



Dr. Derek Steinbacher
Derek Steinbacher MD, DMD, FACS, FRCS(Ed.)
Double Board Certified Plastic & Aesthetic Surgeon
Cosmetic / Orthognathic / Rhinoplasty



Care Instructions: Jaw Surgery

BEFORE SURGERY CARE + STEPS (Orthognathic Jaw Surgery)

BRACES / PRESURGICAL ORTHODONTICS (regular braces or clear aligners (Invisalign)) are usually necessary to prepare you to undergo orthognathic/Jaw surgery. The exact protocol can vary, and your orthodontist and surgical team will be in close communication. In some cases a “Surgery-first” protocol is followed where braces are placed a week or two before surgery and the majority of orthodontic tooth movement occurs after surgery.

Initial Visit with Dr. Steinbacher. At the first visit we ask questions relating to the potential limitations or symptoms you have experienced (biting, chewing, speaking, breathing, appearance related, lip closure, smiling, etc). We perform an examination and take measurements on your face and mouth. If your orthodontist has sent notes and X-rays we review those. We may ask for supplemental medical tests or information if appropriate (e.g., sleep study). We obtain a 3D photograph and multi-view photographs for planning. We will defer the ultimate planning radiology (cone beam CT scan) until closer to surgery, and dental models until that time as well.

Records Needed 10 Days Before Surgery. We see you about 10-14 days before surgery to perform the preoperative visit, review paperwork and consent forms, discuss the surgery further. Importantly this visit allows us to obtain the CBCT and final dental models for planning (these items are obtained in separate locations by coordinated by our team). Note: we will not know the exact movements of the jaws until we obtain these “records” and perform the 3D plan. The 3D plan is completed by 5-7 days before surgery, and we are happy to share specifics of movements with you if you are interested.

Medical history: Please inform us of any major medical problems. We will perform a history and physical but in some cases a clearance from your other specialists, and our anesthesia department may be required. Please inform us of any auto-immune problems, diabetes, healing problems, bleeding problems, bone disorders (e.g., osteoporosis or osteopenia), or respiratory problems, sleep apnea/snoring.

Medications: NO blood thinners – no aspirin, NSAIDS, ibuprofen, or similar medications BEFORE SURGERY. Do NOT take these prior to surgery. These can increase bleeding. Please do NOT take these for at least 2 weeks prior to surgery. If your primary doctor has you on these for a specific reason we will coordinate with you and them. We will screen your medication list. We WILL give you NSAIDS, specifically ibuprofen after surgery, but please do not take prior to surgery.



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Pre-Anesthesia Meeting. In certain circumstances you will need to meet a member of the anesthesia team prior to surgery. Sometimes this can be zoom or a phone call. Also, certain tests, such as an EKG, and labs may be obtained prior to surgery. A clearance from your primary doctor and modification of your existing medication schedule may be required. All/any medications need to be considered in a liquid form or crushed. If you are young, healthy, with no medical problems and few medications this might not apply to you.

Foods / Supplements to Avoid Prior to surgery: Avoid onion, garlic, tomatoes, and ginseng, or other herbal supplements prior to surgery. Avoid fish oil. Avoid herbal teas (green tea is good/fine).

Smoking: Do NOT smoke for 4 months before and 4 months after surgery. Smoking will decrease your ability to heal and will increase your risk for infection. Also, the sucking in of hot smoke can impede healing of the incisions inside your mouth, pull the incisions apart, and irritate the mucous membranes.

General care and washing prior to surgery: Please remove nail polish or nail gel before surgery. Male patients should shave their face prior to the procedure (morning of or night before). To help reduce infection risk we will give you a prescription for and ask that you use:

Antibiotic nasal cream – starting at the preoperative appointment

Shower and shampoo the morning of surgery with chlorhexidine shampoo

We also may recommend

Dental cleaning 2 weeks before surgery

Your own diligence with **oral hygiene** leading up to surgery

A **fluoride mouthwash** the month before surgery

A **chlorhexidine mouthwash** the night before and morning of surgery.

NIGHT BEFORE SURGERY

Relax, eat a healthy meal – but avoid excessively rich, fatty, or salty meals

DO NOT CONSUME ALCOHOL

Do not eat or drink anything after midnight

Remove contact lenses at least by the night before surgery – ok to bring/wear glasses day of surgery, bring a case to protect them during surgery

AVOID ANY CLOTHING THAT HAS TO PULL OVER HEAD.

Plan to bring a zip-up, or button up only.

Do not wear makeup.



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DAY OF SURGERY

You will arrive 1-2 hours prior to the scheduled start time. Remember: **NO FOOD OR DRINK AFTER 12 MID-NIGHT THE NIGHT BEFORE SURGERY.** You and your family will meet with the nursing, anesthesia, and surgical team members. We will answer any final questions. **Tell us / anesthesia if you have a history of motion sickness** or nausea with anesthesia; please tell the anesthesia team – we take several measures to reduce nausea and vomiting, and they may wish to add a motion sickness (Scopolamine) patch behind your ear.

The operation:

Length and Stay

The operation usually takes 2-5 hours. You and your family will check in and meet in morning. Updates will be given and your family can relax or pick-up your postoperative medications.

Post-Op Course

After the surgery you will enter our recovery room and work with our team to prepare you and you're your family for discharge. Your family member(s) will be an important part of your recovery team. We may send you home or to your local accommodations with a private duty visiting nurse. The will help administer medications, check on you, help suction, and so forth, usually for the first afternoon/evening, possibly into the next day. We may see you back in our facility the first postoperative day for a checkup and new CT scan.

Immediately postop, we would like **ice applied to your face** beginning in the recovery room and continuing to your discharge and local accommodations following surgery. **Ointment to your lips and nasal sprays** should also be immediately used. Your bed should be inclined so your **head is elevated**. Small dripping or drainage of blood or secretion from the nose and mouth is normal, and not a cause for concern. Your **teeth will NOT be wired together**, but we do typically place tight elastic / rubber bands for the first week. If you are an Invisalign patient, we may place small buttons in your gum tissue to affix the rubber bands. These "buttons" are not painful. You may have a small "retainer" or splint on the roof of your mouth if we had to change the width of your upper jaw. This is typically not very noticeable but is held with a few wires around the teeth and we will remove at one of your follow-up visits (usually at 3-6 weeks later).

Your **throat can be a bit sore** for a few days after surgery due to the anesthesia tube they place during the procedure. Your nose may feel heavy due to the **normal congestion from surgery. DO NOT BLOW YOUR NOSE.** If you have to sneeze do so with mouth open. Use the nasal sprays as directed – the nurse will help you during this time in the hospital. Ask for humidified oxygen while in the hospital – and using a humidifier at home can help. If you experience nausea or feel the need to vomit, try to stay calm, turn your head to the side to allow fluid to flow out. There is a suction in your room which can be used. Let the nurse know and anti-nausea medications are given. Vomiting is infrequent, and if it does occur it is usually during the period when you are in the hospital with nursing support and suction.



Clear liquids to drink will be given the first night in the hospital. **NO STRAWS.** A syringe will be given to help get liquids into your mouth and swallow. The next day, some **blenderized food** may be given, such as yoghurt or apple sauce. Our nutrition and feeding specialist will be by to see you and your family.

We typically obtain a **cone beam Xray/CT** the first day back in our facility – to ensure the bones and teeth are in the planned position. If you are able to drink enough liquid /fluids, using the syringe, and able to walk to the bathroom, and control your breathing, you are able to be **discharged home.** In some occasions a second day in the hospital is needed before discharge. It is normal to feel tired / exhausted the first week after surgery. The **swelling of your lips and face tends to be greatest on the 3rd day** and improves afterwards. Please continue the ice and nasal sprays as directed.

Recap General

- It is normal for your lips and cheeks to feel “tingly” or “numb” after surgery. Be careful not to bite your lips. Swelling usually peaks at 3-4 days after the operation.
- Orthodontic rubber bands (elastics) are often placed from your top to bottom teeth to help guide your new “bite” into position. Leave these in place and we will instruct you on how to change/replace them.
- It is normal to have “leakage” from your nostrils the first few days after surgery. Also, your nose and ears may feel “stuffy” if there was upper jaw involvement.
- You will resume your orthodontic appointments 4-6 weeks after surgery.

Recap Diet

- 24-48 hours (In hospital): Please adhere to a “**clear liquid diet**”. This includes items such as clear juices and broths. Do not use straws for the first week. We **DO NOT want you to get DEHYDRATED.** DRINK 2 L of LIQUID PER DAY.
- **NO STRAWS**
- We will give you a 50mL syringe to intake liquids and soups through the side of your mouth.
- We recommend you drink from a cup and use a spoon as soon as possible (you are able).
- 2-3 weeks (home): **Blenderized / no chew diet.** Our feeding team will instruct you on how to use a syringe. You will adhere to a blenderized diet for 2-3 weeks. This is to be followed by a soft, no-chew diet for the next 2-3 weeks.
- 3-6 weeks after surgery: “**Soft (light chew) diet**” -- in addition to blenderized. Recommended foods: pineapple juice (which has been shown to reduce swelling/bruising), soup, yogurt, pudding, jello, ice cream, scrambled eggs and foods mashed with a fork or blender pureed.

Please see handout on **Blenderized Diet.**

- **DRINKS /FOODS TO AVOID:** pure citrus / acidic juices (like orange or grapefruit), coke or soda (as these drinks will prematurely dissolve your sutures and can irritate the incisions).
- **Boost or Ensure drinks, shakes, or homemade shakes with protein powder may be helpful**



- **Multivitamin complex** during the first several weeks postop is recommended.
- **Calcium carbonate effervescent powder** is recommended – mix tab in water and drink – once per day (to help with bone healing).

Medication

- Antibiotics are typically given during surgery and continued for 1 week at home. We will give you a prescription when you are discharged.
- We will give you a prescription for oral pain medication at discharge. For safety, the medication dose is weight based.
- We will also give you two nasal sprays. The Afrin (oxymetazoline) spray should only be used for 48 hours; the saline spray should be used 3-4 times daily for 1-2 weeks.
- In the hospital you may receive steroid doses to help bring down swelling and abate nausea. at times we will send you this to go home.
- We will give you an oral mouth rinse – please use several times per day.
- We will give you ointment for your lips – please use either Vaseline or bacitracin to your lips.
- We will give you Sudafed to help with ear pressure and sinus pressure. Take this as needed, or if you are flying in the first week postoperatively.
- All medications should be taken exactly and only as directed.

Pain

Most patients describe the recovery phase more as “uncomfortable” rather than pain, per se. This is because your nerves in the jaws are usually somewhat deadened, numbed for a period of time; and it is the head/face swelling, and breathing congestion that is typically the most annoying (it is akin to having a head cold or sinus infection). That said, because it is an operation on the bones, there can be a deep-seated, dull, bone pain type discomfort. This extent of which varies from patient to patient. We will prescribe you pain medicine to combat this discomfort and advise you to “stay ahead” of the pain. That is: take the pain medicine before you are really/truly in pain (or before the pain reaches a max). The pain medicines we will give you for when you are home are typically:

- Percocet or roxicet. This is Tylenol with oxycodone. Either in tablet form or liquid form. The first couple days at home you may want to take this 4 x/day. As the week goes on you can typically take it in the evening and bedtime only and start lessening the times and dose. By the time of your first follow-up visit many patients do not need this medication any more.
- Tramadol. If you prefer not to have a pain medicine with narcotic (as oxycodone is) we can give you this medication to take in lieu of percocet. Alternatively, we can give this to you in addition and you can alternate between Percocet and tramadol. Or take the Percocet in the evening and bed, and tramadol during the day.
- Ibuprofen. This is the best medication for discomfort associated with orthognathic surgery. Once you are home please take 600-800mg 3-4x per day, and this is frequently more effective than the Percocet. So try this first. As the week moves on and into the second week you can start lessening the doses or times this is taken too. (e.g., 600mg 3x/day. Then 400mg 3x/d, then 400mg 2x/day, etc).



Swelling (Edema)

- This surgery can cause considerable facial (and at times lip) swelling – it will go away.
- The amount of swelling varies from patient to patient and cannot be predicted.
- Swelling increases first 2-3 days and starts going down by the end of the second week.
- We do several things to help lessen the edema [Ask to see our papers on fat grafting and orthognathic edema].
- Facial ice packs are crucial the first 2-3 days after surgery.
- WE PREFER USING ICED GREEN TEA BAGS TO THE EYES
- Arnica and vitamin K cream (topical), pineapple juice (drinking it) can help
- Traumeel ointment apply to the face 3x / day.
- Arnica pills or tabs 3x/day; also Bromelain tabs 2-3x /day
- Anti-inflammatory medication (steroid type) (Medrol dosepack, usually only after first week)
- Keeping head elevated.
- Stay upright and walk around. (not with exertion and sit up slowly)
- Lymphatic facial massage before surgery (possibly after).
- Avoid too much speaking or stress first few weeks of operation. No heavy lifting or strenuous activity.
- Edema around lower jaw mostly disappears by 6-8 weeks, slight cheek swelling (upper jaw) can remain for several months.

Bruising

This may occur within 3-5 days after surgery and usually disappears by 2-3 weeks.

- Arnica and Vitamin K (topical) and Pineapple juice (drinking it) can help it resolve
- Traumeel ointment to face 3x/day.

Nose/Nasal Considerations

Small nosebleeds and bleeding in the mouth are normal after surgery.

Bleeding from the nose can continue as a secondary bleed during the first week or two (as blood from your sinuses makes its way out the nose).

- Nasal sprays help, take as directed. These are more effective if sprayed while lying down – you should taste the medicine / spray at the back of your throat.
- **DO NOT BLOW YOUR NOSE FOR AT LEAST 4 WEEKS AFTER SURGERY.** Noseblowing can push air into your facial skin, and increase chance for infections in the jaws, or face.
- If the nasal congestion is still persisting after your first postop visit we may give you **Flonase nasal spray** 1-3x/day for 2 weeks.
- Nasal congestion will gradually improve.
- In some cases we plan or anticipate need for rhinoplasty. The eventual rhinoplasty and septoplasty will help improve your nasal breathing even more.

Dental, Mouth Hygiene

- Before and after your liquid diet you should DOUBLE-RINSE your mouth after each meal or intake.
- 1. Tablespoon of salt mixed in warm water (swish and spit)



- 2. Chlorhexidine (Peridex) mouth wash we give you – (swish and spit)
- After day 4 from surgery – Also swish and spit with diluted hydrogen peroxide (! Part Hydrogen peroxide, 2 Parts water)
- Toothbrushing – at day 5 – buy a very soft children’s toothbrush. Use fluoride toothpaste, and only let the brush contact your teeth and braces (NOT your gum tissue).
- DO NOT use a water pic for at least 3 weeks post-surgery.

Care Recap

- **ICE to FACE.** You may apply ice packs to your face, as shown during your hospital stay.
- Warm Compresses and Lymphatic massage at day 4 onward.
- **Keep lips moist.** Apply Vaseline, cocoa butter, or balm to your lips several times per day. Rare patients have an allergy to preservatives, to look at the ingredient list of any lip ointment. Vaseline is the safest.
- **NO NOSE BLOWING.** See above recommendations for nasal care. You can gently wipe your nose with a clean cloth or tissue. Do not forcibly blow your nose. Sneeze through your mouth.
- **ORAL/Mouth CARE.** Use rinses with warm saline and medicated mouthwash several times per day as described above. Oral rinses should should certainly be carried out following every meal, snacks, or liquid nutritional intake.
- The sutures typically dissolve in 3-4 weeks. You may begin brushing your teeth 5 days after surgery using a soft tooth brush and staying away from the gums and suture lines.
- **NO SMOKING, NO VAPING**

Activity

- Keep your head elevated with 2-3 pillows.
- Stay upright and walk around – helps the swelling drain. Sit up slowly, and don’t overdo it. If you feel dizzy sit again. Ensure you are drinking enough and sit up and walk slowly without much exertion.
- You can SHOWER / BATHE at 3-4 days after surgery – but make sure a family member can assist you. The hot water will help open your nasal cavities, but we do not want you to pass out during the recovery phase. Please have someone help you and consider sitting if possible.
- DO NOT allow any pressure on the outside of the face, chin or nose.
- DO NOT Squat or stoop. And minimize or have someone help if climbing stairs after surgery.
- NO Strenuous aerobic activity, NO lifting over 5 pounds should be avoided for 4 weeks.
- NO contact sports for 6 weeks. Failure to observe this can jeopardize the healing of segments, lead to mobility or incomplete healing, and cause the swelling to stick around longer, possibly with infection risks as well.
- Patients may feel up to returning to school/work after 7-10 days; but it depends on your specific job and the activities you perform at work. Discuss this with us at your visit.



Other

Weight loss

- It is normal to experience some weight loss (usually no more than 5-15 pounds). This is due to both lack of appetite and less caloric intake. Your appetite will return after the first week. In some cases some weight loss is advantageous, especially in the sleep apnea or snoring patient. However, we do not want you to be malnourished or you will not heal or recover as quickly. Please see above recommendations for keeping your calories up and ensuring protein, vitamins, and minerals.

Sleep and Mood

- Sleep can be disturbed or difficult during the first week. This is normal and will return. If you still need Rx pain medication at home, taking this at night can be preferable. That is, take ibuprofen during the day, and Percocet/roxicet, or tramadol at night. Ensure your nasal sprays are instilled before bed. In some cases Benadryl is helpful at night to dry mucous membranes and impart a sleepy feeling. Do not take more than 25 mg during the first week. At times your muscles of your jaw might be tight and make it hard to sleep. We will give you a low-dose muscle relaxant if this is the case – please email or call us.
- At times during the first 5-7 days there can be a depressed mood, which comes about from the anesthetics and medications used, the tiredness from the operation, and the annoyance feeling like a “sinus cold” and difficulties with speaking, swallowing, and breathing. This usually improves / turns around by the 2nd week.

Mouth (Jaw) Opening

- You will not be able to open your mouth much or at all the first week following surgery – because we typically place tight rubber bands to allow your jaw muscles to heal and attach in the proper “New” locations. At your first follow-up appointment we will loosen these elastics and allow you to gently open and close (and you can remove the elastic whilst you are eating / drinking). However, do not push-it. Do NOT overly force your mouth open at this juncture. Everyone has tight jaw opening for the first several weeks, but it almost always naturally returns to normal. If after the 4-6 week mark we want to accelerate this process, we may recommend jaw opening exercises you can do at home, massage, muscle relaxants, or in some cases have you see a physiotherapist to help with your range of motion and muscle tightness. If you have had a concomitant TMJ procedure, these protocols may be altered slightly (please ask us if so).
- LIP PURSING (kiss or whistle face) you can / should start moving your lips, making a whistle lip purse or pucker as soon as the first postoperative day.

TMJ click or pressure

- It can be normal to experience TMJ clicks or discomfort for several months after orthognathic (especially when the lower jaw is operated as well). This ordinarily lessens or subsides with time.
- At times this can be confused for ear pain or pressure (fullness) too. Sudafed helps significantly for this.



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Follow-up

The first follow up appointment is usually scheduled 7-10 days post-operative. Following your first post-operative appointment, please anticipate recommended follow visits at approximately 6 weeks, 3 months, 6 months and 1 year from your date of surgery.

PostOp Jaw Surgery Video Instructions

<https://youtu.be/47fCLq3xnUA>

For additional information and before and after examples please visit:

<https://www.dereksteinbacher.com/orthognathic-jaw-surgery/>

OR

<https://www.instagram.com/dereksteinbacher/?hl=en>

Office Phone: 203-453-6635

Office Fax: 203-458-7580

In the event, you have urgent concerns please contact or message us.

Concerns and Contacts

Please call 203-453-6635 for assistance/concerns, such as persistent fever (greater than 101 degrees), excessive drainage or bleeding, difficulty breathing or new onset swelling.

In case of an emergency, call 911.

