

SEPTORHINOPLASTY

Septorhinoplasty means plastic surgery of the septum and external nose and is usually performed for what is referred to simply as internal-external deformity of the nose. The septum is a partition in the nose dividing the internal nose into left and right halves. Although, the septum should ideally be in the midline, more often than not, it deviates a small or moderate amount in many individuals. A nose that has previously been injured, will often have significant deviation of the septum, making nasal breathing difficult. As to the external nose, they come in many shapes and sizes. There is no ideal nose or perfect nose. The shape of the nose depends on ethnicity, size and height of the individual, sex, associated deformities of the face, jaws or lips (such as cleft nose) and other factors such as history of trauma or injury. Each individual desires a specific look for their face and nose. Surgical alteration of the external nose is usually performed to improve looks as perceived by the patient. This procedure is called rhinoplasty and is probably the most challenging plastic surgical procedure of all. In altering the look, the surgeon desires to provide proportion to the upper third, middle third and lower third of the nose and match it with the face. These changes are discussed in advance with you. Common jargon words are nasal tip, nasal dorsum, supratip region, root or radix of the nose and upper and lower lateral cartilages. Internal (incision within the nose) or external (incision on the nose skin) approaches may be used to achieve the defined objective and these too will be discussed with you in advance. Additional procedures such as augmenting or reduction of the chin may be suggested to you to provide a balance to the face.

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involve risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin textures, circulation, tissue and the healing process, and in their response to anesthesia, there can be no guarantee made as to the results of potential complications.

Surgery: This is usually performed under general anesthesia. An external approach uses an incision in the lower part of the nose called columella. Internal approaches use incision within the nose. Each of them has advantages and disadvantages. Your surgery may take 2-4 hours depending on the complexity of the surgery. Nasal packing may be placed at the end of surgery. Nasal packing may be placed at the end of surgery. Usually a nasal cast is placed on the nose. This is removed on the seventh or eighth day after surgery.

What to expect: There may be some discoloration of the eyes, nose and cheek for 1-2 weeks. Some spotting of blood from the nose is expected. The tip of the nose may remain swollen for 4-6 weeks if an external approach is used and a little less if an internal approach is used. Over time (months to years) the shape of the nose will change depending on scar tissue and tissue texture and skin changes. The skin around the nose may also turn somewhat yellow for a period of time before it clears up. Occasionally, the underlying bone or cartilage outline may become obvious over time. This is more likely in the thin skinned individuals.

Post-surgical care: Sleep with 2-3 pillows under your head and do not lift weights. Avoid hot foods for about a week. Nose packs may be placed on either side of the nose. These may be removed the same day or the next day. Pain after surgery is mild to moderate but narcotics are infrequently required. If the pain is severe after surgery, contact your surgeon. Saline nasal sprays should be started soon after the packing is removed and continued for at least six weeks thereafter. Splints are placed in the nose; these are usually removed at one week after surgery. Crusting in the nose is to be expected until complete healing takes place. This could take up to six weeks. Cool compresses should be applied to the nose and cheek for pain relief and to reduce the likelihood of bleeding after surgery.

Sequelae, risks and complications

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you, but to make you aware and more knowledgeable concerning the surgical procedure. These include but are not limited to:

Bleeding from the nose may occur after surgery. Often nasal sprays, cool compresses to the nose or nasal packing, will control this. Return to the operating room is sometimes necessary to control this bleeding.

CSF leak: because of the close relationship of the septum to the brain, there is a risk to these structures. However, leak of brain fluid (called CSF leak) from the nose and meningitis are very rare.

Discoloration on the nose and around the eyes is expected and resolves over 2-3 weeks.

Scar on the columella may be noticeable if an external approach is used.

Suture spitting is seen occasionally where a stitch placed deep in the nose may try to come out through the skin.

Suture granuloma or cysts are rarely seen (the body's reaction to foreign material). This may require removal.

Nasal crusting and swelling will last for 2-6 weeks after surgery resulting in continued nasal blockage.

Septal perforation: this may rarely occur after septoplasty. Surgical correction or a septal button may be required to close the defect in the septum.

Synechiae or scar tissue between the septum and side walls of the nose may occur but are infrequent.

Revision surgery may be indicated for minor asymmetries or for additional refinements and are usually performed one year or more after the first surgery. These will not be covered under the cost of the first surgery.

Asymmetries of the nose may be obvious soon after surgery or sometime later as healing takes place. Unfortunately, the healing process is so variable between patients that it is difficult to predict the exact shape of the nose long-term. If asymmetries are noted to be persistent, they do not indicate poor surgery. Asymmetries or poor results may be improved by revision surgery.

Unforeseen event: as with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

Patient's consent: I have reviewed the above information in detail and am aware that any of the above may occur. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risks and complications that may result from this surgery.

Patient's signature

Date

Witness's signature

Physician's signature

UMANG KHETARPAL, M.D.
TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE

Ear and Skull Base surgery, Head and Neck Surgery, Facial Plastic and Cosmetic Surgery, Pediatric E.N.T., Cochlear Implants, Endoscopic sinus surgery, Snoring and Sleep Apnea Surgery, Allergies, Hearing Loss, Balance and Voice disorders, Maxillofacial trauma, Craniofacial and Cleft lip/palate surgery

GENIOHYOID ADVANCEMENT

Geniohyoid advancement or GHA is performed for individuals with obstructive sleep apnea that is documented by a sleep study. Usually these individuals have failed CPAP therapy or have become intolerant to this treatment. Often nasal surgery and UPPP/tonsillectomy have already been performed with moderate success but the sleep apnea will persist. It is crucial that weight loss and improvement in physical condition be attempted prior to this surgery.

The purpose of this surgery is to advance a small piece of the lower jaw bone along with a neck bone called the hyoid bone. Usually an incision is made in the neck. The resultant increase in space behind the tongue improves obstruction in this region and alleviates sleep apnea. You may get partial or complete resolution of sleep apnea following the procedure.

Surgery: GHA is performed under general anesthesia. A neck incision is made and sometimes an incision inside the mouth is made as well. Surgery may take 2-4 hours.

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involve risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin textures, circulation, tissue and the healing process, and in their response to anesthesia, there can be no guarantee made as to the results or potential complications.

Post-surgical care: You will be monitored in the ICU for 1-2 nights after surgery. This is to ensure that you do not develop breathing problems. You may be allowed to drink liquids after surgery but eating solids may take 3-5 days. Some weight loss is also expected. A dressing is placed on the neck for the first day and a small drainage tube may be left in the neck for 3-5 days. You will have difficulty swallowing after surgery. Sometimes, tube feeding may be necessary to give you proper nutrition while you are recovering from surgery.

Sequelae, risks and complications

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you, but to make you aware and more knowledgeable concerning the surgical procedure. These include but are not limited to:

Bleeding in the neck may occur after surgery. Return to the operating room is sometimes necessary to control this bleeding.

Scar in the neck may be noticeable.

Suture spitting is seen occasionally.

Lower teeth or incisors may become loose even infected requiring dental assistance. Rarely a tooth may require removal.

Seroma or fluid collection or drainage from the neck may persist for more than a week and could develop an infection.

Swallowing difficulties and some weight loss are expected.

Breathing difficulty may be noted right after surgery or some days later. An emergency tracheostomy may be required if the breathing problem becomes life-threatening.

Wound infection or breakdown are infrequent

Suture breakdown or plate/screw exposure may occur

Anesthesia-related problems including heart problems can occur. Please discuss these with the anesthesiologist.

Unforeseen event: As with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

Patient's consent: I have reviewed the above information in detail. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risks and complications that may result from this surgery. These have been explained to me in Spanish as well.

Patient's signature

Date

Witness' signature

Physician's signature

**TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE
DR. UMANG KHETARPAL, M.D.**

REPAIR OF FACIAL FRACTURES

Fractures of bones of the face may occur after any type of trauma. Not all fractures require repair. Those that are repaired are done through one or more incision in the face or neck. For lower jaw or mandible fractures, incisions inside and outside the mouth may be required to get access to the fracture line. For fractures of the eye and mid-face, incisions may be placed in the lateral brow, lower eyelid and/or the mouth. For fractures of the forehead or frontal bones, an incision may be placed in the forehead or scalp. Usually titanium plates and screws are used to reapproximate the fractured segments of bone and then fixed in a realigned position that is nearly the way it used to be before the injury. While achieving optimal alignment is our goal, not always can this be achieved or assured. The bone has a tendency to remodel itself to improve contour. The number of incisions and plates used depends on the severity of the fracture. For lower jaw or mandible fractures, the upper and lower jaw may be weird shut for two or more weeks to keep the fragments stable. During this time, a liquid diet is permitted. For blow-out fractures of the floor of the eye, a graft from the nose or skull may necessary to repair the defect.

The surgery may take many hours depending on the degree of injury. Some fractures take more than 10 hours for accurate reapproximation. The surgery is performed under general anesthesia and patients are usually admitted to the hospital for a few days after surgery. Sutures are removed in about a week. Sometimes a tracheostomy or a breathing passage in the neck is necessary prior to repair of the fractures. The plates and screws will stay in the body unless they cause problems of infections or pain; in this situation they are removed surgically. Generally healing of the fractures in the face takes 2-3 months. Any disruption of healing during this time may result in poor union of the fragments.

RISKS AND COMPLICATIONS

Due to differences in anatomy of the ear, ability to heal, tissue reaction and multiple other factors, no guarantee is provided regarding success of the procedure or results. However, we will provide you with the very best skill that we have at our disposal. Many of the complications noted below have been described in the medical literature and are listed here only to inform you but not to scare you.

Non-union of fragments or poor healing may occur despite our best efforts. This may be due to poor aftercare by you (motion of the fragments), or due to poor healing of the fragments due to infection, diabetes or poor blood supply. Malunion often required revision surgery with or without the use of additional bone grafts.

Malunion or healing in a poorly aligned position may occur due to shifting of the fragments. This may result in pain and may require revision surgery.

Misalignment of teeth may occur despite our best efforts. If your teeth were misaligned before injury, it is very likely that they will remain so after injury. However, sometimes misalignment of teeth occurs due to improper healing, resorption of bone or poor healing. This is often corrected by orthodontic treatment.

TMJ Ankylosis or scar tissue in the jaw joint may result in children or adults with power jaw fracture. Because the two jaws have to be wired shut after surgery for 2-4 weeks, the jaw joint may develop scar

tissue resulting in poor opening after removal of wires. We advise all individuals with this type of fracture to start jaw opening exercises soon after removal of wires. Wooden tongue blades may be used to gradually increase the opening and break up scar tissue. If no improvement is achieved, a referral to an oral surgeon may be made for possible consideration of arthroscopy of the joint.

Mental or infraorbital nerve injury may occur from trauma or during surgery. The chin/cheek/lip or teeth may feel numb after surgery for a long time. This may or may not improve over time.

Facial nerve branch injury may occur from trauma or from surgery. These nerves move the muscles of the face and their injury may result in an asymmetric smile or tearing or inability to close the eyelid. If this does not improve over time additional surgery may help in improving the appearance of the face.

Ectropion or entropion (eversion or inversion of the lower eyelid) may result from scar tissue following incision of the lower eyelid. Eyelid massage, taping or even surgery may be required to improve the appearance.

Keloid or thick scar may result on the skin if you have a tendency to do so. Steroid injections to the scar or even excision may be required to improve the scar.

Diplopia or double vision or even vision loss may occur after attempts to operate around or in the eye socket. Further intervention or the opinion of an eye doctor may be necessary for this.

Infection may occur after surgery and is usually treated with antibiotics. Additional surgery may be necessary if bone infection develops.

Bleeding or hematoma could also occur and it may require surgery to drain it or control it.

Additional surgery may be necessary for any number of fracture-related issues. These cannot be predicted in advance.

Anesthesia problems or Unforeseen events including death may occur during surgery.

I have reviewed this consent form in detail and all questions regarding my surgery have been answered to my satisfaction by Dr. Khetarpal and/or his staff. I understand that no guarantees have been provided. I desire to proceed with surgery fully aware of the risks, benefits and alternatives.

Patient/Parent/Guardian signature

Date

Witness signature

Date

UMANG KHETARPAL, M.D.
TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE

REMOVAL/EXCISION OF SKIN LESIONS

Moles, cancers or benign lesions of skin may require removal for various reasons. These are usually performed under local anesthesia. The extent of the scar and reconstruction required depends on the size of the lesion. There will be scar following removal of any skin lesion. Our goal is to provide a scar that is cosmetically less visible and one that may be camouflaged with make-up. Your surgery will be done with utmost care. Occasionally, additional surgery may be required to remove residual skin cancer after removal the first time. This will be explained to you after the first surgery and does not mean that the first surgery was unsuccessful but that the margins of skin resection may have cancer in them. This cancer can only be seen under microscope examination and not by the naked eye when the removal is being performed.

The duration of surgery varies with the extent of lesion.

Expected results include scars where the lesion was removed. This unavoidable because the body heals by forming scar tissue. If the scar is too obvious, scar revision may be considered at a later date.

Complications include but are not limited to bleeding or hematoma, infection that may require antibiotics, skin discoloration, splitting of the skin incision and unwanted effects of anesthetic. Alternatives include leaving the sin lesion alone.

I have understood the above information in detail and all questions regarding my surgery have been answered to my satisfaction. I desire to proceed with surgery.

Patient signature

Date

Witness signature

Physician signature

SUBMANDIBULAR GLAND/NODE EXCISION

The submandibular glands/lymph nodes are located one on either side below the jaw. By making saliva they help with lubrication and breakdown of food. Antibiotics, warm compresses and hydration can often cure infections of the submandibular gland. However, when either one of the glands is infected on a recurring or continuous basis it may require removal of the gland. Other conditions that may require partial or complete removal of the gland include tumors, cysts and stones. Occasionally skin cancers that lie over the gland or are close to it may require its removal. Certain benign tumors of the gland (such as mixed tumor, Warthin's tumor and some cysts) are at risk of developing cancer or lymphoma over time. Because of this and problems related to local spread of these tumors. It is suggested that they be removed. Certainly, most cancers (except lymphomas) of the gland should be removed. Lymph nodes associated with the submandibular gland may get infected or remain persistently enlarged requiring removal for excision biopsy. After removal the node or gland are assessed by the pathologist to ascertain the cause of the swelling.

The lingual nerve, hypoglossal nerve and marginal mandibular nerve are in close proximity to the gland and node. The lingual nerves provide sensation to the tongue. The hypoglossal nerve moves the side of the tongue that it supplies. The marginal mandibular nerve moves the lower lip. Given the close relationship of the nerve to the gland, the nerve may be compressed, pinched, stretched out or involved by disease of the gland. Furthermore, this same close relationship puts the nerve at risk during surgery. There are risks of damage to these nerve during surgery but these are generally fairly low.

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involve risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin textures, circulation, tissue and the healing process, and in their response to anesthesia, **there can be no guarantee made as to the results or potential complications.**

Surgery: This is usually performed under general anesthesia. The incision is made in the crease line in front of the ear and may drop down to the neck after a small extension behind the ear or may be hidden in the hairline behind the ear. Time for surgery may vary from 3-5 hours depending on the size of the tumor.

Post-surgical care: The patient may go home the same day or the day after surgery. A drain (or tube) is usually placed to drain any blood clots. This is usually removed in 2-3 days. A pressure dressing may be placed on the cheek and neck for a few days. The pain from surgery is of mild to moderate severity and usually controlled with Tylenol or Tylenol with codeine. The stitches and staples are removed in 5-7 days. Clean the suture line with Q-tip and hydrogen peroxide

three times daily (after removing dressing) and smear with bacitracin ointment. This prevents crusting at the incision thus making the scar less noticeable.

Sequelae, risk and complications:

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you, but to make you aware and more knowledgeable concerning the surgical procedure. These include but are not limited to:

1. Lingual Nerve problems- There is about 1-2% risks of permanent damage to the lingual nerve. Occasionally, the tumor spreads into the nerve. In this situation, the nerve may be removed or resected. This results in numbness around the mouth, lips and tongue.
2. Hematoma- There is about 3-5% risk of bleeding into the wound after surgery. This may require drainage or return to the operating room.
3. Seroma- There is a 5-10% chance of fluid collection in the wound (seroma). This is usually controlled with pressure dressings a medications that decrease saliva drainage.
4. Infection- There is a low risk of infection and pneumonia.
5. Anesthesia- related problems. Please discuss any anesthesia concerns with the anesthesiologist.
6. Hypoglossal nerve damage- is rare and results in tongue moving only to one side. Some difficulty with swallowing is expected initially but this improves with time. Additional surgery may be necessary to assist with nerve or tissue transfer into the tongue to assist with tongue motion.
7. Visible scar- You may have a visible scar after surgery. Keloid formation is rare.
8. Marginal mandibular nerve damage- may occur resulting in lip asymmetry or lowering on the side of the surgery. Usually this is related to nerve stretch and improves with time but the lip may require cosmetic surgery for information.
9. Unforeseen event- As with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

The pathologist's report usually takes 3-4 days. Therefore, this report should be available at the time of your return visit for suture removal. The type and nature of tumor will dictate any subsequent treatment.

Patient's consent: I have reviewed the above information in detail. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risk and complications that may result from this surgery.

Patient's signature

Date

Witness' signature

Physician's signature

ADENOIDECTOMY

The adenoids are located behind the nose. Repeated infections/enlargement of the adenoids may result in breathing difficulty, chronic sinusitis, repeated ear infections, snoring, sleep apnea and malalignment of teeth. These above problems may be improved by removal of adenoids (also called adenoidectomy)

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involve risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin textures, circulation, tissue and the healing process, and in their response to anesthesia, there can be no guarantee made as to the results or potential complications.

Surgery: This is performed under general anesthesia.

Post-surgical care: A regular diet is prescribed but the food should be cool. Pain from adenoidectomy is controlled with Tylenol and codeine elixir or plain Tylenol.

Sequelae, risks and complications

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you, but to make you aware and more knowledgeable concerning the surgical procedure. These include but are not limited to:

Bleeding – There is a 2-5% chance of bleeding after surgery. This may occur up to three weeks after surgery. You should gargle with ice water, apply cool compresses to the face and lay down with you head on 2-3 pillows to stop the bleeding. If the bleeding does not stop, contact the office right away. You may be asked to come to the emergency room. Often the bleeding can be controlled in the office or in the emergency room. Infrequently, return to the operating room is necessary for bleeding control. Rarely, a blood transfusion may be necessary.

Voice Changes may occur after surgery due to changes in the size of the voice passage and due to scar tissue.

Breathing difficulty may rarely occur in toddlers and young children due to some swelling of the nasal passage

Nasopharyngeal stenosis – Narrowing of the region behind the nose is usually due to scar tissue. This is rare and may require surgery for correction

Fever 1-3 days after surgery, a low-grade fever may develop. If the fever exceeds 101.5 degrees, please notify your physician.

Rhinolalia or nasal speech may occur after surgery. This usually improves over time or it may require speech therapy. This is due to excess space above the soft palate and behind the nose.

Pain is common after surgery for up to 1-2 weeks. This is treated with pain medicines

Anesthesia-related problems including heart problems can occur. Please discuss these with the anesthesiologist.

Unforeseen event – As with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

Patient's consent: I have reviewed the above information in detail. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risks and complications that may result from this surgery. I desire to proceed with the surgery..

Patient's Signature

Date

Witness' Signature

Physician's Signature

UMANG KHETARPAL, MD
TEXAS SINUS, ALLERGY, SNORING AND SLEEP INSTITUTE

CONSENT FORM FOR OFFICE BALLOON SINUPLASTY

This minimally invasive technique involves using a balloon catheter to enlarge the opening of your sinuses. Typically, the maxillary also called the cheek sinus is enlarged along with the forehead or frontal sinus and sometimes the sphenoid sinuses all the way in the back may also be enlarged using this balloon catheter. This is a fairly new technology that was first used in the operating room to enlarge the sinus openings and then has been brought into the office to improve sinus problems. However, balloon sinuplasty does not address problems with the ethmoid sinuses which may require us to use a shaver to open up the sinus and improve its ventilation. The premise under which balloon sinuplasty is considered to improve sinus health is by improving the ventilation and blockage of the sinuses thereby permitting better circulation with the sinus. This procedure is performed in the office under local anesthesia, with IV sedation or IV anesthesia thereby avoiding expenses of total general anesthesia and hospitalization.

Generally, the sinuses will take 3 to 4 weeks to heal fully and sometimes the disease may take a little longer to improve. In some patients, revision balloon sinuplasty or endoscopic sinus surgery may be required despite a balloon sinuplasty. Given that this procedure is minimally invasive, it is a great way to improve sinus condition in many patients as a first procedure.

Your procedure will be performed with as much care as we can exercise. While there are inherent risks with any procedure, so far in our practice these have remained minimal to few. However, no guarantees can be made as to the outcome of the procedure. The risks of the balloon sinuplasty may include.

Bleeding after surgery: In frequency bleeding from the sinuses after surgery may need packing. Usually, our policy is not to pack after either surgery of balloon sinuplasty. Rarely may we ask you to go to the emergency room to get nose packed.

Brain or eye injury: this is indeed very rare. However, it is possible for the entry of the balloon or and instrument into the eye or the brain creating a CSF leak. This may require urgent surgery in the hospital to prevent the risk of meningitis.

Pain or Headache: Some patients may have moderate to severe nasal pain and headache immediately after the procedure. This may subside over the next day. Typically, Tylenol No. 3 or Vicodin is prescribed for this.

Airway Problem: occasionally under sedation breathing difficulty or. blockage of the air may occur which may require us to put an airway in to the back of his/her throat. Rarely a tube may need to be inserted in the windpipe until you are awake and at the time this tube will be removed. It is extremely rare but if the airway problem persists then a transfer to the emergency room may be necessary.

Nasal Congestion: May persist after balloon sinuplasty or sinus surgery which may be related to persistent allergy problem or a deviation of you septum. This may need to be addressed separately.

If headaches persist long after the sinuses are healed and more than likely the headaches are related to tension or perhaps even migraines.

Infection may be noted after the procedure and if you were to see a greenish discharge please notify us so we can start you on an antibiotic medication.

I have reviewed the consent form with my surgeon, Dr. Khetarpal, and fully understand the risk, alternatives and benefits as well as complications of the procedure. I have voluntarily consented to proceed with the surgery. If necessary, this has been explained to him in Spanish by his staff.

Patient /Guardian Signature

Date

Physician signature

UMANG KHETARPAL, M.D.
TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE

BLEPHAROPLASTY

Human eyelids convey expression and protect the eye. While the young eyelid maintains good tension and has few wrinkles, aging may result in the developing wrinkles, skin sagging, loosening of the eye muscles and prominent fat deposits in deeper parts of the eye. Additionally, the eyes may become darker and also develop a boggy swelling. Allergic patients often have swelling of the lids. These changes are also seen in the facial skin. The first signs of aging are seen as wrinkles outside the eye, also known as crow's feet. Eyelid skin excess may result in inability to see objects above and to the side of the eye without turning one's head, a condition known as visual field restriction. The eyelid skin. Muscle and/or fat may need to be corrected for optimal results. Correction may be achieved by used of chemical peels, laser or surgery (blepharoplasty).

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involve risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin textures, circulation, tissue and the healing process, and in their response to anesthesia, there can be no guarantee made as to the results or potential complications.

Surgery: This may be performed under local anesthesia with sedation of general anesthesia. Surgery may take up to 3 hours. There are various options available for fine skin wrinkling of the eye. These included laser resurfacing or chemical peels or blepharoplasty. Deeper skin wrinkles may require deeper peels or blepharoplasty. Skin and muscle excess is dealt with through a lower eyelid incision below the lash line. If there is excess skin without muscle excess or prominent fat, then an incision below the lash line may be necessary for the lower eyelid. If fat prominence is the only concern in the lower eyelid, this can be removed by an incision on the inner aspect of the eyelid. If the lower eyelid has poor tension, lower eyelid shortening or canthopexy (tightening of the lower eyelid) may be performed at the time of blepharoplasty or at a later date. Most supper eyelid tissue excess is dealt with through an incision in the upper eyelid skin. The goal of surgery is to achieve improvement and not perfection.

Post-surgical care: if dissolving sutures are placed in the eyelids, they do not require removal. Non-dissolving sutures are removed in 3-5 days. Do not perform any heavy work or lifting for 1-2 weeks after surgery. Application of ice-cool compresses will provide relief from pain and reduce swelling of the eyelids and surrounding tissue. The head should be elevated with 3-4 pillows for sleeping. If you notice changes in vision and/or severe pain in the eye, contact your surgeon immediately. By and large, the pain from this surgery is well controlled with Tylenol or Tylenol with codeine. Discoloration around the eye may last for up to two weeks. Tearing occurs from obstruction of the tear ducts from swelling and is usually temporary.

Sequelae, risks and complications

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you, but to make you aware and more knowledgeable concerning the surgical procedure. These include but are not limited to:

Scleral show- Some amount of scleral show (show of the white of the eye) is expected with lower eyelid surgery.

Wound separation- The incision line separates after sutures are removed. This may require revision surgery.

Milia or small white cysts are common after this surgery and can be removed without anesthesia in the office.

Ectropion- Over time about 10-15% of lower eyelid blepharoplasties may develop ectropion or turning out of the lower eyelid. Tearing onto the cheek occurs as the tears are not directed into the tear ducts. Lower lid shortening or canthopexy can correct ectropion.

Blood clots or bleeding problems occur infrequently (less than 3%). If bleeding is excessive or resulting in pain or visual changes, a return to the operating room may be necessary to control the bleeding and protect the eye. Minor blood clots can be treated with steroid injections or aspirated.

Loss or alteration of vision- Extremely rare although possible and may persist.

Corneal injury- Either by trauma or due to exposure of the eye. Usually can be prevented, but may require consultation of an eye doctor as may any other eye complaint

Lagophthalmos- Difficulty in closing the eyelid – is common immediately after surgery but may persist.

Dry eyes- Surgery may unmask a previous dry eye. This may persist or resolve over time.

Ptosis- A drooping of the upper eyelid

Asymmetries- Surgery may unmask a previous asymmetry.

Residual wrinkling may be treated with laser resurfacing or chemical peels about 3 months after surgery.

Visible scar- Healing may result in a visible scar. Keloids of the eyes are extremely rare. To reduce the risk of tattooing or browning of the scar, avoid sun exposure and use a hat and SPF30+ cream around the eye.

Pigmentation- Blepharoplasty, laser resurfacing or chemical peels do not correct pigmentation around the eye. With chemical peels and laser resurfacing excess or incomplete pigmentation may occur. Yellow, brown or darker skins are at greater risk for pigmentation problems after laser treatment or peels.

Infection- Exceedingly uncommon, but may occur.

Unforeseen event- As with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

Secondary blepharoplasty- occasionally required to modify under-correction or over-correction.

Patient's consent: I have reviewed that above information in detail and am aware that any of the above may occur. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risks and complications that may result from this surgery. These have been explained to me in Spanish as well.

Patient's signature

Date

Witness' signature

Physician's signature

UMANG KHETARPAL, MD
KHETARPAL FACIAL PLASTICS INSTITUTE

BOTOX INJECTIONS

Botox is short for botulinum toxin, a chemical that is derived from a bacteria. This is poisonous in large doses and can lead to death. Botox has been used increasingly for muscle disorders in the body and for the purpose of partially paralyzing muscles of the face to improve wrinkles. It is believed that long term use or overuse of facial muscles plays a role in wrinkle formation. Botox acts by paralyzing the muscles that it is injected in, thereby smoothing out the facial wrinkles in that specific area. The effect of botox is short-lived (temporary) any may last from 1-6 months depending on quantity injected, degree of absorption by the body and how rapidly the chemical gets broken down by the body. This varies between different individuals. Therefore, repeat injections may be necessary depending on personal preference. The long term effects of Botox on muscle atrophy and function are not clear yet, but there is a possibility that repeated injections to a specific group of muscle may result in permanent paralysis of these muscles. This could result in a permanent loss of facial expression, brow paralysis or asymmetric smile.

Risks and complications of Botox

Paralysis of respiration is indeed very rare but can occur and may require hospitalization and being placed on a ventilator for airway support.

Temporary paralysis of brow with drooping of the brow may result. This usually improves over time.

Asymmetric smile or inability to close eyes completely may also occur depending on quantity injected and this too tends to be temporary. Inability to close eyes completely may result in irritation of the cornea or conjunctive and these should be protected with artificial tears and an ointment to prevent injury or infections.

Muscle pain may rarely occur and usually resolves over time. An over the counter pain medication should help in alleviating the pain.

Unforeseen or unpredictable events may rarely occur. Please let us know if you notice an unusual reaction to the injection.

I have reviewed the above information thoroughly with Dr. Khetarpal and have desired to proceed with Botox injections fully aware of the risks and complications. Fees issues have also been discussed.

Patient signature

Date

UMANG KHETARPAL, M.D.
TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE

BROW LIFT OR BROWPLASTY

The brow is an important facial structure and landmark. It provides expression to the face and is often ethnically unique. The height of the brow is determined genetically and in part by action of the forehead muscles. With aging, the brow starts drooping below the upper rim of the eye of orbit. This is called brow droop or brow ptosis. This may give individuals a bored, depressed or angry look which some may find displeasing. The combination of brow ptosis and upper eyelid skin excess and sagging may result in inability to clearly identify objects above the eye or to the side of the eye. This is called visual field restriction. Occasionally, nervous system or muscle disorders may result in brow ptosis and excess eyelid skin. Facial nerve paralysis may result in brow droop. These effects of aging of neuromuscular diseases can be corrected, in part, by browplasty (plastic surgery of the brow) and blepharoplasty (plastic surgery of the eyelids).

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involve risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin textures, circulation, tissue and the healing process, and in their response to anesthesia, there can be no guarantee made as to the results of potential complications.

Surgery: This is usually performed under local anesthesia with sedation but occasionally under general anesthesia. The browplasty may be performed in several ways. Incision may be made just above the brow, in the wrinkles of the forehead, just behind the forehead hairline, in the scalp or in the upper eyelid. The goal is to remove excess forehead skin and tuck the brow at or above the level of the upper part of the eye socket. This counters the effect of gravity. The brow does tend to settle down a little over time. A "surprised look" is not uncommon after surgery and may be desirable.

Post-surgical care: Sutures are removed in 3-5 days. Make sure that you clean the suture line with Q-tips and hydrogen peroxide three times daily and after cleaning apply bacitracin ointment. This prevents crusting and makes the scar less noticeable. A drain (or tube) may be placed in the forehead or scalp for draining any blood or clots. This is usually removed the next day. If a scalp or behind the hairline incision is used, you may gently shampoo your hair after 3 days.

Sequelae, risks and complications

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you, but to make you aware and more knowledgeable concerning the surgical procedure. These include but are not limited to:

Discoloration- the forehead may be black and blue for a few days.

Pain is usually controlled with Tylenol or Tylenol with codeine.

Numbness- The forehead and scalp may be numb temporarily and infrequently this may be permanent.

Bleeding- The risk of bleeding and blood clots is less than 3%.

Infection- the risk of infection is less than 3%.

Scar- With forehead incisions, the scar may become more obvious over time. Dermabrasion, laser treatment or scar revision can address these problem. Wearing a hat and using SPF 30+ cream can reduce tattooing and browning of the scar.

Minor asymmetries may be resented between the two sides and can be addressed by revision surgery.

Unforeseen event- As with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

Patient's consent: I have reviewed the above information in detail and am aware that any of the above may occur. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risks and complications that may result from this surgery. These have been explained to me in Spanish as well.

Patient's signature

Date

Witness' signature

Physician's signature

CERVICAL LYMPH NODE EXCISION

The neck has a large number of lymph nodes that are part of the immune system of the body. Antibiotics, warm compresses and hydration can often cure infections of the lymph nodes. Lymph nodes may get infected or remain persistently enlarged requiring removal for excision biopsy. After removal the nodes are assessed by the pathologist to ascertain the cause of the swelling.

The lingual, hypoglossal, accessory or marginal mandibular nerves may be in close proximity to the nodes. The lingual nerves provide sensation to the tongue. the hypoglossal nerve moves the side of the tongue that it supplies. The marginal mandibular nerve moves the lower lip. Accessory nerve moves the shoulder muscles. Given the close relationship of the nerve to the gland, the nerve may be compressed, pinched, stretched out or involved by diseases of the node. furthermore, this same close relationship puts the nerve at risk during surgery. There are risks of damage to these nerves during surgery but these are generally fairly low.

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involved risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin textures, circulation, tissue and the healing process, and in their response to anesthesia, **there can be no guarantee made as to the results or potential complications.**

Surgery: This is usually performed under general anesthesia. The incision is made in the crease line in front of the ear and may drop down to the neck after a small extension behind the ear or may be hidden in the hairline behind the ear. Time for surgery may vary from 3-5 hours depending on the size of the tumor.

Post-surgical care: The patient may go home the same day or the day after surgery. A drain (or tube) is usually placed to drain any blood clots. This is usually removed in 2-3 days. A pressure dressing may be placed on the cheek and neck for a few days. The pain from surgery is of mild to moderate severity and usually controlled with Tylenol or Tylenol with codeine. The stitches and staples are removed in 5-7 days. Clean the suture line with Q-tip and hydrogen peroxide three times daily (after removing dressing) and smear with bacitracin ointment. This prevents crusting at the incision thus making the scar less noticeable.

Sequelae, risks and complications:

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you, but to make you aware and more knowledgeable concerning the surgical procedure. These include but are not limited to:

1. Lingual Nerve problems- There is about 1-2% risk of permanent damage to the lingual nerve. Occasionally, the tumor spreads into the nerve. In this situation, the nerve may be removed or resected. This results in numbness around the mouth, lips and tongue.
2. Hematoma- There is about 3-5% risk of bleeding into the wound after surgery. This may require drainage or return to the operating room.
3. Seroma- There is a 5-10% chance of fluid collection in the wound (seroma). This is usually controlled with pressure dressings and medications that decrease saliva drainage.
4. Infection- There is a low risk of infection and pneumonia.
5. Anesthesia- related problems. Please discuss any anesthesia concerns with the anesthesiologist.
6. Hypoglossal nerve damage- is rare and results in tongue moving only to one side. Some difficulty with swallowing is expected initially but this improves with time. Additional surgery may be necessary to assist with nerve or tissue transfer into the tongue to assist with tongue motion.
7. Accessory nerve damage- is rare and may require additional surgery for improving shoulder motion.
8. Visible scar- You may have a visible scar after surgery. Keloid formation is rare.
9. Marginal mandibular nerve damage- may occur resulting in lip asymmetry or lowering on the side of the surgery. Usually this is related to nerve stretch and improves with time but the lip may require cosmetic surgery for improvement.
10. Unforeseen event- As with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

The pathologist's report usually takes 3-4 days. Therefore, this report should be available at the time of your return visit for suture removal. The type and nature of tumor will dictate any subsequent treatment.

Patient's consent: I have reviewed the above information in detail the questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risk and complications that may result from this surgery.

Patient's signature

Date

Witness' signature

Physician's signature

UMANG KHETARPAL, M.D.
TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE

CHIN IMPLANT

Chin implants are usually performed for individuals with a somewhat poorly developed chin to improve its projection. There are several different materials used for this the more common ones being silicone or Gore-Tex. They are sized for the chin and placed in front of the jaw bone. The incision may be inside the mouth or in the neck skin. They may be anchored in place with screws or sutures.

Expect some swelling and even bruising in the area of the chin following surgery. Some lip eversion may be seen as well. This tends to settle down over time. It takes some time for the scar tissue to encapsulate the implant. During this time the implant could move. Therefore, avoid trauma to the chin area for 3 months after surgery. Surgery is usually done under general anesthesia. If you have a history of bleeding problems, hepatitis C, diabetes, poor healing, smoking, alcoholism or are taking steroids, please inform the physician. Higher complications are seen in patients with above conditions. Because skin texture and capacity to heal are variable between individuals, no guarantee is made to the results. We will of course do our best to achieve optimal results. The fee covers the surgery and cost of the implant and 2-3 routine post-operative visits. The fee does not cover any additional surgeries that may become necessary in case of complications resulting from implant placement.

RISKS AND COMPLICATIONS

Implant rejection- The body may try to reject the implant because it is made of substance that is not native to the body. This may result in infection, swelling and even drainage from the wound or skin wrinkling or scarring. If this occurs the implant may be removed surgically. The surgical removal of implant is not covered by your initial payments.

Infection of the implant or the wound may occur. Antibiotics are prescribed for this but surgery to drain an abscess may be necessary.

Chin or lip numbness or persistent swelling may occur after this surgery.

Keloid or thick scar may form if your body has a tendency to do so. Often this can be improved with steroid injections.

Implant breakdown is an infrequent complication that may require removal of the implant.

Skin wrinkling or soft tissue asymmetry may be noticed after placing or removal of implant material. These may require additional surgery.

Unforeseen events such as death, aspiration, heart or lung problems may rarely occur from anesthesia. Please discuss these with the anesthesiologist prior to surgery.

I have reviewed the above information carefully and all questions related to my surgery have been answered to my satisfaction by Dr. Khetarpal and his staff. I desire to proceed with surgery fully aware of the risks, benefits and complications. I also understand that no guarantees have been made in terms of results.

Patient signature

Date

Witness signature

Physician signature

TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE

COLLAGEN REPLACEMENT THERAPY

Collagen is a protein present throughout the body. It forms the stratum on which most organs in the body are laid. The tissue under the skin is made up of collagen. Even parts of the skin are composed of collagen. With age the collagen stretches and weakens resulting in typical changes to facial skin and soft tissue. One effect of these changes is in wrinkling. Bovine or cow collagen (zyderm and zyplast) have been used for many years as fillers to improve wrinkles or to enhance the lips. The product is derived and processed from bovine or cow soft tissue and is not natural to human body. Therefore, it is possible that you may develop an allergic reaction to the injections either the first time or sometime later. This could result in redness, or infection at the site where the collagen is injected and sometimes poor scarring. The effect of collagen is usually short-lived for 2-6 months. Therefore, you may need repeated injections.

Risks and complications

Allergic reaction to the collagen injection as described above. This may occur at the injection site or a generalized reaction that may require antihistaminics, steroids or even antibiotics.

Skin infection may occur and is usually treated with antibiotics but may result in scarring.

Irregularities from collagen injection may occur and will usually subside over time.

Rarely, over time, it has been reported that some individuals may develop **allergy to beef**. When this develops, beef cannot be consumed.

Unforeseen or unpredictable events may occur that may require treatment.

I have reviewed the above information thoroughly with Dr. Khetarpal and have desired to proceed with Botox injections fully aware of the risks and complications. Fees issues have also been discussed.

Patient signature

Date

Witness signature

Physician signature

**TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE
DR. UMANG KHETARPAL, M.D.**

ENDOLYMPHATIC SAC DECOMPRESSION

Endolymphatic sac decompression is a surgical procedure that may benefit disabling vertigo (spinning sensation) or dizziness associated with Meniere's disease. In Meniere's disease, there is excess fluid build up within the hearing and balance systems of the inner ear. The Endolymphatic sac is a part of the inner ear balance system and measures up to 2 mm in size. It sits in a small space between the brain lining called the meninges and the temporal bone (the ear). While it is not yet known if the excess fluid actually causes the symptoms of Meniere's disease, attempts at reducing inner ear fluid have shown some success. These include trial usage of diuretics and low salt diet. By the same token, it is believed that relieving pressure within the Endolymphatic sac (thereby the inner ear) will improve symptoms. A large number of studies have indicated a 60-90% success rate in relieving vertigo associated with Meniere's disease. Wide Endolymphatic decompression may have higher rate of success than narrow sac decompression procedures. Our approach is a modified wide Endolymphatic decompression procedure.

The surgery is performed under general anesthesia and may take up to 3 hours. An incision is made behind the ear to access the Endolymphatic sac. Therefore, some of the hair above and behind the ear will be shaved during surgery. Overnight admission in a hospital may be required after surgery. An ear dressing is placed for a couple of days after surgery. Some nausea or dizziness may occur after surgery.

RISKS AND COMPLICATIONS

Due to differences in anatomy of the ear, ability to heal, tissue reaction and multiples other factors, no guarantee is provided regarding success of the procedure or results. However, we will provide you with the very best skill that we have at our disposal. Many of the complications noted below have been described in the medical literature and are listed here only to inform you but not to scare you.

Facial nerve paralysis: the facial nerve moves the muscles of the face and sits very close to the inner ear and could be injured during surgery. Injury of the nerve results in inability to close the eyes, a drooping eyelid due to poor brow function, an asymmetric smile with possible drooling. Additional surgery may be required to improve this condition.

CSF leak: Leakage of a fluid that lines the brain may occur during this surgery. Since the sac sits atop the meninges, even a tiny tear of the meninges could result in CSF leak. Usually this is repaired at the time of surgery, if recognized. However, rarely it may result in meningitis which requires hospitalization and intravenous antibiotics.

Hearing loss: Worsening of hearing or even total hearing loss may occur as a result of inner ear reaction to surgery. This cannot be predicted.

Tinnitus or ringing/bussing sounds in the ear may also worsen after surgery due to inner ear reaction. To our knowledge there is no known cure for this condition.

Ear infection and bleeding are infrequent after this type of surgery.

Anesthesia problems or unforeseen events could occur but are uncommon.

Additional surgery may be necessary to further improve symptoms or for addressing complications.

I have reviewed this consent form in detail and all questions regarding my surgery have been answered to my satisfaction by Dr. Khetarpal and/or his staff. I understand that no guarantees have been provided. I desire to proceed with surgery fully aware of the risks, benefits and alternatives.

Patient/Parent/Guardian signature

Date

Witness signature

Date

TEXAS SINUS, ALLERGY, SNORING AND SLEEP INSTITUTE

ENDOSCOPIC SINUS SURGERY

The middle and upper parts of the human face contain air-filled cavities called sinuses. These sinuses open into the nose by openings called ostia that are just like holes in a wall. The nose and the sinuses are lined by mucous membrane that makes mucus. The nose and sinuses provide moisture to incoming air and prevent certain size particles from getting into the lungs. There are four sinuses on either side of the face. These are called maxillary (or cheek) sinus, ethmoid (or eye) sinus, frontal (or forehead) sinus and sphenoid (or behind the nose) sinus. These sinuses are separated from the eyes and brain by 1-mm thick bones. Sometimes these bones may be thinned out or absorbed from disease. This can often be assessed by a CT scan (specialized X-rays) of the sinuses. The nose is like a room with a partition in the middle called nasal septum and bony shelves on the side called turbinates. The size of these turbinate's changes with time of day, season, allergies, dryness or humidity of air, room temperature and several other factors. Large turbinates or septal deviation may result in congestion of the nose or difficulty breathing through the nose.

Because the nose and sinuses are so closely related, infections of the nose (called rhinitis) are often associated with sinus infections called sinusitis. Infections of the nose and sinuses are called rhinosinusitis. Rhinosinusitis usually starts out as a virus infection. If prolonged, this may become a bacterial infection requiring treatment with antibiotics, decongestants and nasal sprays. Patients with an underlying history of allergies to environmental agents such as pollen, grasses, dust mites, molds, etc., may experience more frequent infections of the sinuses. Rhinosinusitis may cause headaches, congestion of the nose, sneezing, coughing, postnasal drip, infections and pain behind the eye, in the cheek or forehead. Sinus infections or disease may worsen your asthma. Patients with repeated or chronic infections of the nose and sinuses may require surgery to straighten the nasal septum, reduce the size of the turbinate's or remove blockage of the sinuses by enlarging the size of their openings (ostia) into the nose and for removing disease from the sinuses. Antibiotics, saline and nasal steroid sprays, possibly oral steroids are usually tried before surgery is suggested. Straightening the nasal septum is called septoplasty or septal reconstruction and removing sinus disease and obstruction with endoscopes (telescopes) is called endoscopic sinus surgery. Decreasing the size of the turbinate's is called turbinate reduction. Septoplasty and turbinate reduction are often performed along with endoscopic sinus surgery. The purpose of surgery is to open the sinus passages, reduce the number of sinus infections or persistent sinus problems and/or headaches. More often than not these symptoms are eliminated but that is not a guarantee.

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involve risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin textures, circulation, tissue and the healing process, and in their response to anesthesia. **There can be no guarantee made as to the result or potential complications.**

Surgery: Endoscopic sinus surgery is performed with telescopes without any incisions on the face. Surgery may provide relief from your sinus disease and is either performed under general anesthesia or local anesthesia with sedation. The goal is to open the nasal passages and the sinus openings and remove diseased tissue from the nose and sinuses. The surgery usually takes 1-2 hours depending on the severity of disease.

Post-surgical care: Sleep with 2-3 pillows under your head and do not lift weights. Avoid hot foods for about a week. Nose packs may be placed on either side of the nose. Depending on the surgeon's choice, these may be removed the same day or in 1-2 days. Pain after surgery is mild to moderate but narcotics are infrequently required. If the pain is severe after surgery, contact your surgeon. Saline nasal sprays should be started soon after the packing is removed and continued for at least six weeks thereafter. Crusting in the nose is to be expected until complete healing takes place. This could take up to six weeks. Crusts are routinely removed with the help of endoscopes at your return visit to our office. If

any splints are placed in the nose, these are removed in about a week. Cool compresses should be applied to the nose and check for pain relief and to reduce the likelihood of bleeding after surgery.

Sequelae, risks and complications

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you, but to make you aware and more knowledgeable concerning the surgical procedure. These include but are not limited to:

- 1) **Bleeding** – from the nose is the most common problems after surgery. Up to 5% of the patients may experience this as long as 3 weeks after surgery. Often nasal sprays, cool compresses to the nose or nasal packing, will control this. Return to the operating room is sometimes necessary to control this bleeding and to maintain the benefits of surgery.
- 2) **CSF Leak**: Because of the closer relationship of the sinuses and the eye and brain, there is a risk to these structures. Less than 1% patients will have leak of brain fluid (called CSF leaks) from the nose. More often than not, this leak is detected and repaired at the time of surgery. If so, your surgeon may keep you in the hospital for a few days observation to make sure that the leak does not continue and that you do not develop meningitis. Meningitis and brain injury are extremely rare.
- 3) **Vision problem**: Loss of vision after endoscopic sinus surgery is also very rare.
- 4) **Double vision**: Also, very uncommon after endoscopic sinus surgery. Often this resolves over time but may require surgical of eye muscles.
- 5) **Discoloration** around the eyes or nose after surgery may occur. This should resolve in 1-2 weeks. Do not cough or blow your nose as you may blow air into the eye.
- 6) **Nasal crusting** and swelling will last for 2-6 weeks after surgery resulting in continued nasal blockage.
- 7) **Septal perforation** – This may rarely occur after septoplasty. Surgical correction or a septal button may be required to close the defect in the septum.
- 8) **Revision** or second sinus surgery is often required for patients with nasal polyps and may be required for other patients due to scar tissue blocking up the sinuses. The incidence of revision surgery may be reduced by good aftercare of the nose and sinuses and good allergy management.
- 9) **Persistent headaches**: It is sometimes difficult to tell if headaches are related to sinus disease. Headaches not of sinus origin may persist after sinus surgery.
- 10) **Flu or upper respiratory tract infections** – sinus surgery does not prevent flu or other upper respiratory tract infections that usually occur in the fall and winter season.
- 11) **Unforeseen event** – As with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

Patient's consent: I have reviewed the above information in detail. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risks and complications that may result from this surgery. I desire to proceed with the surgery. These have been explained to me in Spanish as well.

Patient's Signature

Date

Witness' Signature

Physician's Signature

LARYNGOSCOPY WITH OR WITHOUT REMOVAL OF TISSUE

The larynx or voice box is located in the middle of the neck. The Adam's apple marks one of the cartilages that make up the larynx. The function of the larynx is to allow air in and out of the lungs, provide voice and to prevent food from going into the lungs. Diseases of the larynx may produce hoarseness, voice changes, cough, breathing problems and occasionally choking. In children, some laryngeal problems, if severe, may also result in failure to gain weight. Long term smoking is a hazard for larynx tumors and cancer. Voice abuse and regurgitation of acid from stomach into the voice box also produce laryngitis or inflammation of the larynx. Frequent hacking, coughing and throat clearing are bad for voice hygiene and may result in voice problems.

Surgery: Laryngoscopy or examination of the larynx may be required to take a small piece of tissue of biopsy or for removal of disease such as polyps or tumors. Often a microscope is used for the surgery. This is usually performed under general anesthesia. Duration of surgery depends on the severity and location of disease within the voice box. Surgical time varies from 30 minutes to 3 hours.

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involve risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin, textures, circulation, tissue and the healing process, and in their response to anesthesia, there can be no guarantee made as to the results or potential complications.

Post-surgical care: Voice rest is usually recommended for a week. If you have to speak, do so at a normal voice. Whispering and shouting are bad for vocal cord healing. So are coughing, hacking and throat clearing. Your voice may be hoarse after surgery.

Sequelae, risks and complications

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you; but to make you aware and more knowledgeable concerning the surgical procedure. These included but are not limited to:

1. Hoarseness- this is expected after laryngoscopy and tissue removal. It may take a while to resolve or may not completely resolve depending on previous disease.
2. Cough- from irritation is normal for a few days.
3. Bloody cough is rare but should resolve with drinking cool liquids and application of cool compresses to neck
4. Throat pain usually lasts for a day or two.
5. Pneumothorax or air trapping outside the lungs is very rare
6. Breathing difficulty may occur from swelling within the voice box. Please notify your physician immediately if this were to happen. You may be required to come to the emergency room.
7. Anesthesia-related problems including heart problems can occur. Please discuss these with the anesthesiologist.
8. Unforeseen event: As with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

Patient's consent: I have reviewed the above information in detail. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risks and complications that may result from this surgery.

Patient's signature

Date

Witness' signature

Physician's signature

UMANG KHETARPAL, M.D.
TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE

Head and Neck Surgery, Ear and Skull Base surgery, Facial Plastic and Cosmetic Surgery, Pediatric E.N.T., Cochlear Implants, Endoscopic sinus surgery, Snoring and Sleep Apnea Surgery, Allergies, Hearing Loss, Balance and Voice disorders, Maxillofacial trauma, Craniofacial and Cleft lip/palate surgery.

LARYNGOSCOPY WITH OR WITHOUT REMOVAL OF TISSUE

The larynx or voice box is located in the middle of the neck. The Adam's apple marks one of the cartilages that make up the larynx. The function of the larynx is to allow air in and out of the lungs, provide voice and to prevent food from going into the lungs. Diseases of the larynx may produce hoarseness, voice changes, cough, breathing problems and occasionally choking. In children, some laryngeal problems, if severe, may also result in failure to gain weight. Long term smoking is a hazard for larynx tumors and cancer. Voice abuse and regurgitation of acid from stomach into the voice box also produce laryngitis or inflammation of the larynx. Frequent hacking, coughing and throat clearing are bad for voice hygiene and may result in voice problems.

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Sequelae, risks and complications

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Hoarseness - this is expected after laryngoscopy and tissue removal. It may take a while to resolve or may not completely resolve depending on previous disease.

Cough - from irritation is normal for a few days

Bloody cough is rare but should resolve with drinking cool liquids and applications of cool compresses to neck

Throat pain usually lasts for a day or two.

Pneumothorax or air trapping outside the lungs is very rare

Breathing difficulty may occur from swelling within the voice box. Please notify your physician immediately if this were to happen. You may be required to come to the emergency room.

Anesthesia-related problems including heart problems can occur. Please discuss these with the anesthesiologist.

Unforeseen event: As with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

Patient's consent: I have reviewed the above information in detail. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risks and complications that may result from this surgery. These have been explained to me in Spanish as well.

Patient's signature

Date

Witness' signature

Physician's signature

UMANG KHETARPAL, M.D.
TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE

MYRINGOPLASTY OR TYPE 1 TYMPANOPLASTY

The ear drum is a very important sound conductor from the external environment to the inner ear. If the ear drum or tympanic membrane has a hole in it either for infection or trauma or from previous placement of an ear tube, it may result in hearing loss or recurrent drainage from the ear. In these situations, a myringoplasty is performed to repair the ear drum and place either a paper patch (patch myringoplasty) or a tissue from behind/front of the ear. This patch or new tissue serves as a scaffold for the ear drum to repair itself.

The surgery is performed under general anesthesia. An incision may be made behind the ear. Therefore, some of the hair above and behind the ear will be shaved during surgery. The surgery is usually performed on an outpatient basis. An ear dressing may be placed for a couple of days after surgery. Some nausea or dizziness may occur after surgery.

RISKS AND COMPLICATIONS

Due to differences in anatomy of the ear, ability to heal, tissue reaction and multiple other factors, no guarantee is provided regarding success of the procedure or results. However, we will provide you with the very best skill that we have at our disposal. Many of the complications noted below have been described in the medical literature and are listed here only to inform you but not to scare you.

Persistent perforation: Despite good surgery the ear drum may not repair itself and a persistent perforation may result. This may require revision surgery.

Facial nerve paralysis: The facial nerve moves the muscles of the face and sits very close to the inner ear and could be injured during surgery. Injury of the nerve results in inability to close the eyes, a dropping eyelid due to poor brow function, an asymmetric smile with possible drooling. Additional surgery may be required to improve this condition.

Hearing loss: Worsening of hearing or even total hearing loss may occur as a result of inner ear reaction to surgery. This cannot be predicted.

Tinnitus or ringing/buzzing sounds in the ear may also worsen after surgery due to the inner ear reaction. To our knowledge there is no known cure for this condition.

Ear infection and bleeding are infrequent after this type of surgery.

Anesthesia problems or unforeseen events could occur but are infrequent.

Additional surgery may be necessary to further improve symptoms or for addressing complications.

I have reviewed this consent form in detail and all questions regarding my surgery have been answered to my satisfaction by Dr. Khetarpal and/or his staff. I understand that no guarantees have been provided. I desire to proceed with my/my child's surgery fully aware of the risks, benefits and alternatives.

Patient/Parent/Guardian signature

Date

Witness signature

Date

TEXAS SINUS, ALLERGY, SNORING, AND SLEEP INSTITUTE
DR. UMANG KHETARPAL, MD

MYRINGOPLASTY OR TYPE 1 TYMPANOPLASTY

The ear drum is a very important sound conductor from the external environment to the inner ear. If the ear drum or tympanic membrane has a hole in it either from infection or trauma or from previous placement of an ear tube, it may result in hearing loss or recurrent drainage from the ear. In these situations, a myringoplasty is performed to repair the ear drum and place either a paper patch (patch myringoplasty) or a tissue from behind/front of the ear. This patch or new tissue serves as a scaffold for the ear drum to repair itself.

The surgery is performed under general anesthesia. An incision may be made behind the ear. Therefore, some of the hair above and behind the ear will be shaved during surgery. The surgery is usually performed on an outpatient basis. An ear dressing may be placed for a couple of days after surgery. Some nausea or dizziness may occur after surgery.

RISKS AND COMPLICATIONS

Due to differences in anatomy of the ear, ability to heal, tissue reaction and multiple other factors, no guarantee is provided regarding success of the procedure or results. However, we will provide you with the very best skill that we have at our disposal. Many of the complications noted below have been described in the medical literature and are listed here only to inform you but not to scare you.

Persistent perforation: Despite good surgery the ear drum may not repair itself and a persistent perforation may result. This may require revision surgery.

Facial nerve paralysis: The facial nerve moves the muscles of the face and sits very close to the inner ear and could be injured during surgery. Injury of the nerve results in inability to close the eyes, a drooping eyelid due to poor brow function, an asymmetric smile with possible drooling. Additional surgery may be required to improve this condition.

Hearing loss: Worsening of hearing or even total hearing loss may occur as a result of inner ear reaction to surgery. This cannot be predicted.

Tinnitus or ringing/buzzing sounds in the ear may also worsen after surgery due to inner ear reaction. To our knowledge there is no known cure for this condition.

Ear infection and bleeding are infrequent after this type of surgery.

Anesthesia problems or unforeseen events could occur but are infrequent.

Additional surgery may be necessary to further improve symptoms or for addressing complications

I have reviewed this consent form in detail and all questions regarding my surgery have been answered to my satisfaction by Dr. Khetarpal and/or his staff. I understand that no guarantees have been provided. I desire to proceed with my/my child's surgery fully aware of the risks, benefits and alternatives.

Patient/Parent/Guardian signature

Date

Witness signature

Date

INSTRUCTIONAL SHEET^

OBSTRUCTIVE SLEEP APNEA

You have been diagnosed with Obstructive Sleep Apnea. The doctor has explained to you that there are long term consequences of sleep apnea such as high blood pressure, heart disease, stroke, poor concentration, excess daytime sleepiness, and fatigue among others. All the consequences of sleep apnea are not yet known. **If you have excessive daytime sleepiness, then you should not drive.** You could risk your own or another's life if you fall asleep at the wheel. Truck drivers are particularly at risk and are strongly advised not to drive if they suffer from excessive sleepiness during the day or when driving. You may return to driving after the sleep apnea has been improved with treatment such as CPAP and weight loss. To return to driving, daytime sleepiness should no longer be a problem. There are several different treatments for Obstructive Sleep Apnea. If you are overweight, weight loss is critical, CPAP, a nasal or face mask is very effective in reducing sleep apnea and helping people sleep at night. This mask, if advised should be used nightly for at least 4-6 hours a night and at least 5 times a week to provide some benefits. We encourage everyone to use this mask even if they do not tolerate it at first. Many individuals, over time, will get accustomed to the mask. Jaw advancement devices and upper airway surgery may also improve sleep apnea. If you have severe sleep apnea and do not tolerate the CPAP mask, then a tracheostomy may be recommended to you. This procedure provides an air passage in the neck to allow you to breathe at night. The opening may be closed during the day. If you are operating heavy machinery or dangerous machinery, and you have a tendency to fall asleep, you are advised to not operate that machinery until your sleep apnea and sleepiness have improved. In making these recommendations, we expect that you will not put yourself or others in harm's way or be a treat to yourself or others.

I, _____, have read the above information and understand the risks of Obstructive Sleep Apnea. By signing below, I acknowledge that I have received a copy of this information sheet and release the physician from any liability related to accidents or workplace injury or personal medical injury.

Patient Signature

Date

Witness Signature

Physician Signature

PARATHYROIDECTOMY

The parathyroid glands are located in the lower neck or in the upper chest. By producing parathyroid hormones, it regulates the calcium levels of the human body. Tumors or enlargement of the parathyroid glands often produce excess parathyroid hormone and result in increased levels of calcium in the body. This excess calcium if not corrected, over time, may cause kidney stones, abdominal pains, inflammation of the pancreas, and other problems. Sometimes parathyroid glands may be enlarged secondary to kidney failure. When the parathyroid glands harbor a tumor or are enlarged, they may require removal. The parathyroid glands are usually four in number, sometimes five. High calcium levels may be from one or more tumors of the parathyroid glands or due to enlargement of all four glands. The surgical removal of the parathyroid gland is called parathyroidectomy. When one or more tumors are found on surgery, they are removed and the remaining glands are left in place. However, when all four glands are enlarged, three and one-half glands are removed leaving just one-half gland behind.

Parathyroid glands usually sit behind the thyroid gland close to the voice box and windpipe in the lower neck. However, they may be situated in the middle neck or in the upper chest (behind the breast bone). Adjacent to the parathyroid gland are nerves that move the vocal cords, blood vessels that bring and take blood to and from the head, neck and brain. The goal is to identify all four glands during parathyroid exploration. Sometimes one or more glands may not be identified.

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involve risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin textures, circulation, tissue and the healing process, and in their response to anesthesia, there can be no guarantee made as to the results of potential complications.

Surgery: This is usually performed under general anesthesia. The incision is made in the lower neck above the collar bone. Time for surgery may vary from 3-6 hours, depending on the difficulty in identifying the parathyroid glands. The upper chest may need to be explored during surgery.

Post-surgical care: The patient may go home in a few days. A drain (or tube) is usually placed to drain any blood clots. This is usually removed in 2-3 days. A pressure dressing may be placed on the neck for a few days. The pain from surgery is of mild to moderate severity and usually controlled with Tylenol or Tylenol with codeine. The stitches or staples are removed in 7 days. Clean the suture line with Q-tip and hydrogen peroxide three times daily (after removing dressing) and smear with bacitracin ointment. This prevents crusting at the incision thus making the scar

less noticeable. Do not lift any weights and sleep with 2-3 pillows under your head. Blood samples are routinely performed after surgery to check the calcium levels. You may be put on calcium tablets and vitamin D prior to discharge. Using SPF 30+ cream on the scar and avoiding any sun exposure to the scar can prevent browning or pigmentation of the scar.

Sequelae, risks and complications

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you, but to make you aware and more knowledgeable concerning the surgical procedure. These include but are not limited to:

Hoarseness- there is a risk of permanent damage to the vocal cord nerves resulting in hoarseness. This hoarseness usually improves over time. If it persists, surgical options are available for improving voice.

Bleeding- there is risk of bleeding into the wound after surgery. Occasionally this requires return to the operating room.

Low calcium- up to 30% incidence of temporary low blood calcium has been noted and this may require calcium and vitamin D supplementation.

Infection- there is a low risk of wound infection and pneumonia.

Anesthesia- related problems. Please discuss any anesthesia concerns with the anesthesiologists, especially if you are on heart medications.

Kidney stones- may occur rarely after surgery and these stones have already been in the kidney prior to surgery and are finally coming out.

Scar- the neck scar may be obvious and may require scar revision.

Breathing difficulty hours after surgery is usually due to a blood clot that requires evacuation. Rarely, this may be related to vocal cord paralysis or anesthesia-tube.

Revisions Surgery may be required if a second parathyroid gland tumor is present or if the repeated elevation in the blood calcium is seen.

Unforeseen event- as with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

The pathologist's report usually takes 3-4 days. Therefore, this report should be available at the time of your return visit for suture removal.

Patient's consent: I have reviewed the above information in detail and am aware that any of the above may occur. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risks and complications that may result from this surgery. These have been explained to me in Spanish as well

Patient's signature

Date

Witness's signature

Physician's signature

UMANG KHETARPAL, M.D.
TEXAS SINUS, ALLERGY, SNORING AND SLEEP INSTITUTE

PAROTIDECTOMY

The parotid glands are located one on either side of the face in the front of the ears and makes saliva. The surgical removal of the parotid gland is called parotidectomy and this is usually done for tumors of the parotid gland. The facial nerve artificially divides the parotid gland into a deep part and a superficial part. The facial nerve is responsible for moving the muscles of the face, forehead and those around the eyes. Given the close relationship of the nerve to the parotid gland, the nerve may be compressed, pinched, stretched out or involved by diseases of the parotid gland. Furthermore, this same close relationship puts the nerve at risk during surgery. If the nerve is inflamed such as in Bell's palsy or involved by a parotid tumor or damaged during surgery, the smile is somewhat crooked and it is difficult to close the eye and raise the forehead. The nerve may only stretch by tumor or during surgery. In these situations, the muscles of the face usually return back to normal function within 3-9 months. If the nerve function does not return, there are several surgical procedures that may help with making the face look more symmetric.

Your surgery will be performed safely and with care to obtain the best possible results. You have the right to be informed that the surgery may involve risks of unsuccessful results, complications or injury from both known and unforeseen causes. Because individuals vary in skin textures, circulation, tissue and the healing process, and in their response to anesthesia, there can be no guarantee made as to the results or potential complications.

Surgery: This is usually performed under general anesthesia. The incision is made in the crease line in front of the ear and may drop down to the neck after a small extension behind the ear or may be hidden in the hairline behind the ear. Time for surgery may vary from 3-5 hours depending on the size of the tumor.

Post-surgical care: The patient may go home the same day or the day after surgery. A drain (or tube) is usually placed to drain any blood clot. This is usually removed in 2-3 days. A pressure dressing may be placed on the cheek and neck for a few days. The pain from surgery is of mild to moderate severity and usually controlled with Tylenol or Tylenol with codeine. The stitches and staples are removed in 5-7 days. Clean the suture line with Q-tip and hydrogen peroxide three times daily (after removing dressing) and smear with bacitracin ointment. This prevents crusting at the incision thus making the scar less noticeable.

Sequelae. Risks and complications:

The following complications have been reported in the medical literature. They are listed here for your information, not to frighten you, but to make you aware and more knowledgeable concerning the surgical procedure. These include but are not limited to:

Facial Nerve problems- there is a risk of permanent damage to the facial nerve and up to 25-30% chance of temporary weakness of the nerve. Occasionally, the tumor spreads into the nerve. In this situation, the nerve may be removed or resected and results in weakness of one side of the face. Rehabilitative plastic surgery usually improves this situation but rarely returns it to normal.

Hematoma- there is about 3-5% risk of bleeding into the wound after surgery. This may require drainage or return to the operating room.

Seroma- there is a 5-10% chance of fluid collection in the wound (seroma). This is usually controlled with pressure dressings and medications that decreased saliva drainage.

Infection- there is a low risk of infection and pneumonia.

Anesthesia- related problems. Please discuss any anesthesia concerns with the anesthesiologist.

Anesthesia could result in heart problems, breathing problems and even death.

Numbness- almost always the skin in and around the ear remains numb for a long time after surgery. This sensation may or may not return. Male patients should be careful in this region during shaving.

Healing- in patients with a history of smoking, the blood supply to the skin is poor and there is a significant risk that the skin behind the ear may not heal well. This may or may not require a skin graft secondarily.

Visible scar- you will have a visible scar after surgery. Keloid or thick scar formation may occur but is rare except in those individuals that are predisposed to thick scars.

Frey's syndrome- some years after surgery you may notice that the skin in front of the ear sweats during eating. This is called gustatory sweating of Frey's syndrome. An antiperspirant or deodorant application over the skin often suffices. For moderate to severe sweating during eating, medications or even surgery may be required. Because the removed parotid gland is of moderate size, you may notice a slight flatness to the region in front and below the ear. This appearance may improve over time.

Tumor recurrence- aggressive tumors may return quickly or even 20 years after surgery. This may require revision surgery or even other forms of treatment.

Unforeseen event- as with any medical or surgical procedure, unforeseen or unpredictable events may occur that include such remote possibilities as death.

The pathologist's report usually takes 3-4 days. Therefore, this report should be available at the time of your return visit for suture removal. The type and nature of tumor will dictate any subsequent treatment.

Alternatives include non-surgical treatment. The tumor may grow and press upon the facial nerve and may become cosmetically displeasing. If it is malignant, then it will spread and become life threatening.

Patient's consent: I have reviewed the above information in detail. The questions that I have had before and after reading this document have been answered to my satisfaction by the surgeon, Dr. Khetarpal. I fully understand the benefits, risks and complication that may result from this surgery. These have been explained to me in Spanish as well.

Patient's signature

Date

Witness' signature

Physician's signature

POSITIONAL VERTIGO MANEUVER

INSTRUCTIONS AND WHAT TO EXPECT AFTER THE MANEUVER

- 1 Sleep in a recliner with the head about 45 degrees above the horizontal or sleep with 4 pillows beneath your head. This should be done for two consecutive nights after the maneuver.
- 2 Do not perform any strenuous activities for 48 hours.
- 3 No jerky or shaking movements of the head for 48 hours.
- 4 Do not climb ladders for 48 hours and do not tilt your head back
- 5 Do not bend down. If you need to do so, please bend at your knees without lowering your head.
- 6 No alcohol or smoking for 48 hours.
- 7 You may feel some light headedness or a sense of weakness in your legs for a day or two. Continue to walk with an escort but do not do so without help.
- 8 Continue taking your regular medications.
- 9 If you were taking Antivert prior to the maneuvers, you should be able to stop taking them
- 10 I have had greater than 90% success with this maneuver. In an occasional patient the spinning sensation has returned, but this is rare within the first six months. Some "wooziness" and "lightheadedness" or "sense of feeling drunk" are more common.
- 11 In case of return of vertigo, this maneuver can be performed again with similar benefit.
- 12 In patients who do not obtain benefit from this maneuver, an MRI scan of the brain will be performed and surgery to cut a small balance nerve or plugging the balance organ may be recommended.
 - This maneuver may not be performed if you have disease of the cervical (neck) spine
Please notify your physician if you have any questions or concerns

For Home therapy – here are the steps for this procedure. Please do so with someone in attendance.

Position 1: Sit up

Position 2: Lay down and rotate your head towards the side that makes you dizzy (e.g. Left side) The affected ear should be below the level of the heart. The head should hang a little. Let your vertigo pass. Stay in this position for 30 seconds.

Position 3: Turn the head towards the opposite ear with head hanging (e.g. Right side). Lay in this position for 30 seconds.

Position 4: Turn the body to the right side by 90 degrees and the head should now face the floor

Stay there for 30 seconds

Position 5: Sit up and tuck your chin for 30 seconds.

This completes the maneuver. This may be repeated, as needed.