Jacqueline E. Jones, MD 1175 Park Avenue Suite 1A New York, NY 10128

ENDOSCOPIC SINUS SURGERYA Pre-Operative and Post-Operative Guide for Parents and Patients

SOME BACKGROUND INFORMATION

1. What are sinuses?

Sinuses are air filled cavities in the head. Their true purpose is still unknown although possible roles of the sinuses are to make the head lighter and to provide extra mucous to the respiratory tract.

2. What is endoscopic sinus surgery?

Endoscopic sinus surgery is the removal of diseased sinus tissue through the nose. It is a relatively new procedure which replaces more extensive surgery performed in the past. The purpose behind endoscopic sinus surgery is to open the natural drainage passages to the sinuses and promote the sinuses natural ability to heal themselves. Most sinus and nasal mucosal disease will resolve once aeration and drainage are reestablished. Removing the source of the blockage allows the sinuses to heal and return to their normal function.

3. When should endoscopic sinus surgery be performed?

Endoscopic sinus surgery is recommended for patients with:

- a) continual sinus infections
- b) obstruction to the airway
- c) persistent mouth breathing
- d) severe snoring
- e) severe nasal obstruction
- f) headaches

PREPARING FOR SURGERY

1. What medications should and should not be taken prior to surgery?

- a) Aspirin or aspirin based mediations (Advil, Bufferin, Nuprin, Aleve, Motrin, Ibuprofen etc.,) and vitamins should not be taken for two weeks prior to, and after, the surgery.
- b) **Afrin** should be sprayed in the patient's nose three separate times prior to arriving at the hospital. This can be performed when the patient wakes up, when the patient leaves to come to the hospital, and when he or she arrives at the hospital.
- c) Adult patients will receive a prescription from the doctor labeled **Mephyton**. Mephyton is a vitamin which promotes the blood clotting system in your body. **You should start taking the prescription 5 days before surgery is scheduled.** Please be sure you have received your Mephyton prescription from our office.

2. What can the patient eat and drink before surgery?

All patients undergoing surgery are allowed to ingest only clear liquids, up to 8 ounces, after midnight prior to the morning of the surgery. Adult patients must stop drinking liquids 4 hours before arrival to the hospital, while children must do so 3 hours prior to arrival. Clear liquids consist of apple juice, water, clear broth or Jell-O. No solids, juice with pulp or milk products are to be given after midnight prior to the morning of surgery. In the morning, patients may brush their teeth, but cannot swallow any water.

3. Mandatory blood tests for adults and children:

All adults must have a complete blood count blood test and blood clotting tests within 14 days of the surgery and no less than three days before the surgery. If other blood tests are needed our office will notify you. Patients above the age of 45, are required to have a chest x-ray and an EKG. In the case of children, a CBC should have been performed preferably within a month of surgery, and no later than 6 months before the procedure date. All results must be faxed into the office at 212-981-9832 no later than three days before the surgery date if testing is done outside the hospital.

4. What should I tell my child about the procedures?

It is important that you discuss the surgery with your child before the day that it is to take place. Reassure your child that on the day of surgery, there will be one parent with them throughout the entire first stage of anesthesia and that there will be no pain felt at all during this time. Make sure your child knows that you will be with him/her and that you will make sure everything is okay. Explain to your child that this surgery is going to help keep him/her healthier in the future. Sesame Street, Mr. Rogers and Curious George all have wonderful children's' books about going to the hospital. If you can, get a copy of these books and read them with your child before the day of surgery. Remember to relax! The calmer you feel about this procedure, the calmer your children will be on the day of surgery. Please note that there is a special pre-operative program in New York-Presbyterian Hospital to help prepare you and your child for surgery. You can obtain more information about the program from our office.

5. Clothing and accessory restrictions:

For both pediatric and adult patients, contact lenses should not be worn on the day of surgery. If you wear them to the hospital, you will be asked to take them out before the surgery is started. Patients should abstain from wearing any makeup and earrings.

THE MORNING OF SURGERY AND THE PROCEDURE

1. Arriving and signing in:

Patients are generally scheduled for surgery at either New York Hospital, Manhattan Surgery Center, or Manhattan Ear Eye and Throat Hospital. If you are having surgery at New York Hospital, when you arrive at the hospital, you will go to the 9th floor of the Starr building, room L-919, the Ambulatory Surgery Center, where you and your child will sign in. If you are scheduled at Manhattan Surgery Center or Manhattan Ear Eye and Throat Hospital, you will go t the main reception desks at 619 West 54th Street or 210 East 64th street, respectively. Once you are signed in, your child will go into a changing area in the back room and change into hospital pajamas. Generally, with the approval of the anesthesiology staff, one parent is allowed to accompany the child to the operating room (OR.) This parent will need to change into a hospital jumper at the same time and place that the patient puts on his/her pajamas. The jumper fits right over your clothes. On the day of your child's surgery, the parent going up to the OR should wear pants, as opposed to a skirt if possible. Also, please wear closed toe shoes to the hospital.

2. The waiting room:

Once your child is signed in and has changed into pajamas, you and your child will be brought to the waiting room. Usually you will wait in this area for about 45 minutes before your child is brought up to the OR. While there are some toys in the waiting area, you should bring a favorite toy or stuffed animal if your child has one. You may also bring a video tape or iPad that can be played for your child in the waiting room. Once the doctors in the OR are ready for your child, one parent or guardian and the patient will be escorted to the OR.

3. What happens in the operating room?

Children are placed asleep by general anesthesia administered via a mask. It is important for the parents to discuss this with their child, as this procedure may be frightening if your child is unaware of what to expect. Tell your child that you will be present throughout this entire phase of anesthesia induction. Once the patient is asleep, parents must leave the OR. You will be reunited with your child once the procedure is finished and they are in the recovery room (post-anesthesia care unit). After the parents have left the OR Suite, an end tracheal tube and an intravenous line will be inserted. This is routine for all patients undergoing general anesthesia. Surgery will take approximately one to one and a half hours. While your child is in the OR, parents will be asked to wait in the waiting room.

4. Information for adult patients:

Once signed in, you will go into a changing area in the back room and change into hospital pajamas. Please leave all valuables at home or leave then with the person that will be accompanying you on the day of surgery. Adults will be brought to the OR by an orderly. Since there are no pre-medications administered, you will be asked to walk or be transported by a wheelchair. An intravenous line will be inserted by an anesthesiologist and anesthetic agents will be administered through the IV as part of the induction phase. You will become groggy and, once asleep, an endotracheal tube will be inserted. Surgery is usually completed in one to one and a half hours. After surgery, you will be transferred directly to the post-anesthesia care unit (PACU). Family members or a significant other will be informed when you have arrived in the PACU; when you are awake enough family members may visit you.

THE RECOVERY PERIOD

1. The who, what and where of the pediatric recovery period in the post-anesthesia care unit:

Upon completion of surgery, children will be brought to the PACU. Both parents will be brought to the PACU, in most cases, prior to the child's arrival. Parents will be allowed to be with the child until they are transferred to a floor. On arrival to the PACU, children will have humidified oxygen directed towards their face to help alleviate the effects of anesthesia. Vital signs (blood pressure, pulse, respiration) will be taken every 20 minutes in the PACU. Temperatures will be taken every hour on children. The IV that was placed in the OR will remain in until the child is tolerating fluids. Your child will be placed on a cardiac monitor temporarily to observe cardiac rhythm. Pain medication will be administered as needed. Most children, under the age of 5, will have received a Tylenol suppository in the OR. When your child is able to drink fluids, we will offer clear fluids such as fruit juice, Jell-O and water. Even though it hurts to suck and swallow, it is very important for your child to drink plenty of fluids. Please remember, the more your child drinks, the quicker your child will recover. When your child can drink at least one glass of juice or water without vomiting, the IV can be removed. Ambulatory patients will be

discharged after approximately 2-3 hours. Children to be admitted overnight will be transferred to the floor when a bed is available. Parents should bring a toy or book for the child as there may be a wait for a bed.

2. The adult patient recovery period in the post-anesthesia care unit:

For adults, on arrival to the PACU, oxygen will be administered by nasal prongs to alleviate the effects of anesthesia. The IV will remain in place until you are able to tolerate fluids and you will remain on a cardiac monitor until discharge. The average length of time in the PACU is 1-2 hours if you are any ambulatory patient or until a bed is available if you are to be admitted overnight. Pain medication will be administered at request in the PACU, and vital signs taken every 20 minutes until discharge from the PACU. Patients sometimes complain of feeling cold in the PACU. This is due to the effects of the anesthesia wearing off. Family members may visit patients once they are awake.

DISCHARGE INSTRUCTIONS

1. Limit activity:

After discharge from the hospital or ambulatory unit, you are to go home immediately. Adults should remain home and quiet for one week. Please be aware that most patients do not feel fully recovered for about ten days. Exposure to the sun should be avoided as it may cause increased blood pressure and slow recovery. For the first 5-7 days, it is helpful to use a vaporizer or humidifier when your sleeping. This improves breathing, reduces crusting in the nose and reduces drainage and bleeding.

2. Diet:

Although there is no specific diet, we recommend light meals to start as you may feel slightly nauseated from the anesthesia. Soft foods are encouraged for the first 2-3 days. Occasionally, you may vomit one or two times immediately after surgery. However, if vomiting persists, your doctor may prescribe medication to settle the stomach.

3. Medication for pain and infection prevention:

- a) You or your child should experience minimal pain from this surgery. The patient will be mildly uncomfortable the first evening after surgery such as a feeling one would experience with a stuffy head from a bad cold. Tylenol is usually sufficient. Tylenol should be administered every four hours as needed. Tylenol with codeine will also be prescribed for pain.
- b) You will be given a prescription for **antibiotics** which you or your child will need to continue on for a full 10 days after surgery
 - c) Use Vaseline or Chapstick on the patient's lips to prevent drying.
- d) Please start saline nasal spray 2 days following surgery and use that several times per day. This spray should not be painful.
- d) No not use aspirin (Motrin, Ibuprofen etc.,) or vitamins for 14 days. These products may interfere with blood clotting capacity which may lead to bleeding. Read all medication labels carefully to insure that they do not contain aspirin.

5. In the event of bleeding:

If you notice any significant bleeding coming from you or your child's nose that is continuous or severe, please call us. There may be some oozing of blood from the nose for the first 24 hours. This is normal. If the bleeding is continuous after this time or a significant amount is noted, please contact us.

6. Things to avoid:

Avoid sneezing and violent blowing of the nose for these actions may cause bleeding. If sneezing is imperative, it should be done with the mouth open.

7. Vaporizers and humidifiers:

Have a vaporizer or humidifier going in the patient's bedroom the night following surgery. You should sleep with your head elevated.

8. Please make an appointment for one week from the day of surgery.

During this doctor's visit, the patient's nose will be cleaned of any dried secretions.

COMMON CONCERNS, QUESTIONS AND POSSIBLE COMPLICATIONS

* If there are any concern or questions regarding your post-operative care, please read the following post-operative care instructions and information below. If further information is required, please contact our office:

Jacqueline E. Jones, MD (212)996-2559

1. Why is the patient nauseous and/or vomiting?

It is common for this to occur due to the anesthetic and the swallowing of small amounts of blood during the operation. We will give you or your child medication to control the vomiting. If you or your child is vomiting at home, there are things you can do to help. Encourage rest. Do not give any fluids or food for 30 minutes and then slowly start to give small amounts of clear fluids. If vomiting persists 24 hours after surgery, or is severe, please call us.

2. What should I do if the patient is running a fever?

A low grade fever is normal after any surgery. If your child has a fever higher than 38.5 C/101.5 F by mouth, and has not had Tylenol within the past four hours, give Tylenol. If the temperature is higher than 101.5 F after treatment with Tylenol and persists over 6 hours, please call us. Occasionally, post-operative infection occurs. The infection will present itself as unrelenting pain and fever about 102 F. If this happens, again, please call us.

3. Is it normal for the patient to be drowsy or dizzy after the surgery?

Yes, after the operation, you or your child may be drowsy and/or dizzy. This will usually improve prior to the time of your child's discharge. Because your child may be a little unsteady at the time of discharge and the 24 hours after surgery, it is important to support him/her until your child can walk safely. Supervise your child to prevent falls or injuries during this time.

4. Will the patient's voice be affected from the surgery?

Sinus surgery may result in a slight voice change. This is usually temporary, however, in rare instances, it may be permanent. Certainly, you or your child will sound less nasal once the sinuses have healed.

5. Is it abnormal for the patient to be "stuffy" following surgery?

No, this is normal. All patients have nasal stuffiness following surgery. The nasal stuffiness may last for several weeks as swelling decreases.

6. Why is the patient snoring after surgery?

You may notice persistent or even louder snoring for several weeks. This occurs because of tissue swelling in the back of the nose and the soft palate because of the surgery. As swelling decreases, snoring should subside.

7. Can the patient go swimming after surgery?

Patients should not swim or dive for 10 days following the surgery.

8. Should bathing or showering be regulated?

Bathing and showering are perfectly fine after endoscopic sinus surgery. While showering is tolerated, no water should be directed into the nose from a shower head as this may disturb the healing process.

9. What are the rules for travel?

For both adults and children undergoing endoscopic sinus surgery, travel is prohibited for 2 weeks following the procedure. Flying is restricted because patients are unable to equalize the pressure change experienced in the air the way that they normally do because of swelling in the nasal cavity and sinus areas. Patients should stay within 1.5 hours of home after surgery for proper post-operative care.