

Pre-Op and Post-Op Guide to Sleep Apnea Surgery

These instructions are designed to inform you in an attempt to keep you safe after your surgery. We hope you take this information seriously, read it completely, and address any concerns with your doctor before surgery. Serious harm or death can occur from taking medications or following instructions incorrectly.

Apnea (Greek word for “without breath”) occurs in 3 types: obstructive, central, and mixed. Obstructive apnea is the most common type. People with sleep apnea stop breathing repeatedly during their sleep, sometimes hundreds of times a night, sometimes for a minute or longer. Obstructive sleep apnea (OSA) is caused by tissue blocking the airway in the nose, mouth, or throat during sleep. Central sleep apnea is caused by the brain failing to tell the body to take a breath. Mixed apnea, as the name implies, is a combination of the two.

During each apnea event, the brain briefly wakes up the sleeping person to resume breathing. This causes poor quality sleep which lacks restful REM cycle sleep. Risk factors include being male, overweight, and over the age of forty, but sleep apnea can strike anyone at any age, even children. Untreated, sleep apnea can cause high blood pressure and other cardiovascular disease, memory problems, weight gain, impotency, headaches, and even sudden death. Moreover, untreated sleep apnea may be responsible for job impairment and motor vehicle crashes. The single best treatment for OSA is weight loss.

OSA SURGERY

The goal of surgery is to decrease airway obstruction by removing blockages or stiffening tissues. There are several different surgical procedures which have varied effectiveness rates. Surgery can even worsen OSA. OSA surgery is not intended to cure OSA for the rest of your life; you will likely need treatment again in your lifetime. In addition, you should be aware of your non-surgical options (CPAP or dental (mandibular) appliances worn during sleep) before going ahead with surgery.

- Uvulopalatopharyngoplasty (or UPPP): one of the surgeries used to treat sleep apnea. This surgery enlarges the space behind the palate by removing tissue and/or re-orienting the palatal tissue. The uvula is often removed.
- Tonsillectomy (+/- adenoidectomy): often necessary when performing many palate operations.
- Septoplasty (straightening the center wall between the nasal cavities) and inferior turbinate submucous resection (shrinking nasal tissue inside the nose): used to increase nasal airflow and decrease mouth breathing.

UPPP, tonsillectomy, septoplasty, and turbinate reduction can be performed during the same surgery appointment to provide maximum benefits under the same anesthetic.

→ Insurance typically covers some (but not all) surgeries for sleep apnea. However, during the pre-approval process, if your insurance company refuses to pay for a surgery, an appeal can show them the efficacy and appropriateness of that surgery in your case. We will assist you with this appeal and we may recommend an in-office airway endoscopy at intake or on appeal to strengthen your case.

→ Throat pain from the major surgeries varies but is generally significant for two weeks. You should plan to take 2 weeks off work/school.

→ Major surgical procedures for sleep apnea are performed under general anesthesia. After major procedures, you may need to stay overnight in the hospital for monitoring.

→ Even with close monitoring, OSA patients can have post-operative complications like bleeding, infection, swelling, blood clots and even death. In fact, some studies have shown that people with moderate to severe apnea, as a baseline, have a greater than 2 times normal rate of sudden death (before or after surgery).

→ Surgery helps many, but effectiveness varies from person to person depending on OSA severity. A follow-up sleep study at 6 months post-surgery is the only way to assess the effectiveness of surgery.

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PRE-OPERATION PRECAUTIONS

- ✓ Stop ALL NSAIDS (i.e., aspirin, ibuprofen, Advil, Motrin, Motrin IB, Aleve, etc.), herbal supplements (like ginkgo biloba, Echinacea, chamomile, glucosamine), high dose vitamin E, omega 3 fish oil for 2 weeks BEFORE your surgery. These may increase the risk of bleeding during or after surgery.
- ✓ In most cases, certain NSAIDS (only ibuprofen, Advil, Motrin, Motrin IB, Aleve) can be restarted after surgery and can help with pain management.
- ✓ The doctor or his staff will review how to use your normal medications.

GENERAL ACTIVITY AFTER PALATE/TONSIL/TONGUE PROCEDURES

- ✓ If you are sent home the day of surgery AND live alone, you MUST arrange for someone to take care of you the first 1-2 nights. If you live more than 2 hours from the hospital, book a local hotel room the night of surgery.
- ✓ You CANNOT drive the day of surgery NOR while you are on narcotic pain medicine. You cannot take a taxi home after same day surgery. If you don't have a ride, your surgery will be cancelled.
- ✓ Walk around 3 times a day. While in bed and awake, flex your legs and move your feet. This can prevent blood clots forming in the leg veins, a potentially fatal complication of surgery. In general, rest sitting up or reclined and stay as active as you can tolerate after surgery.
- ✓ No bending, lifting, or vigorous activity for 2 weeks.
- ✓ If nasal surgery was performed, bloody nasal drainage for several days is normal. You will have bright red blood dripping from the front of your nose for 1 day or so. In most patients, NO nasal packing will be placed.
- ✓ Use a nasal drip pad (a gauze roll placed under the nose) and change this regularly.
- ✓ Apply (with fingertip) KY jelly, Aquaphor ointment or any antibiotic ointment around the nostrils at least 3x/day.
- ✓ Don't blow your nose hard or sneeze with your mouth closed for 1 week.
- ✓ Start using nasal saline the day of surgery AT LEAST hourly while awake. This cleans out nasal clots/scabs that may be painful to remove after surgery.
- ✓ Elevate your head when resting and sleep propped up with 2-3 pillows for 1 week.
- ✓ Place a humidifier within 6 feet of the head of your bed at night and in the room where you spend your daytime hours.

CPAP AFTER SURGERY FOR OSA

- ✓ Though you are having surgery to improve your OSA, it will not be improved immediately after surgery. Post-op improvement is expected by post-op month #2 to #3.

DIET

- Hydration is extremely important after surgery. Patients should drink **100 ounces per day**. Hydration improves pain and speeds recovery.
 - If well hydrated, your urine will be light yellow to colorless.
- Food: Don't force yourself to eat. Avoid spicy foods, citrus, or hot temperature foods during the first week. Soft or liquid foods are recommended for the first week after tonsil/palate surgery. Make sure to get enough protein.
 - Holding ice chips in the back of the mouth the first 3 days can reduce swelling.
- Don't drink alcohol while recovering and/or while taking narcotic pain medicine.
- In most cases, you may resume your home meds except for any restricted meds or any meds that might cause sedation (including anti-anxiety pills or even anti-histamines). Please review your med list with the doctor prior to surgery.

POTENTIAL COMPLICATIONS

- Fever: Common 5-7 days after surgery - up to 101.5 °F is common. Fever above 101.5 °F indicates dehydration.
- Activity: Increase slowly, but get up and walk around at least 3 times a day. While in bed and awake, flex your legs and move your feet.
- Travel: No out of town travel until 14 days post-op.

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- Post-op nausea and vomiting is usually related to anesthesia.
- Breathing trouble: Snoring or breathing trouble may still be present after surgery due to swelling in the nose and/or the throat. Snoring should subside when the swelling subsides.
- Scabs: These will form where the tonsils and adenoids were removed. They are thick, white, cause bad breath, and look like an infection. They will fall off between 7-14 days post-op and are swallowed (unwittingly) with food or drink.
- **Bleeding: If bleeding occurs, contact my office, go to the Emergency Room, or call 911.**
 - ✓ Except for small spots of blood from the nose or in saliva meaningful bright red blood is unusual.
 - ✓ The most common time to have bleeding is between 5 and up to 14 days after surgery. There is a 3% risk of bleeding and a 1% risk of needing cauterization for tonsillar bleeding. If patient vomits up dark "coffee-ground" material, this indicates past hidden bleeding.

POST-OP PAIN

- Your maximum discomfort will be during the first 1-10 days after surgery. You may have significant pain even out to 14 days.
- You will experience throat pain which can get worse 5 days after surgery and you may experience headaches, nasal pain, referred pain in the ears, etc.
- Keep a notebook to record when and how much medicine was given.
- Take the pain medicine as prescribed. DON'T take more pills than prescribed; it can hurt you or even kill you in some cases. Pain medicine is designed to take away SOME, not ALL, of your pain.

Instructions		Medication	Adult Dose	When to Take
Primary Pain Medication Start after surgery	→	Acetaminophen (Tylenol)	650 mg (If you have liver problems, check with your doctor)	Take every 5 hours
If acetaminophen is not helping pain, STOP acetaminophen, and START hydrocodone.	→	Hydrocodone – Acetaminophen	Read prescription bottle for instructions	As needed, every 4-6 hours for moderate pain

- Narcotic pain meds: another source for pain relief post-op
 - OSA patients are more sensitive to the effects of narcotic pain medicine since these patients already have apnea during sleep, OSA patients on narcotics can have slowing or even increased stopping of breathing during sleep.
- It is possible to take narcotics to the point of slowing or even stopping breathing, BUT your pain is still NOT controlled. Unfortunately, for some patients, reducing post-op pain to an acceptable level is not safe. These patients will have to simply work through the pain without acceptable pain relief.
- Over-the-counter stool softeners (MiraLAX or similar is recommended): start the day before surgery and take daily until narcotics are no longer needed.
 - Numbing throat sprays, liquid, or lozenges: These usually DO NOT help and can increase the risk of aspiration (taking food or liquid into the windpipe) because they numb your airway-protective reflexes.
 - Anti-nausea medications may be prescribed and taken if needed.
 - Oral steroids: Prescribed if swelling is expected. If dexamethasone or prednisone is prescribed, these are usually small tablet(s) that should be given (whole, unbroken) in a spoonful of applesauce or yogurt; crushing makes them very bitter.

POST-OP APPOINTMENTS

- You will be seen at 1-2 weeks after surgery. Make your first appointment before your surgery.

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WHEN TO CALL THE DOCTOR

- ✓ Excessive nasal bleeding
- ✓ Oral bleeding. This can happen up to 14 days after tonsil/palate surgery
- ✓ Pain not relieved by the medication
- ✓ Medication reactions: rashes, itching, difficulty breathing, etc.
- ✓ Leg swelling
- ✓ Difficulty breathing, getting your breath, high rate of breathing
- ✓ Chest pain, chest tightness, chest heaviness
- ✓ Persistent fever over 102.5 °F (taken via ear scan thermometer or similarly accurate device) (not oral temp)
- ✓ Dehydration