



FACIAL REJUVENATION: A LETTER TO MY PATIENTS

Facial rejuvenation has come a long way from the skin “nips and tucks” done years ago (some techniques date as far back as the late 1800’s). In that time the entire field of surgery has experienced an explosion of innovation and advancing knowledge. Aesthetic Surgery of the face is no exception.

The greatest advances have come from the more critical thinking and analysis of the physical aging process as well as the remarkable improvement in our knowledge of facial anatomy. It is not only extra skin anymore. As we age two major processes progress and give rise to the changes we see. First, the skin and structural tissues lose their elastic properties and can not spring back as effectively. They thus, become redundant and lax. The second has to do with the underlying volume of soft tissue. Although we Americans are supposed to be overweight, we actually lose fatty tissues from our face as we age. For lack of a better word, our faces “deflate” and begin to sag. The once heart-shaped face of youth, with its bright eyes, soft, high cheeks and smooth jaw-line and neck is replaced by an lax, oval shaped face. Loss of fullness in the temporal forehead causes the brows to descend giving the eyes a tired and sometimes angry appearance. Extra skin in the upper lids may progress to “blindness” and a heavy appearance. The supporting structures of the lower lid lose their integrity with the resulting bulging fat pads and sagging lid margins. The soft fat of the cheeks atrophies and sags giving rise to deepening folds near the nose, jowls and a frowning appearance. The same processes occur in the neck with the development of bands and, as some of my patients describe, the “waddle” in the neck.

Now I’m sure I have completely depressed some of you with those descriptions, but I always think it is better to educate patients so they can truly understand the thought processes that go into our operative plans. However, there is still a little more bad news. As with all Aesthetic surgery, facial rejuvenation is not perfect. Why? Because we are unable to give you 20 year old skin or pump your face back up. However, the techniques are very successful because we are able to remove the redundant tissues and reposition the soft tissues to simulate a youthful contour. During your consult you will be shown pictures of some of my patients that will illustrate the procedures we will discuss further.

The first thing I look at when analyzing a face is to evaluate the facial proportions and symmetry. For those art buffs out there, the neo-classical canons suggest that the face should have approximately one third above the mid eyebrow and a third below the base of the nose. That leaves the middle third from the base of the nose to the mid brow. In truth, almost no one has perfect proportions but looking at them helps me evaluate the uniqueness of a face and how each person has aged. The facial thirds also are relevant because they correspond to the different procedures we do.

The upper third of the face is comprised of the forehead and brow. As I described earlier, as we age the forehead and brow lose soft tissue. This causes the lateral brow to fall. This results in laxity and fullness of the tissue above and lateral to the upper eyelid imparting a sad and tired appearance. It also contributes to the overall laxity and redundancy of the upper lid skin. Twenty years ago Plastic Surgeons mistakenly associated these aging changes to the upper eyelid. Therefore, when doing eyelid surgery, it was common to remove as much skin as possible to treat the laxity. More often than not, all it did was pull the brow down further which could actually accentuate the sad and tired look. The hazard is obvious. If someone with that kind of eyelid surgery then had a brow lift, they would have a difficult time closing their eyes! The inner brow also has changes with aging. I tease my patients that because they are always angry, they get frown lines between their eyebrows. In reality, what really happens is that we all squint and move our inner brows frequently. Just like a piece of paper that you fold over and over, the lines in between your eyebrows are related to the underlying muscles (the corrugators and brow depressors). With all techniques of brow lifting, these muscles are weakened or removed to prevent and improve these frown lines.

A quick note about brow lifts. I frequently hear patients say “I don’t want a brow lift. I saw someone with that and they looked terribly surprised!” Remember, everyone notices “bad” surgery. The good results should just make you look refreshed and awake. I have a strong prejudice for brow lifts because a good one is probably one of the most elegant and powerful ways to enhance a face. When psychologists study human behavior, they note that when men and women look at another human being, they first notice the eyes. Men quickly move their eyes south (big surprise!) where as women spend more time on the face then proceed with the entire body. They then look back at the eyes. Improving the aesthetics of the eyes is one of my number one priorities because it universally is the first impression a person gives off. Brows are one of the most important areas for facial expression. Think about drawing a simple “happy face.” By changing the angle of the brow lines you can impart a happy, angry, sad, tired or any of a number of emotions to the resulting face. The same is true about facial rejuvenation. It isn’t even the hair in the eyebrow that is important. I have done many brow lifts on people that have high brows or those who have artificially elevated their brows

by tweezing or permanent makeup. I am more interested in the ability of the soft tissue around the eye being able to frame the eye appropriately. Ideally there should be a crisp fold above the upper eyelashes and a soft highlight above and lateral to the eye. The inside brow should not be overly elevated (surprised) but the harshness removed (from being angry all the time!).

How are brow lifts done? There are several ways to accomplish brow / forehead lifting. The classic technique is to place a long incision over the top of the head (Coronal approach). The problem is that when the extra tissue is removed, you remove quite a bit of hair and the forehead gets bigger. Unless you are Marie Antoinette, you probably don't want a larger forehead. I therefore place the incision right at the hairline and follow each hair follicle to camouflage the resulting scar. The added advantage is that I am closer to the problem areas and can effect change more precisely. However, the down side is that it takes me longer to do the procedure. Most surgeons that do coronal incisions close them with staples. I find that to be a little barbaric. To make the hairline incision minimally detectable requires that I spend extra time using very fine sutures. There is also a technique called Endoscopic Brow lifting. This utilizes similar instruments as are used for arthroscopic knee surgery and laparoscopic surgery. Small incisions are placed and the manipulations of the brow muscles are done with small telescopes. They then advance the brow and hold it in place with screws placed into the bone or other device. I have never really embraced these techniques because I do not believe they offer equivalent results as doing it "open." My analogy is that of working on the engine of your car. You could probably do it without opening up the hood, but it would be a lot harder to do as good a job. By doing it "open", I have more precise control of the brow position and muscle removal. Also, in endoscopic brow lifts, the redundant tissue is never excised. Because of this, I believe that the longevity of the result is in question. I personally think that hairline forehead surgery is vastly superior to endoscopic results. However, this continues to be argued within our field and many competent surgeons utilize this technique.

Upper eyelid surgery is relatively straight-forward. The extra skin is simply removed leaving a nearly invisible scar in the crease. One mistake that was made in the past was the over excision of upper eyelid fat. Early after the surgery it may look good, but years later it may contribute to a "hollowing out" of the upper lid. Remember what I said. As we age, we lose fat in our faces. The overwhelming trend in facial rejuvenation is the preservation of facial fat.

Improvement of Lower eyelid aging requires a more complicated approach. Many people think that it is just a matter of extra skin and fat. This could not be farther than the truth. As we age the supporting structures of the eyelid lose their strength. As a result, the lower lid sags and the fat that is located around the globe of the eye, becomes visible. It is not that the eyelid got fat. It is more accurate to say that the wall that held the fat in becomes weak and the fat bulges through the weak wall. Therefore, if a surgeon just removes skin and fat, what you can get is a "cow's eye" (lateral lid droop or even turning out called an ectropion) with a sunken-in look. As techniques progress, it has become apparent that "less surgery is more result." There are exceptions, but each patient requires careful consideration before proceeding with lower eyelid surgery. Depending on the needs, skin or muscle may be removed, soft tissue repositioned and orbital fat removed. In many patients, the only major problem is bulging fat. In those people the offending fat can be removed by making a small opening on the inside of the eyelid so that no external visible scar is required. The best treatment of the lower eyelid skin may actually be non-surgical resurfacing. This will be discussed later.

Facial aging of the lower two-thirds of the face is addressed by techniques of face lifting. The traditional face lift, and in fact the kind of face lift that the majority of Plastic Surgeons still employ, is a skin lift. The idea is that you pull up the extra skin, cut it off and sew up the incisions. There are great disadvantages and limitations of this technique. First of all, we as Plastic Surgeons are becoming more aware each year that much more than the skin is involved with facial aging. If you look at the face in concentric layers, it progresses from Skin, Fatty tissue, Muscle and finally bone. The reality is that all these structures age to one degree or another. But the aging of the bone and muscle tends to contribute little to the overall aged look. In contrast, the fatty tissue has been increasingly appreciated as the most important layer to consider when planning rejuvenation. Skin lifts do nothing to this layer. Another great disadvantage is the characteristic of skin itself. Skin is the largest organ in the body. Its job is to conform to the body and keep the outside out and the inside in. It is very stretchy stuff. Just think about how the skin on the tummy of a pregnant woman changes. Skin is made to conform to the underlying shape. So if you just pull on the skin, it tends to stretch back out in a very short time. That is why women were told that to maintain their facelift, they may have to repeat the surgery every 3 to 5 years. In an attempt to make the result last longer, some surgeons chose to just pull on the skin harder. This had many very bad consequences. The "pulled" look that everyone associates with face lifting is one. Also it causes stretching of the collagen with thinning of the skin with a shiny appearance. Also, since there is so much tension on the closure, the scar widens (some mistakenly call this a keloid).

The newer more advanced techniques of face lifting incorporate corrections of the fatty layer into the procedure. There are many different specific operations but they all share this in common. Examples include deep plane, composite, and subperiosteal facelifts. The procedure I perform is officially called an Extended SMAS Facelift. SMAS is an acronym for "Superficial Musculo-aponeurotic System." There will be a quiz at the end of this letter to make sure you know this! Simply stated, it is the

tissue that envelops and controls the position of the fatty tissue of the face. It is the handle by which you can move and secure changes in the facial fat.

Many Plastic Surgeons do “SMAS” lifts. Most of them (including my father 20 years ago) simply place sutures into the fatty layer to “tighten” that layer. In some people, this can give a limited result. In the Extended SMAS, the fatty layer is mobilized and released from its anatomical attachments (a critical step. If it is not released, it will not move). The facial fat is then repositioned to reestablish a youthful contour. This adds fat to the hollow cheeks, moves the jowl fat back into the cheek and tightens the lax neck structures. Once repositioned, it is sutured in the new position. After this step, the skin of the face is draped over the new contour. Any extra skin is removed but the skin is not pulled upon. This accomplishes several beneficial things. The resulting contour is natural and soft. It is not pulled. Since there is little tension on the skin, the incisions uniformly heal with minimal visibility. Lastly, since the overall structural contour has been changed, the result lasts longer. In contrast to the simple skin or SMAS lift, Extended SMAS results are typically maintained for ten years or longer. The down side of the Extended SMAS is that it is technically much more difficult and takes quite a bit longer to perform. That is why I took an extra two years of fellowship in Facial Aesthetic Surgery after my residency in Plastic Surgery. Typically it requires five to six hours for a Plastic Surgeon to complete a facial rejuvenation procedure that includes and Extended SMAS procedure. That may sound like a long time, but I believe that the extra time is well worth it. I think the pictures of my patients you will see will support that.

How are the incisions placed for a Facelift? One of my mentors, Tom Baker, told me that if it weren't for the ear, Facelifts would be easy to plan. However, most of my patients have ears so you have to plan the placement of the incisions wisely and navigate around the them. The classic placement of a facelift incision is behind the side burn, in front of the ear, and behind the ear into the hair. The same problem presents itself here as I discussed for the brow lift. If you place the incision behind the sideburn, you end up removing the sideburn when you remove the extra skin from the face. That is why women were traditionally told to wear their hair down after a facelift. Instead I place the incision right at the junction of the sideburn and the cheek. That may frighten some patients. However, when care is taken during the closure, rarely is the fine hairline scar visible. Even if it is, it is easily concealed with a little make-up or Hair Transplants (something else I do in my practice). In contrast to the classic incision, the sideburn is left intact. From a technical standpoint, it also allows me to be more precise and get a better result around the eyes and cheek.

To recap, the surgical procedures that are done during facial rejuvenation include Browlifts, Eyelid Surgery (Blepharoplasty), and Facelifts. Notice I have not discussed Skin Rejuvenation/ Resurfacing yet. That brings up a very important point. Facial rejuvenation surgery can improve the position and youthfulness of the face but little overall change to the quality of the skin results. There is no such thing as a Laser Facelift. That is a marketing term to promote laser resurfacing as an alternative to traditional facial rejuvenation. The two procedures are totally different and accomplish different things. Ironically, the recovery from Skin Resurfacing is usually much more unpleasant and longer than traditional surgical rejuvenation. So what is Skin Rejuvenation?

In the late 1960's women were being treated by European Spa “Peelers” who would treat wrinkles with topical agents. They would not tell anybody their secret until two Plastic Surgeons from Miami, Tom Baker and Howard Gordon, were able to scientifically analyze their techniques. And thus the Baker Gordon Phenol Peel was developed. The results were dramatic with even the deepest wrinkles being improved. The take home story is that if you can precisely destroy the upper layers of the skin without going through the skin (which results in a scar and lifetime enemy for the doctor) you can stimulate the skin to produce a new layer of collagen and elastic fibers. Although this makes the resulting skin a little bit thinner, it increases the two things that are diminished in aged skin, namely collagen and elastin. The phenol peel is just carbolic acid and croton oil. It turns out that when precisely mixed they will result in a non-full-thickness deep second-degree burn that will treat the wrinkles. The problem with the Phenol Peel is that it is very toxic to the cells that produce pigment. So the wrinkles improve at the expense of having lighter colored skin with a rather obvious line of demarcation.

Dermabrasion (a sanding wheel; sounds horrible) has also been employed with excellent results. However, it is too risky for around the eyes because the skin is so thin.

The newest advances have been the use of Lasers to resurface the skin. They have many advantages. One, they tend to be more precise, although some would argue about that. Two, they were thought to produce less pigmentation change than phenol, although now we are seeing more of this complication. Three, they are really impressive, cool and easy to market. The dirty secret is that they are much easier to use than Phenol or Dermabrasion. This is why so many different types of doctors offer these treatments. Usually all you need is a weekend course to be proficient in their use. I personally prefer the Coherent Ultrapulse CO₂ Laser. It is reliable and I can rent it for the days I need it. However, there are now many different lasers on the market that can give comparable results. A new “and improved” one seems to come out each week with “dramatic” claims of being better

(go figure). One great disadvantage of Lasers is that they are profoundly expensive and break a lot. Doctors owning them need to use them to pay for them. They tend to be a little more aggressive with their use.

The planned skin resurfacing procedure depends on the type and depth of the pathology one wants to treat. The deeper the problem, the more progressive the treatment needs to be. The deeper the treatment, the longer the recovery.

Problems of complexion can usually be improved with mild topical agents that have essentially little if any recovery time. Examples of mild topical agents include glycolic and alpha-hydroxy acids, retinoic compounds and topical vitamin C. These may plump up the skin and slowly treat mild pigmentation problems but have not really been found to be very effective for severe sun damage, deep wrinkles or severe pigmentation problems.

In the case of pigmentation problems, a less aggressive treatment than phenol, dermabrasion or Laser Resurfacing may be the ticket. One example is Tri-chloroacetic Acid (TCA). TCA is an intermediate-depth peeling agent. Since pigmentation problems usually exist in the superficial dermis, treating the skin to this level can “wipe the slate clean” and produce a lighter and even complexion.

For the deeper problems such as deep wrinkles, Phenol, dermabrasion or Laser Resurfacing are the options that are usually performed.

RECOVERY:

For some reason, and I don't know why, most people have few complaints of pain after facial surgery (with the exception of deep skin resurfacing). They describe being swollen, stiff, feeling “mask-like” and not moving or chewing right. They rarely have severe pain. Usually only a mild headache the first day or so and after that mild soreness.

In the case of Laser Resurfacing, Phenol and deep Dermabrasion, if it weren't for the special anesthetic ointment I provide, patients would be in severe pain. With its use, few people have significant complaints other than mild discomfort.

Recovery after any of these procedures can be as little as five to seven days in the case of simple upper eyelid surgery to as long as two to three weeks for the more involved procedures with the exceptions noted below.

I tell patients undergoing facelifts and browlifts that many people are feeling pretty good at a week but they should not expect to be back to work (with make-up) for two weeks. The tissues are still stiff and some swelling may be evident for up to 8 weeks. But usually at two weeks the signs of surgery are minimally detectible to the average observer and patients can resume normal non-exertional duties. However if you are expecting facial surgery in preparation for a special event (reunion, wedding, etc.) you should plan on at least 2 months between you surgery and the occasion. Any potential complication will delay normal healing and I would hate that to ruin your plans. Areas that tend to stay a little swollen and stiffer longer than four weeks include the lower eyelids and area under the chin.

Skin resurfacing can take as little as seven days in the case of TCA Peels to three weeks with Laser resurfacing. In particular, Laser Resurfacing is usually associated with significant redness of the treated skin for a prolonged period (up to three months) which requires cover-up makeup to conceal. That is why men almost never have laser resurfacing.

RISKS OF FACIAL REJUVENATION:

I tease my patients and tell you that I have to scare you out of you wits before I can perform any operation. However, the sober reality is that every surgical procedure involves a certain amount of risk, and it is important for you to understand these potential risks and side-effects before you undergo facial rejuvenation, skin resurfacing or any procedure for that matter. An individual's choice to undergo any surgical procedure or intervention must be based on an evaluation of the risk as compared to the success of the desired beneficial result. Despite the fact that the large majority of patients do not experience any significant or serious complications, you should discuss each of them with your plastic surgeon to make sure you understand the risks, potential complications and consequences of the planned procedures.

BLEEDING: It is possible, though unusual, to experience significant bleeding during or after surgery. Should post-operative bleeding occur, it may require emergency treatment and surgery to drain the accumulated fluid. In extreme cases it may require a blood transfusion. In the history of my practice (over 9 years), no one has required any transfusions or hospitalization for any of the procedures I have done. Do not take any aspirin or anti-inflammatory medications for fourteen days before surgery, as this may increase the risk of serious bleeding

REVISIONS AND ADDITIONAL SURGERY: The need to return to the operating room is very uncommon but that is possible with any surgery. Small revisions may be required and can usually be done under local anesthesia with minimal if any down time. In my practice the need for revisions is less than 5 percent.

ASSYMETRIES: Facial asymmetries are the norm in the human face. It is these asymmetries that impart the specific qualities of a face and allow us to recognize ourselves and each other. If it makes sense, I may attempt to improve these asymmetries during the procedure. However, I have found that the human face has a remarkable memory for these asymmetries (they are usually due to underlying boney differences or learned animation habits and muscle tone) and may persist despite any effort.

SENSATION CHANGES AND NUMBNESS: No matter what kind of surgery is performed, changes in sensation are to be expected. In the case of facial rejuvenation, microscopic nerves are interrupted and may not function. The affected areas are numb or may have strange feelings such as tingling, itching, burning or rarely pain. These postoperative changes are usually temporary and normalize within 6 to 12 months. Although uncommon, permanent loss of sensation is possible as well as persistent decreases in sensation and paresthesias (tingling, burning or other abnormal feeling).

MOTOR NERVE DAMAGE: The nerves responsible for the movements of the face are near the areas that are manipulated during face lifts, brow lifts and other facial surgeries. Although I have never had a patient with permanent motor nerve injury (it is a very rare complication), if you research facial surgery in a Plastic Surgery Textbook, full facial paralysis is described as a potential complication. I have had a very few patients with temporary loss of raising an eyebrow or the inability to completely close an eye that resolved in 2 to three weeks. In that instance, those symptoms were probably due to a bruised nerve, not one that was cut. Interestingly, even if a motor nerve is cut, they usually regain function in 12 to 24 months.

INFECTION: Infections of the face is exceedingly rare. I have never seen a case of infection after Facial Rejuvenation Surgery. However, as a precaution, all of my patients receive antibiotics and anti-virals if appropriate.

HEALING ABNORMALITIES: In the case of face lifts and other facial surgery, abnormalities of healing or blood supply may actually cause portions of skin to heal incompletely and can even cause an open wound for a prolonged time. This may even require additional reconstructive surgery. With the exception of those with severe Diabetes and heavy smokers, this is rare.

HAZARDS OF SMOKING: Smoking has a profoundly negative effect on healing, especially in facial rejuvenation surgery. Many surgeons will not operate on active smokers because of the marked increase of many serious complications. For you information, Tobacco smoke contains two very powerful chemicals that really impair healing. The first is Nicotine. Nicotine causes blood vessels to spasm and carry much less blood. The second is Carbon Monoxide. Carbon monoxide is a very hazardous gas that binds to the red blood cell hemoglobin and prevents it from carrying Oxygen. So in the case of smokers, their blood has a more difficult time getting to the areas of healing and, when it does arrive, it delivers less Oxygen, which is critical to healing after surgery. This deterioration of healing can be catastrophic. I always ask active smokers to completely abstain from any tobacco for at least 2 days prior to surgery and for at least 2 weeks afterwards. It is true that if a smoker could do that, they would have succeeded in quitting (which may be the best thing that results from having a facelift). However, the damaging effect of a single cigarette can last up to 6 hours. So "cutting back" is not an option. Occasionally I will refuse to do surgery on a heavy smoker because of the increased risks.

SCARRING: Although every effort is made to insure that all the necessary incisions are minimally detectable, rarely scars can enlarge and become hypertrophic (keloid).

HAIR LOSS: Hair follicles are very sensitive to local changes in blood supply and inflammation. Although uncommon, you may experience temporary and, rarely, permanent hair loss around incisions and sutures.

BRUISING/ SKIN PIGMENTATION: Although most patients experience some amount of bruising, occasionally the discoloration may persist beyond the expected 7 to 10 days. Rarely, the skin overlying a bruise may become discolored with a brownish hue for months or, even more rare, permanently.

SWELLING/ EDEMA: Although some swelling is inevitable with any surgery, the obvious post operative swelling associated with facial surgery usually resolves to an acceptable degree within 14 days. Occasionally, this edema may persist for 4 to 6 weeks and, rarely, several months. The reality of face lift surgery is that most people are presentable at 10 to 14 days. However, the tissues of the face continue to heal for as long as 18 months. Most of this healing is complete in the first 6 weeks. However, subtle improvements continue to progress for up to two years. For those detail oriented among you, to notice these changes would require high quality sequential photographs for comparison.

NEED FOR HOSPITALIZATION: Rarely, patients may require hospitalization after serious complications. I have not had to hospitalize any of my facial surgery patients in my practice.

COMPLICATIONS OF ANESTHESIA: Although rare, serious complications from anesthesia can occur. Nearly everyone has read in the lay press stories of horrible complications following anesthesia. However, in those patients who are healthy and have elective surgery (all of my patients), the rate of catastrophic complication and death is between 1 in 250,000 to 1 in 400,000. That is nearly 4 times safer than getting into an automobile.

BLOOD CLOTS , DEEP VENOUS THROMBOSIS AND PULMONARY EMBOLUS: Although all of my patients receive treatment for prophylaxis against the formation of blood clots in the legs, these complications can still occur. In severe cases, hospitalization may be necessary and the patient may have to take blood thinning medication for a prolonged period. In rare cases, blood clots may travel to the lungs causing Pulmonary Embolus which potentially can cause death.

SEVERE REACTIONS TO MEDICATIONS/ NEW UNKNOWN ALLERGIES: Rarely patients experience serious complication from receiving anesthetic medications that require treatment.

CARDIOPULMONARY COMPLICATIONS: Heart failure, Heart attacks and Pulmonary (lung) failure may be a complication of surgery or anesthesia. These complications are very rare and have not occurred in my practice.

COMPLICATIONS SPECIFIC TO EYELID SURGERY:

DRY EYES: Any surgery around the eyes can cause dryness of the eyes for prolonged periods. Please tell Dr. Hause if you have a history of dry eyes.

INABILITY TO COMPLETELY CLOSE YOUR EYES: It is common for people having eyelid surgery to temporarily be unable to close their eyes completely. This is treated with eyedrops and ointments. Although rare, this may persist for a significant period of time.

DAMAGE TO VISION AND BLINDNESS: Damage to the eye is very rare after eyelid surgery and is usually due to bleeding complications. Blindness after eyelid surgery has been described in the Plastic Surgery Literature but, as pointed out, is exceptionally rare. I have never experienced this complication in my practice.

COMPLICATIONS OF SKIN REJUVENATION:

DELAYED HEALING: Although uncommon, healing that requires more than two weeks can occur.

SCARRING: Rarely due to infection or impaired healing, visible scars can occur after skin rejuvenation. I have not had this complication in my practice.

PIGMENTATION CHANGES: Following facial surgery and skin resurfacing, the skin is very susceptible to developing pigmentation abnormalities, especially if exposed to unprotected sunlight. It is critical that you avoid sun exposure for at least 12 months following skin resurfacing. Strict adherence to the use of complete sun blocks can minimize these complications. Dr. Hause may prescribe bleaching creams to minimize this risk as well.

I certify that I have read and that I understand all 7 pages of this consultation letter. I agree to discuss any of my questions regarding Facial Rejuvenation and Skin Rejuvenation with Dr. Hause during my consultation.

Patient Name

Patient Signature

Date

Witness Signature

Date
