treating a person who has a tendency to gain or lose weight in a significant percentage to their body weight (and that is a bit of an arbitrary number but I say about 15-20 pounds of body weight), there can be some risk with fat transfer since the fat transferred is truly viable and consists of live fat cells. I have seen my patients who gain substantial weight over time look fuller than I would like and who then subsequently lose the weight and return to their ideal shape. On the other hand, if that individual loses weight, the fat taken from the abdomen and thighs seems to hold in the face quite well despite the weight loss. Therefore, when a patient is at his or her thinnest weight, it is not an ideal time to perform fat transfer. Conversely, if the individual is at his or her heaviest, I prefer to perform the fat transfer at that weight or one-third into the weight loss process to attain an optimally safe result. It may then be necessary to use a little bit of temporary, reversible filler to touch up the fat transfer when the patient reaches the nadir of his or her weight profile.

With the weight issue in mind, another issue to consider is the patient’s age. When treating a young patient—one who is under 30 years of age—it is hard to predict how this bioactive product will age for that patient in terms of future weight gain during a period of metabolic deceleration. I have also seen major problems when using fat as a filler in various parts of the face in isolation. For example, when fat is applied to fill in discrete acne scars or to treat a mandibular jawline defect, the person may over time see a protuberance in that area as the fat changes with weight and aging. Therefore, I rarely, if ever, use fat in isolated areas of the face. Another problem with performing fat grafting in just one area of the face is the risk of variable resorption, and accordingly patient dissatisfaction.

After discussing risk factors, it’s also important to inform patients about the limitations of fat transfer. The two things I focus on are improvement rather than perfection and the concept of longevity and permanence. Fat transfer can provide wonderful rejuvenation; however, because it is a graft there can be variable absorption of the graft, which can lead to results that can vary between 70 to 90 percent of the desired outcome. Also, because fat grafting is a soft product (compared with many fillers) that is applied more deeply below the skin (than fillers), the target result near the skin may not be entirely effaced. For example, the nasolabial grooves, or smile lines, may be only partially addressed. Even the tear trough may have a residual deficit. I counsel all my patients that nine to 12 months after initial fat transfer treatment, it may be necessary to return for filler injections to touch up the fat.
ups because of the limitations described above. If a fat transfer shows variable resorption and does not perfectly fix areas near the skin surface, why perform multiple procedures with concomitant morbidity/recovery, which will likely lead to patient dissatisfaction? Furthermore, these limitations compel me not to perform limited fat transfer in isolated areas of the face, as alluded to earlier, because with variable resorption, the patient may not see enough change to merit the cost and recovery time.

**WHEN FAT GRAFTING IS THE TREATMENT OF CHOICE**

With all of these limitations stated, why even perform fat grafting over fillers then? In my experience, the major advantage with fat transfer in the face and especially in the hands is that fat provides the most rapid benefit with the least cost. I have injected 30 to 40—if not more—syringes of fillers in a face to equal a fat transfer outcome, which can make the filler option remarkably more expensive than the fat grafting procedure. As an aside, the reason that one physician can use one to three syringes of filler to create an unnatural result and another can inject 30 syringes of fillers and have the patient still look natural has everything to do with an artistic distribution of product. What makes a fat transfer look so good despite some variable resorption, if done well, is distributing a little fat everywhere (temples, brows, upper eyelids, lower eyelids, nasojugal groove, anterior cheek, lateral cheek, buccal, canine fossa, nasolabial groove, anterior chin, prejowl, and occasionally lateral mandible). This distribution truly makes a face look wonderfully rejuvenated. One of the major problems that I’ve seen with fillers or fat is that too much is applied in one area of the face causing the overall face to look disjointed and artificial. True facial aging, especially with significant sun damage, attacks every millimeter of the face, so a little filler or fat everywhere creates the most impactful and balanced results. Therefore, the patient with stable weight and realistic expectations with sufficient panfacial volume loss is the ideal candidate for a fat transfer if it is done artistically in a balanced manner.

Based on personal experience, I do not recommend performing fat transfer in someone who has had extensive prior filler injections. While many surgeons believe that a patient can safely and effectively try temporary fillers first and then come back for fat grafting later, I disagree. Many of these temporary fillers are in a constant stage of degradation, so I am never certain of applying fat on top of a significant degree of fillers because they are on the way toward dissolution. I use the analogy of building a house on sand—the house being the solid, permanent fat resting on top of the sandy fillers that are constantly shifting and dissolving. (Figure 2) Also, to reiterate a point, filling with fat, which is a less accurate product, on top of a more accurate product like a filler makes no sense, because fillers oftentimes then need to be applied on top of the fat to polish the result. I have heard the argument that the physician can simply dissolve the hyaluronic acid filler, but I’ve found that it is hard to do this in large quantities.
without adversely affecting one’s natural hyaluronic acid (HA) content, and I am personally unconvinced that one’s HA is replenished predictably and on a timely basis.

Another analogy I use to describe the diverse role of fat and fillers to prospective patients is that of a bed. (Figure 3) Fat can be viewed as the mattress, the deep support and volume to the face. It is applied deeply to the face so that there is less impact to the surface structures. The duvet of the bed represents the larger irregularities near the surface of the face that can be more easily corrected with fillers. Finally, the sheets (the skin surface and minor skin irregularities) are managed the best with neuromodulators like Botox, laser resurfacing, and skin care therapies. Using fat to fix surface or near surface flaws can lead to patient dissatisfaction.

The limitations with any technology should be understood and communicated to the patient before the procedure not afterward. These analogies are only meant to help crystalize in a patient’s mind concepts that are otherwise hard to relay, and you can share them with your patients if so desired.

**IS FAT TRANSFER PERMANENT?**

The other controversy regarding fat transfer is whether it is permanent. I have no doubt that if it is performed correctly—minus some of the aforementioned variable resorption—that it is unequivocally permanent in nature. My own mother is seven years out from fat grafting with virtually no touch ups and still looks significantly younger at 74 years of age than she did in her 50s. I do not perform touch ups of a fat transfer with fillers in patients for upwards of a year in many cases because fat grafting results mature over that period of time. This thinking has arisen from carefully observing my results over a year’s period. Despite some absorption, in many cases fat grafting results actually improve somewhere between six to 18 months. I attribute these changes to the blood supply formally taking hold in the fat just as a hair graft does after a hair transplant. Most physicians will see results dip a bit at two to three months following a procedure and then be tempted to fill up that result with fillers or fat, but that actually creates a risk that the individual will be overfilled when he or she approaches a year out. Surgeons who state that “fat grafts will last two to three years” may not fully understand the nature of a fat transfer: How does a graft that has blood supply all of a sudden die two to three years later? Does a skin graft die two years after a procedure? Absolutely not. Whatever proportion does not survive will dissipate in the first year and not thereafter. I’ve performed many lip corrections in overdone fat grafted lips in which I surgically cut down the lip even seven to 10 years after the original treatment. I remove globules of fat that are not native lip tissue or scar, so clearly the fat is surviving as a distinct entity.

I think the reason some physicians who claim that fat transfer typically lasts only two to three years are witnessing the ongoing aging of a patient. I use the analogy of a cup of water constantly emptying to help patients understand the nature of progressive aging (Figure 4). When the cup of water is filled to a certain desired level, i.e., the face is filled to the desired degree, each year that cup of water continues to empty. Despite that fact, the cup of water will almost always be fuller than what it was before it was filled. I believe that this analogy can also be used for hair transplants (which as I have mentioned behave very much like fat transfers), i.e., the transplanted hairs for the most part remain, but native, non-transplanted hairs continue to be lost with each successive year. This is why I tell my more diligent patients that after a fat transfer it would be ideal if they could return on a yearly or every-other-year basis to maintain the result over time. Obviously, even if they do not return, they should look good for many years to come if not indefinitely.

**COMMUNICATION IS THE KEY TO PATIENT SATISFACTION**

In summary, fat grafting can offer a safe, cost-effective, aesthetically beautiful, and durable result for facial rejuvenation and provide the cornerstone in any strategy to achieve those objectives. (Figure 5) However, as always, understanding the limitations and risks of a procedure and communicating that effectively to a patient beforehand can translate into greater patient satisfaction afterward, which is the ultimate goal for all cosmetic facial surgeons.