

Dental-Facial Treatment Centre

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Dental / Cleft Lip & Palate Service

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Information for the Jaw Surgery Patient

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Information for the jaw surgery patient

This is a fundamental overview of what you might expect with jaw surgery. In order to avoid as many “surprises” as possible, and to ensure you are more knowledgeable about your upcoming experience, we have tried to make this as comprehensive as possible. Not everyone has the same type of surgery, nor do they have the same response. The exact nature of your surgery will be explained to you by the surgical staff.

■ Mental attitude

A very important factor in the success of your surgery is your mental attitude. There has been much interest recently in the effect of a positive attitude on one’s overall health and healing. Laughter and good feelings are thought to cause the release of neurotransmitters (messengers) like endorphins within the brain, which have a significant effect on many biochemical processes taking place throughout your body. We do encourage a positive mental attitude to promote good healing and a speedy recovery. Support from your family members is essential. As a result, it is important that family members are equally aware of what you will be going through, so share this information with them.

■ Admission to the hospital

The day of, or sometimes the day before your surgery, you will be required to check into the hospital. Prior to admission, usually the week before, a routine examination and appropriate tests will be carried out. This will be arranged for you through the hospital. You will likely be in the hospital for one to two days after your surgery, but the length of stay depends on the complexity of the surgery and your healing capabilities. Also, prior to your hospital admission, new photos, x-rays and models will be obtained.

■ Length of the surgery

Part of what appears to be time in surgery is time spent administering the anesthetic and time spent in the Recovery Room. It is not unusual to spend several hours after your surgery here, to provide time for the anesthetic to wear off, and to allow you to demonstrate the return of your normal reflexes.

■ Recovery room

Family members may not be allowed in the recovery room – this is a hospital rule. The net result is that you won’t be able to have visitors or family until later that night, or they can visit you the next day when you are back in your normal hospital room. You won’t mind the lack of visitors that evening as you’ll be quite sedated [groggy] from the anesthetic.

Most of these surgeries can last anywhere from one to five, or more hours, depending on the amount and type of surgery being performed. Perhaps this sounds long to you, but the amount of time in surgery is no reason to become alarmed. You are carefully monitored at all times and this type of surgery is one of the safest and most commonly performed. After the completion of the surgery you will be taken to the recovery room until the effects of the anesthetic have worn off.

■ Intensive care unit

Immediately following surgery, you may be taken to the Intensive Care Unit rather than the recovery room. This is not a cause for alarm but is done as a precautionary measure following certain surgeries, especially if the jaw is wired closed, or because of the availability of nursing staff to care for you there. You will be returned to your room as soon as possible; usually the next day, and we will let your family know if this step becomes necessary. It is recommended that any concerned family members should be fully aware of this possibility.

■ Immediate postsurgical appearance

Since the surgery involves your mouth, a nasal tube is placed to allow proper breathing while you are under general anesthesia. This tube leads to your lungs (endotracheal). Another tube leads to your stomach to help prevent nausea (nasogastric tube). You may wake up with these tubes in place. However they are not painful and are removed as soon as possible. The “breathing tube” is removed when you are fully awake. It is present until such time that we know you are breathing properly and are responding to commands. It prevents the aspiration of fluids into your lungs that could lead to pneumonia. During its presence, you will be unable to speak as it rests on the vocal cords. The nurses are aware of this and will allow you to communicate by writing.

The “stomach tube” is taken out either at the end of the operation, in recovery or early on the morning following your surgery (all of these are placed after you were asleep). During long cases it is also necessary to place a urinary catheter. This allows the anesthetist to monitor blood flow especially when hypotensive anesthesia is used (this is often used to reduce blood loss and decreases the need to receive a blood transfusion).

An intravenous line (IV) is put into a vein in your arm before going to sleep. Medicine to put you to sleep is given through the IV. It is left in so fluids and medicine can be given to you for 12 to 24 hours post-operatively. You will not have anything to eat or drink from midnight the night before your surgery, so fluid balance is important. You are encouraged to begin taking fluids by mouth on the day following your surgery and when we feel you are drinking well, the IV is removed from your arm. Some of your postoperative medication (antibiotics, pain meds and fluids) will be given through this line until you are swallowing better.

After the surgery, there is always temporary swelling (especially of the lips and cheeks) and perhaps bruising. Patients will wake up to find a bandage wrapped around their jaw. This is a pressure dressing to reduce swelling and is usually removed 48 to 72 hours after surgery. You may be asked to remove it yourself, at home. At first, your appearance might cause concern to your family, but this is to be expected. You should warn them, or any other visitor, to expect this so that they will not be overly surprised.

This is a normal healing response and should resolve greatly within the first two weeks. Should you look in the mirror, remember this is only a stage of transition. You may feel more swollen than actually you are. This occurs as a result of the numbness (like going to the dentist and having freezing for a filling). You will also notice with the swelling that follows these types of surgeries, it may be difficult to make facial expressions for the first few days or weeks. Don't despair, just tell your friends that you're smiling on the inside... as the swelling and numbness subside, movements will quickly improve.

With upper (maxillary) and lower (mandibular jaw surgery), it is not unusual to have bruising. Bruising with a maxillary procedure can extend from the whites of the eyes into the cheek areas – “black eyes”. With lower jaw procedures it can extend from the area of the jaw line down into the neck and chest. Do not worry. This gradually resolves but can take up to several weeks to completely go away. Remember, the bruising, if not present immediately, can become evident within three to four days after the surgery.

■ Nasal congestion – throat soreness – blocked ears

For several days following surgery, you might experience nasal congestion (more likely with upper jaw surgery). The nasal tubes used for your anesthesia can also cause your nose to feel “stuffy” and your throat to feel irritated when you wake up. This is not unlike having a cold and a sore throat. These should resolve within a few days. If necessary you will be given nasal decongestants. Using a cold air-misting machine will help decrease this. You may also feel after upper jaw surgery that your ears are plugged. This occurs as a result of the swelling around the Eustachian tubes and will pass in several days to a week.

■ Numbness

Following surgery, you may experience areas of altered sensations or partial numbness on your cheeks, lips, nose, gum tissues or chin. During the first three to six months, the small nerve fibers will regenerate and mend. As healing takes place, you may encounter sensations of warmth and tingling in the affected areas. It is rare for these symptoms to last longer than six months. However, those individuals with small areas of residual altered sensations find they are able to adjust to them. In other words, this is an inconvenience of which to be aware, but not afraid.

■ Wired or restrained jaw

When you awake, even though we have used rigid fixation appliances directly on the bone which therefore deletes the need to wire your jaws closed, you will still find that your jaw may be restrained with orthodontic elastics. This is to prevent you from inadvertently opening too wide, which could cause loosening and failure of the fixation devices. These elastics will still allow you to move your jaw. Fixation devices (plates and screws) are strong enough to hold the bones into position without the need to wire the jaw together, or if need be, just for a short period of time for comfort sake. The fixation devices are considered permanent but on occasion may have to be removed if they become loose or, when as sometimes occurs, they can be felt below the gum surface. In this latter circumstance, some individuals do not like their presence.

The jaw is wired shut only in circumstances where it has been or is impossible to use rigid fixation. This can occur as a result of a technical problem or by virtue of the type of surgery performed. A period of four, or six to eight, weeks is usually required if your jaw is wired following most surgeries. Keeping the jaw from moving is like putting a cast on a broken limb. We cannot put a cast on your head, so instead we wire the jaw closed to prevent movement and promote healing. Occasionally, it can be longer, perhaps as much as twelve weeks. This is dependent on the age of the patient as well as the amount of the jaw movement. We will remove the fixation as early as possible, and as your healing permits, but the first priority is enough healing of the bone so as to provide strength and therefore, a more stable result.

Sometimes, the twisted end of a wire used for fixation can stick out and irritate your lips or gums. Let us know so we can try and twist it out of the way for you. If this is a chronic problem in any area of your mouth, we have soft wax, which we can give you to place over the wire and protect adjacent areas from irritation.

■ Plastic splint

In some circumstances, you may find a plastic splint is attached to the biting surface of the teeth. This is common if the fit of the lower teeth to the upper teeth is not ideal or in circumstances where the upper jaw has been divided into pieces so as to widen, narrow, close spaces or level. It is usually left in place for a minimum of six weeks.

■ Communication & swallowing

For a few days following surgery, you may have some difficulty talking and swallowing. This is related to the swelling and a possible sore throat, numbness, and if your jaw is wired together, or restrained by orthodontic elastics. Most patients don't experience this problem; however, trying to carry on lengthy conversations with relatives or friends can be fatiguing and is best avoided for a while. Difficulty swallowing can result in drooling. This can be embarrassing but will resolve usually within the first week. Practicing and forcing yourself to do these tasks will expedite their proper return to function.

■ Nausea & vomiting

Patients are often concerned with being nauseated and or vomiting after surgery. This does not happen very often or to everyone. You will have an empty stomach before your surgery, and to be sure, we place the “stomach tube”, mentioned earlier, while you are asleep. You are routinely given “anti- nausea” medication as well.

But “What about after I go home?” you ask. The most important thing to remember is even when your jaw is wired shut, anything you “eat” or take by mouth is already in liquid or a pureed form. In the rare event that you are nauseated and have to vomit, rest assured these liquids can drain easily out of your mouth, if necessary. While throwing up is never pleasant, it is not a threat.

Don't panic, just head for the toilet or get a bowl and let it come – you'll probably feel better for it anyway. As a safety precaution, if your jaw is wired shut, you should purchase a pair of electrical wire cutters (Canadian Tire etc.) and carry them with you at all times, so that you can cut the wires that hold your jaw together. You will be instructed in how to do this. If you feel it necessary to cut the wires, you should contact us immediately. Should nausea persist, it can sometimes be due to the liquid medications you are prescribed. If in doubt, call our office, however, anti-nauseates such as “Gravol” are available in most pharmacies, without prescription, and can be obtained in liquid or suppository form if you feel you need them.

■ Bleeding

Bleeding associated with the surgery usually stops at the end of the procedure. It is not uncommon, however, to experience slight bleeding from the incision sites intra-orally the following day of surgery. Subsequent to this, minor bleeding may occur from the incision sites as a result of mechanical trauma (such as associated with the brushing of the teeth). When maxillary surgery is performed it is not unusual to experience minor normal-like nose bleeds. These occur as a result of small tears of the nasal mucosa often associated with nose blowing and or when the air humidity is dry.

■ Post surgical blues

Following any kind of surgery, a patient may go through a stage of mild depression - usually three to five days afterwards. This is sometimes associated with a steroid medication, given in hospital, to minimize swelling. A slight mood-elevating effect is associated with this drug. Therefore, as the drug gradually leaves your body you may experience a form of depression. This is a normal response. Its effects are mild, at worst, and we feel if you are aware of it, you will deal with it better. During the first few days at home, you won't be very active. Lots of sleep and occupying your mind with a good book or TV is helpful, while you wait for this period to pass.

■ Loss of Weight

Following your surgery and throughout the post-operative recovery period, especially if your jaw is wired shut, you could lose as much as 10 percent of your body weight. Prior to your surgery it's OK to gain a few pounds in anticipation of this possible weight loss. Once the jaw is functioning more normally (or unwired), patients quickly return to their normal weight. If excessive weight loss occurs, it may mean that you are not consuming an adequate volume or nutritionally proper forms of foods and liquids. You should keep track of your weight and we can advise you appropriately on what to do.

■ Dietary requirements

During the first week after your surgery, your dietary intake is very important! During your hospital stay, you may be served solid foods initially. This is merely an oversight. Your diet should consist of only liquids, or puréed foods until instructed otherwise. If you let the staff know your preferences, extra liquids in the form of juices, milk or soups can be ordered. Each day gets a little easier as you learn how to consume a liquid diet. Your tissue is in a state of healing and your nutritional requirements are fairly high. This is no time to go on a diet - you will find you will lose weight regardless. In addition to any liquid and puréed food (i.e. the consistency of infant baby foods), to aide supplementing your diet, we recommend nutrient supplements such as “Ensure”, “Boost” or “Carnation Instant Breakfast”. These are balanced in all the appropriate fats, carbohydrates (sugars), proteins, minerals and vitamins. Once the bone of the jaw has regained some of its strength, through the process of healing, you will gradually be guided back to a normal diet. Be aware, however, that this may take several weeks. In addition to nutrients you must ensure that you are taking adequate fluids. On the average this means the volume of liquid required to be consumed (with or without nutrients) is two liters (or the equivalent of two & a half large coke bottles).

■ Oral hygiene

Keeping your teeth clean is very important post-operatively. Your teeth should be kept as clean after surgery as you did before. Obviously, this will be more difficult initially as a result of the swelling, numbness, discomfort and the limited opening from the restraining elastics or if your jaw is wired shut. If your jaw is wired shut, you can't brush the insides of the teeth at all. Irrespective of this, the cheek side of the teeth can and should be kept clean. Use a small child's toothbrush. Confine it to the tooth surface, and make small circular movements on two teeth at a time. On the tongue side, all you can do is use your tongue to clean the teeth and the plastic splint between your side teeth if present. Use a dilute mouthwash and your tongue to wipe every possible inside surface and rinse frequently. Healing problems and postoperative infections can be significantly reduced by proper cleaning.

Patients report that they really like an oral irrigating device such as the “Water Pick”. We don't insist you buy one, however, you may wish to do so and it definitely makes cleaning easier. It is not a substitute for brushing and cleaning the “inside” with your tongue as described but, it does make flushing or rinsing more effective. We recommend you fill the reservoir with dilute mouthwash for a fresher taste. Also diluting 3% hydrogen peroxide in the water can make it foamy and help clear the mouth of debris. Caution: Do not use the “Water Pick” in the first 5 days and do not set it at a high pressure for the first week following surgery, as food debris could be pushed through the incision sites. Simply set the pressure dial to a low number such as one or two, for this period.

You will discover your “stitches” during your mouth cleaning – leave them alone, they are “self-dissolving” in most cases and will gradually disappear in about two weeks, or they will be removed by the surgeon.

■ Loose or broken wires or plastics

The wires holding your jaw shut or elastics restraining it should be sufficient for the time required for initial bone healing. However, a wire or elastic can loosen or break during this period. Some gradual loosening is to be expected with wires as they do stretch a little over time. Some movement doesn't matter, however, if it seems excessive, call the office and you will be seen quickly to check things. More than one wire is used to hold the jaw shut (usually four-seven), so any one wire isn't critical. If a wire should break with tooth brushing or for some other reason, you can try and have someone gently grasp it with tweezers and remove it. A good light or flashlight can be helpful. Call the office and you will be seen ASAP and if necessary, the wire will be replaced.

During your normal post-op visits, we may tighten your wires if we feel it's necessary.

■ Your return to work or school

You are encouraged to return to work or school as soon as you feel up to it. Each individual will differ in his or her speed of recovery. This depends on your age, physical condition, and the nature of the operation itself. The usual recovery time for most procedures is two weeks, although some individuals may need an extra week or two. We will be reasonable in signing notes to explain your absence or filling out disability claim forms. However, we are going to push you a little to get back to work or school as soon as possible. Quite frankly, the healing period goes faster when you are busy. You cannot hide the fact that you've just had a jaw operation and you will find that virtually everyone is supportive and understanding of your temporary "plight".

■ Participation in sports

Your fixation may limit your participation in sports or in exerting yourself. If you hold your teeth together, you will see how it might be difficult to breathe deeply should you become winded by exercise. Rely on your common sense. You may be able to participate in some sports or exercise activities at a reduced level. It is doubtful that any of these activities will affect the healing of your jaw, however, a possible increase in discomfort with being "wired" should be considered. We do not encourage swimming in deep water with your jaw wired (or any situation where you could "panic", for that matter.) This doesn't mean you can't go into the water to cool off or swim at a leisurely pace, but do it with supervision, please.

It should be obvious that any blow to the face or jaw that might occur with sporting accidents could be very harmful to your recovery, and you should not participate in such activity for several months or until you obtain the OK from the surgeon. When you do participate in contact sports, wear an appropriate face guard and in the event of such an injury, please get in and see us as soon as possible.

Patients often wonder how long their jaw will be "weak" or perhaps more susceptible to fracture following surgery. This is difficult to answer although, it is safe to say that the bone is probably not as strong as normal for at least six months after the surgery and for several years following a bone operation as a process called "remodeling" occurs in the site of the bone cuts. Face guards and mouth guards for sports are always a good idea. Eventually, the bone will re-establish its normal anatomy and will not be prone to fracture any more than had it not been operated on.

■ After your jaw is rewired or the retraining elastics removed

Removal of the fixation wires that lock your upper and lower jaw together is a simple procedure that involves snipping the wires, between the teeth, and removing them. At this appointment you will likely be able to open sufficiently enough to be able to brush the inside of your teeth. Do not, however, expect to be able to open more than about one cm (two fingers width) for the first few days.

The jaw will feel "stiff". This occurs as a result of the jaw muscles being still for so long. This causes them to be very inflexible and less stretchable for a period of time. Therefore, you would be wise and more realistic to not have that "Big Mac" or steak just yet. If you attempt this now your muscles will spasm and become sore. You are best to continue on with liquids or very soft foods, which have been "mashed".

You will be given a series of jaw exercises to help promote opening and these should be performed as instructed. Some discomfort should be expected with these exercises - "No pain – no gain". If you experience excessive pain however, back off a bit and take it more slowly. The situation will be re-evaluated at your next appointment.

Complications and risks

In all surgical procedures there are complications that may occur even under the best of circumstances. The “surgical” procedures are planned and carried out to avoid these as much as possible. Some occur with a low but expected frequency of which you will be advised. Others happen so infrequently that their incidence is not known. Our goal is to make you aware, as best and realistically as possible, of the risks and complications involved with your specific surgery. Fortunately most are not severe and are rectifiable, resolving on their own or are treatable.

■ Tooth vitality

There is always a possibility that a tooth can become devitalized (lose its blood supply) after some types of surgery. This is uncommon and occurs most frequently when doing upper jaw surgery, or any surgery where bony cuts are made between or near the roots of teeth. It does not mean that you will necessarily lose the tooth (teeth). It can often be resolved with endodontic (root canal) treatment. Very often the teeth feel “dead” or “dull” after surgery. This is temporary and related to a change in their feeling.

■ Bleeding

With most jaw surgeries, a small amount of blood loss will occur. In some instances the surgery is in or near to areas of major blood vessels so heavy bleeding can happen. Where blood loss is anticipated to be heavy, the surgeon will request that the anesthesia department at the hospital provide what is called “hypotensive anesthesia”. This means that your blood pressure is lowered with medication to reduce surgical bleeding. This is considered safe in healthy individuals and is closely watched or monitored during the procedure. It is occasionally necessary to administer a blood transfusion either during or after surgery. This is done only if it is felt to be absolutely necessary and in your best interest for a speedier recovery. If it is anticipated that the amount of blood loss associated with your surgery will require a transfusion, then arrangements can be made to have you donate your own blood ahead of the scheduled surgery. This is called “auto-transfusion”. This requirement is very uncommon and also expensive. In most circumstances, the blood is not used and has to be discarded, therefore making it economically a poor solution. Alternatively, you can arrange to have your blood built up by receiving drugs that stimulate blood formation (also very expensive). These techniques can reduce the risks that are associated with receiving blood from the blood banks. The risks of receiving banked blood are relatively uncommon based on current techniques and can be discussed with you.

In rare circumstances a blood vessel might have to be clamped. This is commonly done in upper jaw surgery to prevent bleeding problems post-operatively. In lower jaw surgery the need is extremely rare, but when necessary it often requires a skin excision. In even more rare situations it may be difficult to slow the bleeding and the surgeon may elect to abort the operation once he has stopped the bleeding, and delay the surgery to another time. This rarely occurs.

It is, as previously stated, not uncommon to have a little oozing from the incision sites or if upper jaw surgery is performed, from the nose, for a few days post operatively. The latter can be helped by not blowing your nose. The development of a delayed nose bleed (two to three weeks after upper jaw surgery) that cannot be stopped has been reported. This is truly a complication and you must return to the hospital immediately. This type of bleeding happens extremely rarely. In order to stop such bleeding it may be necessary to embolize the cut artery.

Also, very rarely, blood vessels which supply blood to portions of the jawbones and teeth may be damaged. This occurs most often when doing upper jaw surgery, where the upper jaw is divided into a number of pieces. If the loss of blood supply to these regions is large enough, teeth and/or bone may die and be lost. Surgery is planned and executed in an attempt to avoid this and fortunately, it rarely occurs.

Finally, blood can collect in the tissue spaces. This is called a hematoma. In most circumstances your body will just eliminate it in the process of normal healing. In a few cases it may have to be drained out.

■ Relapse

The stability of the new position of the jaw or facial bones after surgery is dependent on good surgical and orthodontic planning and techniques, as well as the stretchability of the adjacent soft tissues and muscles. The latter tend to drag the jaw back to its original position and this is called “relapse” or “slippage”. A slight bit of relapse occurs with all jaw procedures. In most instances, however, this does not significantly affect how the upper and lower teeth come together, or the facial appearance. If it does, then further orthodontics may correct the problem. Relapse can be excessive in circumstances in which the condyle (the articulating ball of the lower jaw) is not seated properly. This is looked for early after surgery with x-rays, when doing lower or combined (upper & lower) surgeries, and if detected it would be recommended to go back to the OR and attempt to reposition the condyle to a more favorable position before the bone heals. Once the bone heals with the condyle seated in an improper position, then the ball will reseat, resulting in a shift of the jaw and bite. At this stage it may still be correctable with orthodontics, but if not, then it will have to be accepted or the operation repeated.

With upper jaw surgery alone a similar problem can occur with the condyles that may not be observed until several days or weeks after the operation. Often, this can be corrected with elastic traction; however, re-operation may be necessary. Fortunately these latter types of relapse happen infrequently to a degree that requires re-surgery.

An unusual form of and prolonged relapse occurs if the condyles are subjected to excessive pressures. This can occur in large movements, or also when the condyles are not seated properly, and most commonly both occur when a patient already has some joint problems (i.e. clicking joints). It results from reshaping (resorption) of the condyle. Most commonly, this type of relapse is observed for a time to see if it will become stable. Arthritic complaints may also accompany this type more frequently. The resulting bite problem would then be dealt with as required.

■ Permanent numbness and other nerve damage

Permanent numbness may occur as a result of jaw surgery. This may be total (anesthesia) or partial (paraesthesia). It shows itself as numbness in the upper lip, cheeks and the roof of the mouth (palate) when performing upper jaw surgery and the lower lip and chin and, rarely, the tongue on one or both sides, when lower jaw surgery is performed.

Permanent numbness with upper jaw procedures is rare. It is more common with certain types of lower jaw surgery. Fortunately the incidence is also relatively uncommon. It does not result in any functional loss (movement is not effected), nor how the lip looks. In many circumstances repair of the nerve can be undertaken. But, most people are so little affected by it that they do not elect to have anything done. Extremely rarely, and at an occurrence rate that is not known, a sensory nerve that has been damaged may, as it attempts to heal itself, do so abnormally. This may result in the nerve becoming hypersensitive. This hypersensitivity usually is evident as a partial numbness with a painful or burning sensation in an area when stimulated or it may occur without stimulation and is called a “neuropathic response”.

When performing lower jaw surgery from the outside (skin incision) there is a rare chance that a branch of the facial nerve, that makes the lower lip move, could be hurt. It is not uncommon that the swelling normally associated with the surgery can temporarily make this nerve not function. Any damage that fails to recover can lead to drooping or abnormal movement of the lower lip. This however is quite rare, as the surgeon usually actively looks for this nerve, so as to avoid it. Why would the surgeon do the procedure from the outside? Often because the anatomy of the jawbone suggests that it will be a more predictable method, with fewer complications involved.

■ Infections

Every attempt is made to prevent infection by performing the surgical procedure in a sterile and aseptic OR room and by administering antibiotics. In some instances, however, infection of the soft tissues, bone or sinuses may occur, requiring additional medical or surgical intervention. Infection may also compromise bone healing and the health of segments of the jawbone. Sometimes they occur because the incision site is disturbed and opens up, or in other circumstances because of irritation from a loose wire screw or plate. With upper jaw surgery the sinuses may become infected. Each must be managed independently.

■ Bone pain

Another rare finding is what we describe as “vague bone pain” or discomfort. This can happen in any bone in the body that has been fractured or operated on. Symptoms are usually vague and often seasonal in nature and patients say something like, “it only aches when it’s raining...” or “cold air seems to bother it...” These are difficult to explain, but they seem to gradually resolve with time and perhaps with the use of occasional analgesics. Patients must learn to live with this, when no obvious cause can be found to treat.

■ Jaw discomfort and limitations of opening

Within a reasonable period of time (four to six months) following surgery, your jaw should function reasonably normally without any significant discomfort; although with postoperative orthodontics, this period may be prolonged due to continued movement of the teeth. In rare instances, Orthognathic surgery patients can experience jaw joint discomfort with or without “clicking” and/or limited opening or deviated jaw movement. This problem occurs as a result of displacing the joint disc forward of the ball. It then interferes with the balls freedom of motion. Also, if the disc of the joint is not in its proper place, patients become more prone as anyone with a displaced disc, to the development of arthritic joint changes.

These can be mild, somewhat seasonal in nature and can usually be controlled with mild pain medicine. If it occurs, it very rarely progress in severity but in some circumstances it may, and it may persist indefinitely. If the condyles are additionally under pressure, this may result in significant bony arthritic changes and be a source of excessive relapse as we have already discussed. Additional treatment may be necessary in this circumstance, including surgical intervention in the form of arthrocenteses (washing the joint out), and/or less commonly, attempting to reposition the disc back to its normal position. If your joints clicked prior to the surgery it is more likely that they will continue to do so, but in some circumstances the clicking can become worse or go away. Other causes of limited opening are usually temporary and include muscle spasm and scarring, as well as scarring of the incision sites.

■ Facial esthetics

The orthodontic and surgical treatment, which has been recommended to you, has been planned to have your teeth come together properly, so as to restore the normal relationships of your bite. Obviously, if a whole or part of a jaw is moved to do this, there will be changes in your appearance. We have tried to describe these changes as best we can, and we anticipate the changes in your appearance will be pleasing and ones that produce a better balance to your appearance. Rarely, incidences occur where in order to achieve the proper bite, changes in the soft tissues occur which may not be pleasing to a particular patient. These are not always anticipatable, though some may be improved with additional surgery. Your surgeon should discuss these potential things with you, should you have a concern.

Finally, it must be recognized that no matter how improved one’s appearance may become, some individuals cannot psychologically handle the change. This occurs often as a result of statements by family members and friends who have known and accepted you for years as you were. For others, it is because they thought the changes in their appearance might be beneficial to them in their relationships with others or in work. When this does not seem to be the case, they seek fault in the surgical result, rather than their own emotional state. Finally, for some individuals, it results from their initial inability to define there esthetic concerns, or these concerns are unrealistic. Be sure you know why you are undertaking such treatment.

Summary

We would like to stress, once again, that these complications are quite rare in our experience, and that each operation and individual patient is different. Rare complications that can be associated with your particular operation will be discussed with you, during your consultations. If you are confused or in doubt about anything we have told you, please feel free to question us at length about your particular operation. You must also remember though, that even if it is rare, if you develop any of these problems, we will attempt to deal with them to the best of our ability.

Prior to your surgery, you should review this information with your family to inform them of the natural course of your surgery. You might also consider reviewing this with close friends, such as people at work or teachers at school so that they will have reasonable expectations of your performance during the “post-operative” period. You will need their understanding and support throughout the weeks following your surgery.

We want to support you and we encourage you to ask questions. Please call us if you have any concerns. Our staff will do their best to answer your questions or, they will put you in touch with your surgeon who can discuss the procedure with you.