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ORTHOGNATHIC SURGERY

TO THE ORAL AND MAXILLOFACIAL SURGERY PATIENT

Welcome and thank you for choosing the University of Minnesota Division of Oral and Maxillofacial Surgery. We pride ourselves in being the best provider of Orthognathic surgery services in the region. As such, we strive for excellence and patient satisfaction, if anything about your treatment does not meet your expectations please let us know right away so we can correct the situation. The University of Minnesota School of Dentistry and University of Minnesota Medical Center are teaching institutions therefore students and residents will be involved during all portions of your treatment course. In fact, most patients will get to know and interact with the residents more often than the attending surgeons.

The information provided here is intended to assist you in achieving a greater degree of understanding about your surgery. It describes the typical hospital course and the period following your discharge from the hospital. It is anticipated that you will have questions after reading this information and you are encouraged to ask your doctor about any areas of concern, in fact, as you are reading this, please write down your questions on the back "question" page and be sure to bring this document with you to your next appointment so you can discuss any questions you might have.

WEEKS PRIOR TO SURGERY

Orthognathic surgery is a long procedure with a difficult 1-3 week recovery period. It is advisable to increase your caloric intake 3 weeks prior to surgery. Protein in the range of 1 gram per kilogram of body weight per day is recommended but any form of increased caloric intake is good. Typical weight loss after surgery is 10-20 pounds. Most patients recover this weight in the months following the surgery. A daily multivitamin is also recommended to ensure your body has the necessary vitamins to aid in healing and reduce potential for scarring. Please obtain a soft pediatric size toothbrush for after surgery. Oral hygiene and a clean mouth is key to reducing risk for infection after surgery.

DAY OF ADMISSION (BEGINNING OF HOSPITALIZATION)

Our office will arrange with you the date, place, and time of your admission to the hospital for surgery. If you have any questions about this please call our surgical coordinator at (612) 624-2137.

PREOPERATIVE EVALUATION

Several weeks or months prior to the planned surgery you will come to our office for your pre-surgery evaluation. At that time, you will meet the residents and surgeon who will perform your surgery. At this appointment you may have facial and oral photos taken, models of your teeth will be obtained and possibly several x-rays will be taken. A discussion of the plan for surgery may be discussed but this may change after discussion with your orthodontist. After this appointment your insurance will be contacted and it will be confirmed that your surgery is covered by insurance. Certain insurance companies do not require this pre-authorization in which case this step will be skipped.

After approval is obtained from the insurance company a second appointment will be required. This will be the "History and Physical" meeting, many items will be completed at this appointment. The primary intent of this appointment is to screen patients for potentially complications or issues associated with your surgery. Should questions arise as a result of this examination, appropriate medical consultations will be made and surgery could be delayed. This is intended to ensure your safety during and after the procedure. Laboratory examinations, such as blood and urine tests may be obtained. An electrocardiogram (electrical heart tracing) and chest x-ray may be required, at the discretion of your doctor or the Anesthesia team.

ANESTHESIA

On the day of surgery, a member of the anesthesia department will discuss the specifics of anesthesia as well as potential complications. You will be asked not to eat or drink anything after midnight prior to surgery. This will ensure that at the time you go to the operating room, your stomach will be empty, and helps avoid nausea after surgery. If you are currently taking daily medication, inform your doctor and they will instruct you regarding the taking of this prior to surgery.



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DAY OF SURGERY

A day or two prior to the surgery the hospital will call and give specific instructions about time and location for your surgery. Once you arrive you will be taken to the pre-operative area after you have checked in. You will meet many people including, the registration nurse, the anesthesiologist, a certified registered nurse anesthetist (CRNA) and the OR nurse who will be with you during your case. The surgical team will arrive after the nurses have you prepared and you will have a chance to ask any last-minute questions. A hospital consent form will be presented and a signature of the patient or guardian will be required. During this time you will have an intravenous line (IV) started, you will be given some medication to relax you, and then you will be transferred to the operating room. The IV serves as a means of delivering both intravenous fluids and medications, eliminating the need for repeated injections. The IV will remain in for the entire time you are in the hospital.

Because general anesthesia is required and because surgery will be done in the mouth, it is necessary to pass a breathing tube (endotracheal tube) from the nose into the trachea (windpipe). **This will be done while you are asleep.** While you are asleep, a second tube (nasogastric tube) may be passed from the nose into the stomach and will be used to keep your stomach empty. Sometimes a catheter will be inserted into the bladder to permit the monitoring of urine output. After the completion of the surgical procedure, the catheter usually comes out immediately. The two nasal tubes will be removed as soon as possible, usually before you are fully awake.

POSTSURGICAL PERIOD

After surgery is over, you will be taken to the recovery room. While in recovery your progress will be monitored closely by specially trained nurses. You will remain in the recovery room until you are sufficiently awake, usually about two (2) hours. While you are in the recovery room, your immediate family will not be allowed in for the privacy of other patients in the recovery room. After the recovery room stay, you will be transferred to your room or occasionally to a special care unit. Your family and friends will be informed of your room number and will be allowed to meet you there. Some patients go home the same day as the procedure but that depends on many factors and will be discussed at your pre-operative appointments.

VISITORS

It has been our experience that the evening after surgery was a time when visitors, other than family, are best kept to a minimum. It is encouraged that you have very few visitors and they be limited to the immediate members of the family and/or very close friends.

WOUNDS

The wounds in your mouth and skin should be left alone and undisturbed for the first 24 hours after surgery. You may gently brush your teeth and you may rinse your mouth starting the first day following surgery. Avoid probing the wound with anything and do not use a water-pick during your healing course. Trauma to incisions can result loosening of sutures and opening of wounds. If you smoke please refrain for as long as possible, up to a week (or forever) is beneficial to healing.

NAUSEA AND VOMITING

You may experience some nausea or vomiting after surgery. It is important to realize that this is not a life-threatening situation since your stomach is empty. If you have had some liquids, remember anything that went in through the mouth can come out through the mouth.

If vomiting does occur; (1) remain calm; (2) call the nurse so he/she may assist you; (3) turn on your side or sit up and lean forward so that any fluid produced can be emptied from your mouth. Most patients **will not** be wired shut but there are a few exceptions. You will also be taught how to use a suction device to clear your mouth while in the hospital. This will be available to you in both the recovery room and in your room when you return to it after surgery. The nurses who care for you are used to dealing with patients who have their jaws with elastics holding them together. Scissors will be available to these nurses on your ward, even though it is very unusual to have to cut the elastics that hold your jaws in position.



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SWELLING

Swelling occurs after all surgery. The degree of swelling is quite variable in different individuals. More swelling usually occurs with the lower jaw surgery. Swelling will continue to increase for approximately 48 to 72 hours following surgery, and then will resolve within 10 days to 2 weeks. We try to minimize your swelling with a medication but some swelling should be anticipated. Also, ice packs may be applied to your face for 24-48 hours. You can reduce swelling by keeping your head elevated for the first week following surgery and by walking as soon as possible after surgery.

The ointment at the bedside should be used to keep your lips moist.

FOLLOWING SURGERY

It is common to experience minor bleeding both from the nose and mouth following surgery. This generally stops at 24 to 48 hours but may continue for 7-10 days after surgery. Both your upper and lower lips will be numb from the surgery and may stay that way for a few months. Most patients recover all sensation to these areas but about 10-20% of patients will have some permanent lip numbness following surgery.

NASAL STUFFINESS AND SORE THROAT

Nasal stuffiness and a sore throat can occur, both from the tubes placed during surgery and from surgery on the upper jaw. When stuffiness occurs, it can be managed with a combination of cleansing of the nostrils and nasal sprays. Nasal secretions can be removed by using cotton-tipped swabs soaked in a solution of hydrogen peroxide and water (one to three parts).

When it is necessary to use a decongestant nasal spray, squeeze the spray bottle with sufficient force for you to taste the medication. This will provide relief in approximately 3 to 5 minutes, but nasal decongestant sprays should not be used for more than 4 days. The nasal stuffiness will resolve within approximately 1-2 weeks following surgery.

Your sore throat should improve by the third or fourth day following surgery. If your throat is still bothering you more than a week after surgery please make us aware of this.

CLEAR LIQUIDS

It will be important that you drink a sufficient volume of fluids to allow the intravenous fluids to be discontinued as soon as possible after surgery. An average adult requires 2 to 3 quarts of fluid every 24 hours. While this may seem like a large quantity, it can be best achieved with constant sipping. Most patients drink directly from a cup or glass using a straw. However, for those who find this difficult a large catheter tipped syringe will be available to assist you in taking fluids. Straws for drinking are allowed after surgery and do not pose a risk.

ELASTICS AFTER SURGERY

In select cases the jaws and teeth do not require elastics after surgery. This is determined by the specific nature of your skeletal condition and will be decided by your surgeon. When the teeth have elastics holding the jaws together, these will be in place for 1 to 3 weeks. In rare instances the jaws will have to be in elastics for a longer period of time.

WALKING

You are encouraged to begin to walk as soon as possible, even if bone has been taken from the hip for use during jaw surgery.

OCCLUSAL SPLINTS

In many cases a clear plastic splint is placed between your teeth at surgery. A splint is a plastic (acrylic) device constructed from your dental models that have been placed into the new bite (occlusal relationship). After the jaw surgery, the teeth are often wired together into the "splint" to establish and maintain the correct jaw position. This will remain in place until the wires are removed, and in most instances, will be used for a time following the release of fixation, typically 3 weeks.

SPEECH

The ease with which you can communicate and be understood is not predictable immediately after surgery. Your speech will improve, however, by repeated attempts on your part to talk and be understood. It is important that you slow your rate of speech, concentrate on each word, and be willing to try. Most patients can be understood within 24 hours after surgery but speech may take time to adapt to new jaw position.



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CLEANING THE TEETH WHEN THE JAWS ARE "WIRED" TOGETHER

You will be encouraged to brush your teeth following each meal. A child-sized soft toothbrush can be utilized for this purpose, paying particular attention to keeping the brush in direct contact with the teeth. In addition to brushing, a mouth rinse may be used. The rinse is made by diluting hydrogen peroxide, 50:50, with any commercial mouth rinse. **Do not** use a water irrigating device, such as "water pic," until after 2 weeks following surgery. These irrigating devices have sufficient force to tear open the sutures in your mouth. A "water pic," along with a toothbrush will, however, provide an excellent means of maintaining oral hygiene approximately 2 weeks following surgery.

POSTOPERATIVE PAIN

Pain must be anticipated. In most instances, however, it is moderate and treated with medications. Every patient experience pain differently and there is no one size fits all approach. Your surgical team will attempt to tailor your medications to best control your pain. When bone grafts are taken from the hip (or rib or skull) more discomfort should be anticipated. Generally, no injections are needed for pain and a liquid medication is all that is required.

MEDICATIONS

During the period of hospitalizations, you will usually be given antibiotics, nasal decongestants, nasal spray, ointment to keep your lips moist, and a pain medication if needed. Most often these will be discontinued on discharge from the hospital, except for some of the medications, which will be used for 3 days to 2 weeks following surgery. Antibiotics are typically not prescribed after your hospital stay as you have getting them through the IV. An additional course of oral antibiotics may be prescribed but only if deemed necessary by the surgical team. The typical regiment of medications include pain medication, stool softener, nasal decongestants, mucolytics and anti-nausea medications. If you feel that you need additional medications please inform your surgical team. Below is a list of medications and the common usages

Common medications:

Hydrocodone/Oxycodone – Narcotic pain control

Acetaminophen/Ibuprofen – Non-narcotic pain control

Amoxicillin/Clindamycin – Antibiotic, typically a 5-7 day course

Ondansetron/Phenergan/Compazine/Scopolamine – Anti-nausea medication

Guaifenesin – Mucolytic, used to keep mucous from hardening in nasal passages after upper jaw surgery

Sudafed/Claritin – Decongestant, used to keep sinuses clear after upper jaw surgery

Colace/Senna – Stool softener used while taking Narcotic pain medication

DIET

During the period of hospitalization, we may ask a dietician will discuss "at-home" dietary management with you and members of your family. This will include a diet booklet. It is suggested that prior to your surgery, you acquire a blender and a food strainer. Commercial dietary supplements such as Ensure ® may also be of assistance during the postoperative period; the dietician can suggest those that are recommended. These can be purchased, without a prescription, in your local pharmacy. Most have a variety of flavors.

WEIGHT LOSS

Again, a weight loss of 10 to 20 pounds may be anticipated during the postoperative period. This is usually a reflection of a loss of appetite, rather than the fact that the teeth are "wired" together. Within 2 weeks following surgery, your appetite should be sufficiently improved to maintain and possibly increase your weight.

DAY OF DISCHARGE

Most patients are ready for discharge 1 to 2 days after surgery. You will be encouraged to resume your normal activities as soon as possible. Your discharge from the hospital will be dictated by four things. **One**, your ability to walk independently. **Two**, your ability to maintain adequate fluid intake to prevent dehydration. **Three**, your ability and urinate without difficulty and **four**, that your pain is controlled with medications taken by mouth. After your discharge you will be provided the contact information of the on-call Oral surgery resident. This person is available for questions should any arise after discharge but please read through this entire document prior to calling. The answer may be in the document.



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QUESTIONS?

PLEASE WRITE ANY QUESTIONS YOU HAVE HERE AND BRING THIS WITH TO YOUR PRE-OPERATIVE APPOINTMENT
