

## **“MEDICAL INTERVENTION (SURGERY) RISKS” Annex #2 INFORMED CONSENT – BROW LIFT SURGERY**

### **INSTRUCTIONS**

This is an informed-consent document that has been prepared to help inform you of brow lift surgery, its risks, as well as alternative treatments. It is important that you read this information carefully and completely.

### **GENERAL INFORMATION**

The forehead and eyebrow region often show noticeable signs of aging. Looseness in these structures may cause drooping eyebrows, eyelid hooding, forehead furrows, and frown lines. In brow lift surgery, the structures responsible for these problems are tightened or altered to smooth the forehead, raise the upper eyebrows, and improve frown lines. A brow lift may be performed alone, or in conjunction with other procedures, such as a facelift or eyelid surgery.

Advances in brow lift surgery make it possible to perform the procedure through a variety of approaches, including endoscopy. Brow lift surgery is individualized for each patient. The surgical incisions used may vary with the technique selected by your surgeon to meet your needs. The brow lift cannot stop the process of aging.

### **ALTERNATIVE TREATMENTS**

Alternative forms of treatment consist of not treating the laxness in the forehead and upper eyebrow region by brow lift surgery. Improvement of skin laxity and skin wrinkles may be attempted by other treatments or surgery such as laser resurfacing, chemical face peels, or injectables. Risks and potential complications are associated with alternative surgical forms of treatment.

### **RISKS OF BROW LIFT SURGERY**

Every surgical procedure involves a certain amount of risk and it is important that you understand these risks and the possible complications associated with them. In addition, every procedure has limitations. An individual's choice to undergo a surgical procedure is based on the comparison of the risk to potential benefit. Although the majority of patients do not experience these complications, you should discuss each of them with your plastic surgeon to make sure you understand all possible consequences of brow lift surgery.

#### **Specific Risks of Brow Lift Surgery**

**Change in Surgical Approach for Brow Lift:** In some situations, depending on factors discovered only at the time of surgery, your surgeon may have to make changes in surgical technique and approach to the brow lift procedure. This may require changing from an endoscopic (closed) technique to a standard (open) brow lift technique.

**Nerve Injury:** There is the potential for injury to both motor and sensory nerves during a brow lift procedure. Weakness or loss in movements of the forehead or upper eyebrow may occur after surgery. Most individuals will notice a return of motor function; permanent weakness is rare. Injury may also occur in the sensory nerves of the forehead, scalp, and temple regions. Diminished sensation may normally occur in the scalp region after a brow lift surgery. Permanent numbness or painful nerve scarring is rare.

**Eye Irritation:** Irritation or dryness in the eyes may occur after a brow lift or when the patient has eyelid surgery performed at the same time.

**Hair Loss:** Hair loss may occur within the scalp or surgical incisions. The occurrence of this is not predictable. Hair loss may resolve slowly or in rare cases be permanent.

**Hardware and Deeper Sutures:** Some surgical techniques use small screws, permanent deep sutures, or dissolvable devices to help suspend brow structures. Sutures or devices may spontaneously poke through the skin, become visible or produce irritation that requires removal. In very unusual circumstances, a screw could penetrate through the skull. Intracranial injury is rare, but possible. If this occurs, additional treatment may be necessary. It may be necessary to remove hardware or deeper sutures at a later time.

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**Eyelid Disorders:** Disorders that involve abnormal position of the upper eyelids (eyelid ptosis), loose eyelid skin, or abnormal laxness of the lower eyelid (ectropion) can coexist with sagging forehead and eyebrow structures. Brow lift surgery will not correct these disorders. Additional surgical procedures may be necessary.

### **3D Modeling**

Be aware that preliminary 3D modeling results may also not meet postoperative results. There may also be skin loss and residual skin excess after surgery.

### **General Risks of Surgery**

**Healing Issues:** Certain medical conditions, dietary supplements and medications may delay and interfere with healing. Patients with massive weight loss may have a healing delay that could result in the incisions coming apart, infection, and tissue changes resulting in the need for additional medical care, surgery, and prolonged hospitalizations. Patients with diabetes or those taking medications such as steroids on an extended basis may have prolonged healing issues. Smoking will cause a delay in the healing process, often resulting in the need for additional surgery. There are general risks associated with healing such as swelling, bleeding, and the length of surgery and anesthesia that include a longer recovery and the possibility of additional surgery, prolonged recovery, color changes, shape changes, infection, not meeting goals and expectations, and added expense to the patient. Patients with significant skin laxity (patients seeking facelifts, breast lifts, abdominoplasty, and body lifts) will continue to have the same lax skin after surgery. The quality or elasticity of skin will not change and recurrence of skin looseness will occur at some time in the future, quicker for some than others. There are nerve endings that may become involved with healing scars during surgery such as suction-assisted lipectomy, abdominoplasty, facelifts, body lifts, and extremity surgery. While there may not be a major nerve injury, the small nerve endings during the healing period may become too active producing a painful or oversensitive area due to the small sensory nerve involved with scar tissue. Often massage and early non-surgical intervention resolves this. It is important to discuss post-surgical pain with your surgeon.

**Bleeding:** It is possible, though unusual, to experience a bleeding episode during or after surgery. Should post-operative bleeding occur, it may require emergency treatment to drain accumulated blood or you may require a blood transfusion, though such occurrences are rare. Increased activity too soon after surgery can lead to increased chance of bleeding and additional surgery. It is important to follow postoperative instructions and limit exercise and strenuous activity for the instructed time. Do not take any aspirin or anti-inflammatory medications for at least ten days before or after surgery, as this may increase the risk of bleeding. Non-prescription “herbs” and dietary supplements can increase the risk of surgical bleeding. Hematoma can occur at any time, usually in the first three weeks following injury to the operative area. If blood transfusions are necessary to treat blood loss, there is the risk of blood-related infections such as hepatitis and HIV (AIDS). Heparin medications that are used to prevent blood clots in veins can produce bleeding and decreased blood platelets.

**Infection:** Infection is unusual after surgery. Should an infection occur, additional treatment including antibiotics, hospitalization, or additional surgery may be necessary. It is important to tell your surgeon of any other infections, such as ingrown toenail, insect bite, or urinary tract infection. Remote infections, infections in other parts of the body, may lead to an infection in the operated area.

**Scarring:** All surgery leaves scars, some more visible than others. Although good wound healing after a surgical procedure is expected, abnormal scars may occur within the skin and deeper tissues. Scars may be unattractive and of different color than the surrounding skin tone. Scar appearance may also vary within the same scar. Scars may be asymmetrical (appear different on the right and left side of the body). There is the possibility of visible marks in the skin from sutures. In some cases scars may require surgical revision or treatment.

**Firmness:** Excessive firmness can occur after surgery due to internal scarring. The occurrence of this is not predictable. Additional treatment including surgery may be necessary.

**Change in Skin Sensation:** It is common to experience diminished (or loss) of skin sensation in areas that have had surgery. Diminished (or complete loss of skin sensation) may not totally resolve.

**Skin Contour Irregularities:** Contour and shape irregularities may occur. Visible and palpable wrinkling of skin may occur. Residual skin irregularities at the ends of the incisions or “dog ears” are always a possibility when

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there is excessive redundant skin. This may improve with time, or it can be surgically corrected.

**Skin Discoloration / Swelling:** Some bruising and swelling normally occur. The skin in or near the surgical site can appear either lighter or darker than surrounding skin. Although uncommon, swelling and skin discoloration may persist for long periods of time and, in rare situations, may be permanent.

**Skin Sensitivity:** Itching, tenderness, or exaggerated responses to hot or cold temperatures may occur after surgery. Usually this resolves during healing, but in rare situations it may be chronic.

**Major Wound Separation:** Wounds may separate after surgery. Should this occur, additional treatment including surgery may be necessary.

**Sutures:** Most surgical techniques use deep sutures. You may notice these sutures after your surgery. Sutures may spontaneously poke through the skin, become visible or produce irritation that requires suture removal.

**Delayed Healing:** Wound disruption or delayed wound healing is possible. Some areas of the skin may not heal normally and may take a long time to heal. Areas of skin may die. This may require frequent dressing changes or further surgery to remove the non-healed tissue. Individuals who have decreased blood supply to tissue from past surgery or radiation therapy may be at increased risk for delayed wound healing and poor surgical outcome. **Smokers have a greater risk of skin loss and wound healing complications.**

**Damage to Deeper Structures:** There is the potential for injury to deeper structures including nerves, blood vessels, muscles, and lungs (pneumothorax) during any surgical procedure. The potential for this to occur varies according to the type of procedure being performed. Injury to deeper structures may be temporary or permanent.

**Fat Necrosis:** Fatty tissue found deep in the skin might die. This may produce areas of firmness within the skin. Additional surgery to remove areas of fat necrosis may be necessary. There is the possibility of contour irregularities in the skin that may result from fat necrosis.

**Seroma:** Infrequently, fluid may accumulate between the skin and the underlying tissues following surgery, trauma or vigorous exercise. Should this problem occur, it may require additional procedures for drainage of fluid.

**Surgical Anesthesia:** Both local and general anesthesia involve risk. There is the possibility of complications, injury, and even death from all forms of surgical anesthesia or sedation.

**Shock:** In rare circumstances, your surgical procedure can cause severe trauma, particularly when multiple or extensive procedures are performed. Although serious complications are infrequent, infections or excessive fluid loss can lead to severe illness and even death. If surgical shock occurs, hospitalization and additional treatment would be necessary.

**Pain:** You will experience pain after your surgery. Pain of varying intensity and duration may occur and persist after surgery. Chronic pain may occur very infrequently from nerves becoming trapped in scar tissue or due to tissue stretching.

**Cardiac and Pulmonary Complications:** Pulmonary complications may occur secondarily to both blood clots (pulmonary emboli), fat deposits (fat emboli) or partial collapse of the lungs after general anesthesia. Pulmonary emboli can be life-threatening or fatal in some circumstances. Inactivity and other conditions may increase the incidence of blood clots traveling to the lungs causing a major blood clot that may result in death. It is important to discuss with your physician any past history of swelling in your legs or blood clots that may contribute to this condition. Cardiac complications are a risk with any surgery and anesthesia, even in patients without symptoms. If you experience shortness of breath, chest pain, or unusual heart beats, seek medical attention immediately. Should any of these complications occur, you may require hospitalization and additional treatment.

**Allergic Reactions:** In rare cases, local allergies to tape, suture material and glues, blood products, topical preparations or injected agents have been reported. Serious systemic reactions including shock (anaphylaxis) may occur in response to drugs used during surgery and prescription medicines. Allergic reactions may require additional treatment.

**Asymmetry:** Symmetrical body appearance may not result after surgery. Factors such as skin tone, fatty deposits, skeletal prominence, and muscle tone may contribute to normal asymmetry in body features. Most patients

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have differences between the right and left side of their bodies before any surgery is performed. Additional surgery may be necessary to attempt to diminish asymmetry.

**Surgical Wetting Solutions:** There is the possibility that large volumes of fluid containing dilute local anesthetic drugs and epinephrine that is injected into fatty deposits during surgery may contribute to fluid overload or systemic reaction to these medications. Additional treatment including hospitalization may be necessary.

**Persistent Swelling (Lymphedema):** Persistent swelling in the legs can occur following surgery.

**Unsatisfactory Result:** Although good results are expected, there is no guarantee or warranty expressed or implied, on the results that may be obtained. You may be disappointed with the results of surgery. Asymmetry, unanticipated shape and size, loss of function, wound disruption, poor healing, and loss of sensation may occur after surgery. Size may be incorrect. Unsatisfactory surgical scar location or appearance may occur. It may be necessary to perform additional surgery to improve your results.

### **ADDITIONAL ADVISORIES**

**Smoking, Second-Hand Smoke Exposure, Nicotine Products (Patch, Gum, Nasal Spray):**

Patients who are currently smoking or use tobacco or nicotine products (patch, gum, or nasal spray) are at a greater risk for significant surgical complications of skin dying, delayed healing and additional scarring. Individuals exposed to second-hand smoke are also at potential risk for similar complications attributable to nicotine exposure. Additionally, smoking may have a significant negative effect on anesthesia and recovery from anesthesia, with coughing and possibly increased bleeding. Individuals who are not exposed to tobacco smoke or nicotine-containing products have a significantly lower risk of this type of complication.

**Medications and Herbal Dietary Supplements:** There are potential adverse reactions that occur as the result of taking over-the-counter, herbal, and/or prescription medications. Aspirin and medications that contain aspirin interfere with clotting and can cause more bleeding. These include non-steroidal anti-inflammatories such as Motrin, Advil, and Alleve. It is very important not to stop drugs that interfere with platelets, such as Plavix, which is used after a stent. It is important if you have had a stent and are taking Plavix that you inform the plastic surgeon. Stopping Plavix may result in a heart attack, stroke and even death. Be sure to check with your physician about any drug interactions that may exist with medications which you are already taking. If you have an adverse reaction, stop the drugs immediately and call your plastic surgeon for further instructions. If the reaction is severe, go immediately to the nearest emergency room. When taking the prescribed pain medications after surgery, realize that they can affect your thought process and coordination. Do not drive, do not operate complex equipment, do not make any important decisions and do not drink any alcohol while taking these medications. Be sure to take your prescribed medication only as directed.

**Sun Exposure – Direct or Tanning Salon:** The effects of the sun are damaging to the skin. Exposing the treated areas to sun may result in increased scarring, color changes, and poor healing. Patients who tan, either outdoors or in a salon, should inform their surgeon and either delay treatment, or avoid tanning until the surgeon says it is safe to resume. The damaging effect of sun exposure occurs even with the use sun block or clothing coverage.

**Travel Plans:** Any surgery holds the risk of complications that may delay healing and delay your return to normal life. Please let the surgeon know of any travel plans, important commitments already scheduled or planned, or time demands that are important to you, so that appropriate timing of surgery can occur. There are no guarantees that you will be able to resume all activities in the desired time frame.

**Long-Term Results:** Subsequent alterations in forehead and upper eyebrow appearance may occur as the result of aging, weight loss or gain, sun exposure, pregnancy, menopause, or other circumstances not related to brow lift surgery. Brow lift surgery does not arrest the aging process or produce permanent tightening of the forehead. Future surgery or other treatments may be necessary to maintain the results of a brow lift procedure.

**Body-Piercing Procedures:** Individuals who currently wear body-piercing jewelry in the surgical region are advised that an infection could develop from this activity.

**Female Patient Information:** It is important to inform your plastic surgeon if you use birth control pills, estrogen

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replacement, or if you suspect you may be pregnant. Many medications including antibiotics may neutralize the preventive effect of birth control pills, allowing for conception and pregnancy.

**Intimate Relations After Surgery:** Surgery involves coagulating of blood vessels and increased activity of any kind may open these vessels leading to a bleed, or hematoma. Activity that increases your pulse or heart rate may cause additional bruising, swelling, and the need for return to surgery and control bleeding. It is wise to refrain from intimate physical activities until your physician states it is safe.

**Mental Health Disorders and Elective Surgery:** It is important that all patients seeking to undergo elective surgery have realistic expectations that focus on improvement rather than perfection. Complications or less than satisfactory results are sometimes unavoidable, may require additional surgery and often are stressful. Please openly discuss with your surgeon, prior to surgery, any history that you may have of significant emotional depression or mental health disorders. Although many individuals may benefit psychologically from the results of elective surgery, effects on mental health cannot be accurately predicted.

**Skin Disorders / Skin Cancer:** A brow lift is a surgical procedure for the tightening of skin and deeper structures of the face. Skin disorders and skin cancer may occur independently of a brow lift.

**Previous Surgical Scars:** The presence of surgical scars from previous facial surgery may limit the amount of skin tightening that can be produced.

### **ADDITIONAL SURGERY NECESSARY (Re-Operations)**

There are many variable conditions that may influence the long-term result of brow lift surgery. Secondary surgery may be necessary to obtain optimal results. Should complications occur, additional surgery or other treatments may be necessary. Even though risks and complications occur infrequently, the risks cited are particularly associated with facelift surgery. Other complications and risks can occur but are even more uncommon. The practice of medicine and surgery is not an exact science. Although good results are expected, there is no guarantee or warranty expressed or implied, on the results that may be obtained. In some situations, it may not be possible to achieve optimal results with a single surgical procedure.

### **PATIENT COMPLIANCE**

Follow all physician instructions carefully; this is essential for the success of your outcome. It is important that the surgical incisions are not subjected to excessive force, swelling, abrasion, or motion during the time of healing. Personal and vocational activity needs to be restricted. Protective dressings and drains should not be removed unless instructed by your plastic surgeon. Successful post-operative function depends on both surgery and subsequent care. Physical activity that increases your pulse or heart rate may cause bruising, swelling, fluid accumulation and the need for return to surgery. It is wise to refrain from intimate physical activities after surgery until your physician states it is safe. It is important that you participate in follow-up care, return for aftercare, and promote your recovery after surgery.

### **DISCLAIMER**

Informed-consent documents are used to communicate information about the proposed surgical treatment of a disease or condition along with disclosure of risks and alternative forms of treatment(s), including no surgery. The informed-consent process attempts to define principles of risk disclosure that should generally meet the needs of most patients in most circumstances.

However, informed-consent documents should not be considered all inclusive in defining other methods of care and risks encountered. Your plastic surgeon may provide you with additional or different information which is based on all the facts in your particular case and the current state of medical knowledge.

Informed-consent documents are not intended to define or serve as the standard of medical care. Standards of medical care are determined on the basis of all of the facts involved in an individual case and are subject to change as scientific knowledge and technology advance and as practice patterns evolve.

**It is important that you read the above information carefully and have all of your questions answered.**