



## SOUTHERN NEW MEXICO SURGERY CENTER

2301 Indian Wells Rd. Suite B  
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### **NASAL & SINUS SURGERY**

#### **What to expect after surgery**

If only a septoplasty and partial turbinectomy are performed the procedure takes about 45-60 minutes, and may take up to 3 hours if sinus surgery is to be done. After surgery is completed the patient spends about 30-60 minutes in the recovery room, then usually can go home after about 2 more hours in another location when they are awake enough. In most cases, no packing of the nose is required if there is minimal bleeding, and there is not much discomfort after the operation. Occasionally, however, it is necessary to place several sponges in the nose to control bleeding. If sponges are required these may feel rather tight and may be uncomfortable. Most people describe this as a simply pressure sensation or a nuisance of not being able to breath through the nose, but some people find it very uncomfortable.

Initially the nose will be blocked due to postoperative swelling. The nose will open up over the next 2 weeks, and the maximum ease of breathing will be attained around 4-6 weeks. There will be some crusts persistent in the nose for up to 4-5 weeks.

There are dissolvable stitches in the nose and at some point after surgery you may see these come out. These stitches will look like fragments of thin, brown string. Do not be alarmed if you see these, it is natural for them to come out after a few days to a few weeks.

#### **Bleeding**

During the first 24-48 hours there will be some oozing of blood from the front of the nose and some blood going down the back of the throat. You will be given several small sponges to place under the nose to catch the blood so that it does not run down your face. This dressing, known as the "drip pad" may be changed as often as you like. You may also feel better if you spit out any blood that runs down the back of the throat, as if a large amount of this is swallowed it can cause nausea. Ordinarily the dressing needs to be changed when it is saturated, every 20 minutes to 1 hour during the first day or two. It is important to use Afrin spray 4 times per day during the first day or two to keep the bleeding to a minimum. Afrin spray (Oxymetazoline - generic) is a potent vasoconstrictor and shrinks the blood vessels of the raw surfaces inside the nose and reduces the amount of oozing.

You should keep track of how much bleeding occurs from the nose and down the back of the throat. The amount of bleeding may vary from person to person but keep in mind that if the total amount of blood loss within the first day is less than one measuring cup, it is not enough to cause a problem. If the patient vomits up a significant amount of blood clots this should be kept track of, as it may indicate significant bleeding going down the back of the throat. Once again, a small amount of blood in the stomach is to be expected and should not alarm you. If the amount of bleeding appears to be more than this you should contact Dr. Frost for additional instructions.

During the first night after surgery it is a good idea to sleep with the head elevated to lower the risk of bleeding from the nose. Likewise, try not to bend over for the first two days after surgery to avoid bleeding.

During the first week after surgery you may sniff any drainage through the nose, but do not blow the nose as this may cause bleeding, and if the sinuses have been operated on, it can cause air to be forced into the soft tissues of the face or around the eye. If you have to sneeze, sneeze with the mouth open. After the first week you may begin to blow the nose to clear out any crusts or mucous that may have accumulated.

#### **Nausea/affects of anesthesia**

The after effects of general anesthesia can occasionally cause patients to be groggy and/or nauseated lasting up to about 24 hours. Of course you should not attempt to drive or operate machinery in the first 24 hours. If nausea and vomiting occur, this can be improved by taking an anti-nausea medication, usually Phenergan, prescribed by Dr. Frost. This can be taken either by mouth or as a suppository if the patient is too nauseated to keep the medicine down. Once again, although significant blood loss is unlikely, swallowed blood can cause nausea as well which is usually not controlled by Phenergan. Any vomited material will contain a small amount of blood, and this should not cause alarm, but if it contains a large amount of blood(see above), you should contact Dr. Frost.



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### **Diet**

In general the patient may resume a normal diet. However, hot or spicy foods should be avoided as they tend to cause the blood vessels in the nose to dilate and may increase the amount of oozing.

### **Activity, Work/School**

Most patients feel a little under the weather for about 1-2 days afterwards but feel pretty much back to normal by about 3 days, however the raw surfaces inside the nose tend to cause the nose to ooze a blood tinged mucous-like material for up to two weeks after surgery, but especially during the first 5-6 days. You may want to continue wearing the drip pad until this is resolved. Light activities may be resumed after about the second or third day, but heavy lifting or vigorous activity should be avoided for the first week as this may increase the chance of bleeding. If the patient feels up to it he may go back to school or to work after about 3 days, however the oozing from the nose may create enough of a nuisance that this may preclude effective performance of certain jobs.

### **Pain medication**

In most cases, especially if there is no need for packing in the nose, most patients will have minimal discomfort from the surgery. Plain Tylenol may be all that is required in most cases. Dr. Frost will, however, always prescribe a narcotic pain medication to use in case this becomes necessary. Narcotic pain medications are very potent and can control most pain but it must be kept in mind that it can also cause nausea if a high dose is taken or if the patient is moving around and too active while taking narcotics. For this reason, if the patient is having enough pain to require narcotic medication they should probably be at bed rest too, or at least not active.

There may be some numbness of a small spot on the roof of the mouth because there is a nerve that runs through the septum that can be bruised or cut when the septum is straightened. This numbness may resolve or can persist indefinitely, but does not indicate anything dangerous.

### **Antibiotics**

Dr. Frost has prescribed an antibiotic for you to take the first ten days after surgery. This medication will help to prevent any infection in the nose. It should be taken regularly.

### **Follow up**

Patients will usually be seen at 1 week after surgery. If there has been significant oozing from the nose and/or if nasal sponges have been placed, the patient may be asked to return on first or second day following surgery to check on the patient or to remove the nasal sponges.

### **Care of the nose in the postoperative period**

During the first few weeks after surgery the inside of the nose has several raw surfaces that will tend to form crusts or scabs. This may persist for up to 5-6 weeks. There are several things that you can do to keep the inside of the nose moist and reduce the build up of crusts in the nose.

### **Nasal emollients**

After surgery you may begin using medicines to keep the inside of the nose covered with an oily surface and prevent the raw surfaces from drying out. There are two main ways of doing this. The first is simply to squirt about an inch of Bacitracin antibiotic ointment into each side of the nose directly from the tube about 4 times per day. This can be done more frequently if the inside of the nose dries out. This medication is effective, but should probably be avoided if you have had surgery on the sinuses, because the petroleum jelly can get trapped in the sinuses and cannot be absorbed. The other option is an oily nose drop called Ponaris. This is a non-prescription combination of oils, that can be absorbed by the body and so is safe to use after surgery on the sinuses. It can be obtained from a drug store without a prescription, but it may be somewhat difficult to locate as not all pharmacies are familiar with this. Approximately 4-5 drops should be placed in each nostril between 4 and 10 times per day as needed, to keep the inside of the nose "coated". The drops can be more efficiently distributed over the entire surface of the inside of the nose by sniffing the medicine back and forth inside of the nose after application and possibly by leaning (or kneeling) forward and placing the forehead down (this should only be done after the first 2 days). This allows the medicine to move up into the upper part of the nose and sinuses. This medicine is completely safe and may be used as much as is necessary. You need not be concerned about overdosing. Likewise, there is no harm in swallowing this medication if it should go down the back of the throat as it is absorbed by the body. These emollients can be started on the first day after surgery after the majority of the oozing is stopped (they may interfere with the effectiveness of the Afrin), and may be continued indefinitely however long they are needed to keep the inside of the nose moist.

### **Nasal irrigations**

After about the first week most of the raw surfaces inside of the nose will be healed enough that the major risk of bleeding is passed and you may begin irrigating the inside of the nose with a specially prepared solution to help flush out any persistent crusts that might build up. You can generally expect to have crusts present for up to 4-5 weeks.



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In order to do this you will need a “water-pick” which you can buy at the drugstore, and a special attachment to direct the pulsed water into the nostril. This attachment, called a “Grossan” Nasal Irrigator Tip can be obtained from Dr. Frost or can be purchased from the drugstore for a cost of less than \$15.00 in most cases. The irrigating solution is prepared by mixing the following:

1 oz Hydrogen Peroxide/Oxyfresh  
7 oz Water (distilled or reverse osmosis is best)  
1 Teaspoon of table salt (sodium chloride)

You may add other components such as glycerin, Ponaris or other emollients if you like. The mixture should be warmed to body temperature (or slightly above) for the greatest comfort.

This solution is then placed in the water pick and the attachment is placed into one nostril. Holding your nose over a sink, half of the solution is run into one nostril and allowed to flow out of the opposite nostril and into the sink. This is then repeated with the opposite nostril. In order to keep any of the solution from going down your throat it is important to keep the back of the throat closed. A useful trick to accomplish this is simply to blow air gently through your lips while you are irrigating. This forces the back of the throat to seal. You may repeat this as many times as necessary at each session and can be performed one to three times per day. After the nose has been irrigated it is a good idea to apply some Ponaris drops to the nose to keep the inside of the nose from drying out again.

The hydrogen peroxide in the mixture causes the nose to foam and bubble. This “fizzing” effect helps to loosen the crusts and may feel funny, but it should not hurt. If the fizzing is objectionable the 1 oz of hydrogen peroxide may be omitted and simply use 8 oz of water.

### **Rhinoplasty Instructions**

There are some additional precautions to follow if, in addition to septoplasty and turbinectomy, you have also had a rhinoplasty.

A rhinoplasty is the operation where the outside of the nose has been changed. This includes making cuts in the bone on the bridge of the nose to reduce, narrow, straighten or otherwise correct the appearance of the outside of the nose. These cuts are made through incisions on the inside of the nose, but there will usually be some swelling and bruising under the eyes that will gradually go away over about 2-3 weeks. Occasionally in order to change the outside of the nose more accurately, it is necessary to lift the skin up over the outside of the nose. This is called an open rhinoplasty. This would not be done unless it is specifically discussed with you in advance of the surgery. If you have had an open rhinoplasty, there will be a small cut on the underside of the nose between the nostrils with tiny stitches that will be removed in about 1 week. This small cut heals up with a minimal and barely noticeable scar after several months.

If you have had any kind of rhinoplasty you will have a plastic or metal splint on the bridge of the nose. Please keep this dry so that it can stay in place. It will be removed at 1 week and more tape will be reapplied at that time for 1 more week. Be very careful not to bump the nose during the first 2 weeks and sleep on your back to avoid pressure on the nose during sleep. If you wear glasses, you should not let the glasses rest on the bridge of the nose for about 4 weeks. You can support the glasses by taping them to your forehead if you must do this.

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### **Basic information on Septoplasty, Partial Turbinectomy**

The purpose of this procedure is to improve the ability to breath through the nose. Blockage of the nasal airway can be caused by several factors. First of all the nasal septum, which is the bony and cartilaginous divider between the two sides of the nose, can be crooked either as a result of injury or simply as a result of variations in growth as a child. The septum can be bowed entirely to one side or the other or it may have projections sticking into one or the other nasal cavity, or both. These would be called septal spurs. Any of these abnormalities are grouped together under the description of “septal deviation”. If the septum is deviated enough to block one or both of the nasal cavities, the patient may experience difficulty breathing through the nose.

The second common factor contributing to nasal obstruction is enlargement of the inferior turbinates. The inferior turbinate is a roughly sausage-shaped structure that sticks into the lower part of the nose on either side. This turbinate is composed of bone in the center and is covered by a layer of soft tissue (flesh) that is filled with a large number of blood vessels. These blood vessels have the ability to expand or shrink greatly, depending on a number of physiological factors. An example of these factors are, for instance, during exercise adrenaline released by the body causes the blood vessels to shrink and allow the nasal passage to open up more. Another example is certain nasal sprays, such as Afrin, also cause the blood vessels to shrink. On the other hand another very important factor causing the blood vessels to dilate, and consequently block the nasal passage, is allergies or other irritants to the nose. Thus the size of nasal passage can change substantially, depending on whether the inferior turbinates are shrunken or swollen up.



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While most people will experience some variation in the ability to breath through one or the other nostril through the day, if a person's nose becomes excessively blocked as a result of either septal deviation and/or swelling of the turbinates that cannot be controlled with medical treatment, it may be beneficial to enlarge the nasal airway by a combination of septoplasty and partial inferior turbinectomy as needed.

### **Septoplasty**

The septoplasty component of the procedure is meant to straighten out the septum so that it does not block either side of the nose. In order to do this, an incision is made on the side of the septum inside the nose, the skin over the deviated bone and cartilage is raised up, and the crooked portions of the bone and cartilage are either straightened or removed if they are too deviated to able to straighten. The skin over the septum is then put back into place and sewn back into position and when it heals the septum assumes a much straighter, natural shape.

### **Partial Turbinectomy**

If the turbinates are enlarged or otherwise contributing significantly to the blockage of the nose they can also be reduced in size surgically. This is accomplished by simply trimming approximately the lower one-third of the front portion of the turbinates. This not only reduces the size of the turbinates if the bony component is enlarged, but it also removes a significant component of the blood-vessel-filled lining that is responsible for much of the swelling caused by allergies or other nasal irritations. Consequently, trimming the turbinates can help the nasal blockage that occurs as a result of allergies as well. It should be noted here that although in this way allergies can be helped with a surgical procedure, this procedure does not help the sneezing and runny nose that can go along with allergies, only the nasal obstruction.

### **Chronic sinusitis - what is it and how is it treated?**

Everyone has spaces in their head and face that drain into the nose. These spaces are called paranasal sinuses, or commonly known as "the sinuses". Ordinarily these spaces are filled with air. The exact function of the sinuses is not well known, however some people believe they are there simply to keep from having the head filled with bone thus allowing the skull to be lighter than it would be otherwise. The sinuses are connected to the nose by very small openings called "ostia". Under normal circumstances the lining of the sinuses on the inside produce secretions of water and mucous that are swept through the little openings in the sinuses into the nose and act to carry with it any bacteria or other material that may have become trapped inside the sinuses. If the small passageways between the sinuses and the nose (ostia) become blocked for any reason, such as if they swell up during a cold or flu, then it is much more difficult for the sinuses to clear themselves of infected material. If this happens bacteria and pus may build up inside of the sinuses causing "acute sinusitis". In order to treat acute sinusitis we use medications that may help to open the sinus ostia (decongestants or topical steroids) and antibiotics are used to kill the bacteria in the sinuses. If this treatment is successful the bacteria are completely eradicated and the lining of the sinuses returns to normal.

If infection continues or was particularly severe the lining of the sinuses may be damaged or scarred in a way that does not return to normal. This may result in persistent swelling, scarring and blockage of the ostia of the sinuses so that the infection cannot be cleared. This ongoing infection due to persistent changes in the lining and/or ostia of the sinuses is known as "chronic sinusitis". Although this is the most common basic scenario causing chronic sinusitis, there can be several other factors that can contribute to blockage of the sinuses such as allergies, abnormally shaped structures in the nose as a result of abnormal development, or trauma(septal deviation for example).

The treatment of chronic sinusitis can be either medical or surgical. At first usually a trial of potent antibiotics, decongestants and possibly steroids can be used to try to improve infection enough to get it to resolve permanently. If this is not successful, then surgical correction is necessary. Fortunately there is now a new method to accomplish this known as "endoscopic sinus surgery".

### **Endoscopic Sinus Surgery(ESS)**

The goal of ESS is to widen the natural openings of the sinuses and make it possible once again for the sinuses to clear themselves of infected material. This is accomplished by using long, thin telescopes to see deep into the nose so that the surgeon can accurately identify the blockages and precisely and safely remove only that tissue which is blocking the openings of the sinuses. This surgery is done entirely inside the nose with no incisions on the face. This is an advance over techniques used as recently as 5-10 years ago, because without the telescopes it used to be very difficult to safely operate on the natural openings of the sinuses, and usually the best that could be done was to put a hole in the maxillary sinus (the sinus under the eyes) in a location that was not the normal opening. This was safe, but not very effective and did nothing to treat the most commonly affected and most important sinus, the ethmoid sinus(the sinus between the eyes).

In "the old days" if one needed to operate on the ethmoid sinuses it was necessary to make a cut on the face or risk injury to the eyes.

Once endoscopic sinus surgery is completed the inside of the nose is somewhat raw and may take several weeks or months to heal completely, and although there may be some crustiness inside the nose it should not be very painful



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during that period. Once the sinuses are opened and can once again drain properly, the sinuses can begin to return to their normal state, but it can take up to an entire year for the lining of the sinuses to completely recover from a long infection. Thus complete improvement in symptoms may not be achieved for as much as one year after surgery.