

# ORTHOGNATHIC SURGERY INSTRUCTIONS

## POSTOPERATIVE CARE AND TROUBLESHOOTING FOLLOWING JAW SURGERY (ORTHOGNATHIC SURGERY)

Thank you for having surgery with me today. The following is a list of postoperative instructions and troubleshooting for any problems you may have after your surgery.

If you have any queries or concerns after discharge please do not hesitate to call my rooms on 03 7000 4000 or my after hours pager number for emergencies 03 93871000.

Please note the first part of the document has simple explanations for common problems you may encounter and there is a more comprehensive explanation for each area. Simply forward to the area of concern for a more detailed answer.

Before we start the majority of patients spend 1-3 nights in hospital following surgery. For simple expansion of the upper jaw this is usually 1 night and for single or double correctional jaw surgery 2 nights. Whilst you are an inpatient you will have pain relief, antibiotics and steroids to reduce swelling and nausea. I will do a ward round the morning following your surgery and whilst you are an inpatient. The time I do this is usually early morning but occasionally mid morning.

Jaw surgery involves bone healing and it is very important that you perform excellent oral hygiene and obey the rules for the texture of your food during the healing phase. Remember that the titanium plates and screws are quite rigid and their job is to hold the bone segments together to enable bone healing.

## POSTOPERATIVE REVIEW

The majority of patients having jaw surgery return to see me in my rooms about 5-7 days following their surgery. This appointment will normally be made prior to your surgery by my rooms. If there is any need for an earlier or later review I will arrange this through my team. If you develop any problems you can simply contact my rooms during office hours on 03 7000 4000 or my pager service after hours for emergencies on 93871000. I can easily see you within a short time frame if needs be or can answer any postoperative queries that way. This seems to be the most popular system in place.

## NORMAL POSTOPERATIVE EVENTS

**Numbness:** Your mouth and jaws will be numb for approximately 24 hours after surgery due to local anaesthetic being administered around where your surgery has been performed.

You will be given appropriate pain relief before 12 hours so that by the time the local anaesthetic is wearing off you have adequate pain relief.

Remember that you will be numb in the upper lips, cheeks and nose if you have had upper jaw surgery for a couple of weeks. With lower jaw surgery you are often numb in the lower lip and chin for weeks or months. (See Appendix 1 for a more detailed explanation)

**Bleeding:** It is normal for your wounds to ooze a bit after surgery despite stitches placed. This will often make your saliva look a bit red. If you have had upper jaw surgery you may have some minor nasal bleeding. This is completely normal but can often look like a lot when it dilutes in saliva. Do not spit out the blood as this only increases the bleeding. If it is annoying you can be given a small suction device in hospital to gently remove the blood from your mouth being careful not to traumatise your mouth wounds. Most of this bleeding will settle within the first 24 hours.

The nursing staff may apply a small bolster of gauze across your nose early postop if there is excessive ooze from the nose and the following day this will be removed. Starting the day after surgery you will be given a nasal spray that will clear out your nose and sinuses of the clotted blood if you have had upper jaw surgery. You will use this spray for approximately 5-7 days. After that you might taste some old blood tracking down the back of your throat, this is normal and short lived for about 2-3 weeks. (See appendix 2 for a more thorough explanation)

**Stitches:** These are dissolvable and should fall out after 1-2 weeks. Occasionally they can persist for a while and if they are annoying please return to see me to have them removed. If you swallow them this is no problem. (See Appendix 3 for a more detailed description)

**Pain:** It is normal for you to have pain for approximately 7 days during which time you should take the pain relief prescribed and given to you at discharge. It is ideal for you to take the strict combination of Mersyndol and Nurofen with Endone for breakthrough pain. If you are allergic to codeine, nurofen or opioids alternative medication will be prescribed for you to take after your surgery. Taking Endone at night seems to help patients a lot with their sleeping, as pain often seems worse in the night.

Most patients after jaw surgery can wean their pain relief after 7 days down to Paracetamol, Ibuprofen or nothing. If you have no pain then you can cease all pain relief. Pain that is increasing after 7-10 days is a bad sign and may indicate an infection. If this is the case please call my rooms for a review as its best to get onto these problems early.

**Eating and Diet:** For the first 3 days you should have a very soft diet such as soup, jelly, custard, smoothies and yoghurt. Following this you can commence soft foods such as well-cooked meat, pasta, noodles, omelets and vegetables for another 5-6 weeks. It's best that you eat using your front teeth to chew and the rule of thumb is that if you make a pincer between your finger and thumb this is the sort of pressure I am comfortable with you using when chewing. Often patients like to use a syringe supplied in the ward to squirt the food into their mouth, although not glamorous it is effective. Ask the ward staff if you would like a wide bore syringe.

It is important that you adhere to this food regime as using too much force to chew early can cause flexion across the bone segments and slow the healing or even cause problems with healing. Generally by 6 weeks most patients can try to return to a normal diet.

**Mouth care:** On the first night of your surgery you can brush your front teeth if you wish to freshen your mouth. The following day you will commence Chlorhexidine mouthwash in the ward and go home with this medication. You should do your mouth rinses 4 times a day for 2-3 weeks if possible. Brushing is always complex after jaw surgery as the swelling increases, you can start to gently brush the very front teeth and after about 5 days you can properly brush your teeth. Don't worry about your wounds, as these are a distance from your teeth. Using a small baby toothbrush works well for access.

**Swelling:** Swelling is a normal consequence from surgery and usually peaks at about 72 hours and most of it has resolved by 12-14 days. To reduce swelling ice packs will be applied to your face using sports gel packs, in fact when you wake up after surgery these will be already applied to your face. You should wear these as much as possible for the first 7 days as they help a lot with reduction of swelling. They also have the added benefit of soothing the area and many patients feel it reduces their pain.

Also remember to sleep up at about 20-30 degrees using pillows as lying flat encourages swelling for the first 7 days. Swelling can move around a bit depending on position so if you sleep to one side it will look more puffy that side.

Most patients after 1-2 weeks feel their swelling has gone down a lot and they can become socially acceptable but it is probably better to stay home and rest and recover for the first 7-10 days.

Swelling that returns after one to two weeks is usually a sign of infection so you will need to make contact with my rooms if this occurs. Don't go to your GP or local dentist.

**Bruising:** Some patients experience bruising later in the first week after surgery. It seems to vary from person to person and does not correlate with the complexity of their procedure. It can range from simply along the jawline or into the neck and rarely can extend with gravity to the collarbone area that is where the term "the dentist bruised my chest taking out my wisdom teeth" arises. The bruising should resolve quickly within 2 weeks.

**Exercise:** Most patients can resume exercise after 14 days. The main danger is bleeding by raising your blood pressure and vascularity to the head and neck area. It is important that you rest for the first 7-10 days. Please do not do any contact sports or dangerous activities for 8 weeks as even an innocent knock can cause the bone segments to displace. So a bit of common sense prevails. Certainly swimming, running, gym and gentle ball use is acceptable.

**Normal wound healing:** Your wounds will initially feel puffy and you will feel the ends of the stitches in the wound. After the stitches fall out the swelling in the wound will go down and you may feel it heal flat or alternatively you may have hole or defect where the surgery was performed.

When you look at the wound in the jaw surgery sites it often looks a little white in the first few days due to more keratin being formed as part of normal wound healing.

Sometimes patients think this is infection but it is normal and will disappear after a few days. (See Appendix 4 for a more detailed description)

**Elastics:** When you wake up after surgery there are elastics running between the upper and lower jaw teeth, usually one each side. They are basically allowing your teeth to come together in the new position for comfort. If one of them breaks don't panic, as when I see you for review at day 5-7 postop I will change them over and place new ones. I will give you a supply of elastics at day 5-7 and you will be able to take them on and off at your leisure to aid eating, oral hygiene and a general break. When you see your orthodontist after surgery they will usually go to some lighter elastics and take over the positioning of your elastics.

**Antibiotics:** You will be sent home with a five-day course of oral antibiotics. Occasionally they can cause nausea, vomiting or diarrhea. If this is the case please cease taking them.

**Constipation:** A side effect of opioid containing pain relief such as Panadeine, Mersyndol and Endone are that they can cause constipation. It's important to have a high fluid intake and plenty of fruits and vegetables. If you experience constipation a simple laxative such a Coloxyl can be purchased over the counter at your pharmacy.

Feeling flat day 4-6: Whilst you are in hospital you are given steroids to reduce swelling and nausea from your anaesthetic. They have a side effect of making you feel happy. When you go home its pretty normal at day 4-6 to feel a bit flat, annoyed and fed up. Once you get through to day 7 you normally have turned the corner and feeling much more positive and motivated.

**Bite Looks Weird:** After jaw surgery with swelling and numbness your bite will be all over the place. It might look too far forward or deviated often due to the pull of your elastics. Don't worry about this as if it looked good on the operating table it will settle. I cannot recall a case where I have taken a patient back to theatre to address their bite being incorrect after surgery. Normally it will come to the correct position after a few days.

**Nerve Regeneration Pain:** Due to the numbness of your lips and chin post surgery a good sign of recovery is tingling, buzzing and shooting pains into the lips or chin. This is normal post surgery.

## REASONS TO BE CONCERNED

Pain increasing: This is often a sign of infection. An infection usually occurs 1-2 weeks after surgery with return of swelling in one site, bad taste or discharge, pain and fever. Please call my office or after hours emergency pager number if this occurs as I will need to see you either that day or the following morning for a review. Often I can call a local pharmacy to arrange an antibiotic to be dispensed so these can be commenced promptly.

**Bleeding:** If you have an infection day 7-10 postop you can get either oral bleeding or nasal bleeding. If this is the case please contact me for urgent review. Occasionally it means being readmitted for IV antibiotics but oral antibiotics deal with most of these cases.

## REASONS TO CONTACT MY ROOMS FOR A REVIEW

Bleeding that is not responding to local pressure to the wound as described above. It's not common to have serious bleeding after jaw surgery and most of the time by putting direct pressure over the wound it will stop the bleeding.

If you have done this for at least 5-6 times and it is not working and the blood is filling your mouth or bleeding from your nose please call my pager number after hours on 03 9387 1000 or rooms in hours on 03 7000 4000

Swelling returning after a few days indicates an infection and needs review and antibiotics prescribed. Pain increasing after a few days indicates an infection and needs review and antibiotics prescribed.

## APPENDIX 1:

Local Anaesthetic given at surgery. At your surgical procedure a long acting local anaesthetic has been administered at the site of the surgery. This typically makes the area of surgery numb for 12-24 hours. If you have had jaw surgery your cheeks, lips and tongue will be numb for that period, as I have given a nerve block that covers those areas. In the upper jaw it is usually closer to the site of the actual surgery but the nose lips and cheeks are numb.

It is very important that you don't accidentally chew your lips, tongue and cheeks whilst numb as this can cause painful ulceration at the site of trauma. Children are particularly prone to this as they attempt to feel how numb it is so bite into the soft tissues, so this needs to be emphasized.

Ongoing numbness can mean meaning greater than 24 -72 hours and is normal with jaw surgery as I have worked close to your nerves. Remember that this doesn't mean permanent numbness as whenever you work close to a nerve bundle it typically stops working for a period. Tingling, electric pulses and buzzing are good signs of nerve regeneration.

For pain relief after surgery its best that we capture the period of time the numbness is wearing off with you taking reasonable pain relief. So for example if you have had your I would expect you to start having pain at about 8-12 hours postoperatively as the local anaesthetic starts to wear off. I would recommend you take the pain relief prescribed even if you have no pain at about 6 hours postoperatively so they are working effectively before the numbness wears off. The nursing staff will be involved with this from an early time.

## APPENDIX 2: POSTOPERATIVE BLEEDING

As stated above it is normal for slight bleeding post surgery for a few hours. Direct pressure with gauze is the best way to control this oozing. So simply bite firmly on the gauze provided. It is not unusual for some minor persistent oozing for the first night, so a good idea is to put an old towel over your pillow as the bloody saliva that trickles out of your mouth can easily stain your pillow.

Very rarely you may experience a decent bleed post surgery. This would be after a few attempts of putting pressure over the wound. The reason for the bleeding can be a soft tissue bleeder or alternatively a vessel in the bone. At surgery I am very careful to make sure that there is not obvious bleeders but at the procedure most vessels spasm so you can occasionally miss one. To fix a serious bleeding issue can mean numbing you up again with local anaesthetic and placing more sutures or packing the wound. Despite sounding complex this is normally a very easy procedure and rarely required.

Occasionally at about 7-10 days post surgery, if you have an infection it can present with a bleed with bloody saliva or nasal bleeding. If this is the case please make contact as you will need to be assessed and possibly readmitted although oral antibiotics deal with most of these infections as they are mild.

### APPENDIX 3: STITCHES

Stitches are used at surgery to control bleeding and bring the wound edges together to speed up healing. The ones used in the mouth generally fall out after about 1-2 weeks but can persist in some people for longer than that period. If they are still present at 2 weeks, placing a small blob of toothpaste on your finger and gently rubbing them usually causes them to fall out, otherwise they will disappear but might take a bit of time.

Stitches outside of the oral cavity are normally nylon based and need me to remove them at about one week. These are rarely used with jaw surgery so I will advise you if this is the case.

Occasionally a stitch comes loose early. Don't panic if this occurs as the wound will still heal very well and I generally place enough stitches so if one does come away it is no concern.

### APPENDIX 4: NORMAL HEALING

When jaw surgery is performed there is damage to the bone and soft tissue. This means that the bone and soft tissue needs to heal and regenerate. You can imagine that by working on the bone means there is a defect in the jaw that needs to heal. Early during the healing phase this fills with a blood clot, which subsequently has inflamed healing tissue present, called granulation tissue and then finally new bone formation. The soft tissues above the bone become inflamed and new tissue grows over the bone.

It normally looks a bit bizarre in the wound for about the first week. It is normal for it to appear whitish due to extra keratin being made as normal healing, a bit like the flaky skin you get around a cut as it heals on your skin. Due to the mouth being moist it looks quite white but this is normal.

Whilst the bone heals where surgery has been performed there can be a divot or hole in the gum. The base is the healing tissue that will become bone with time. During that healing time it is not unusual to get food in the site. You can use mouthwash, saline or even water to flush it out and over about a 2-3 week period this usually disappears.

In older patients the bone healing is a bit slower following surgery. So if you are over 30 years of age it might take 4-6 weeks to settle. It is just a slower period compared to when you were younger. The danger is if you are getting food caught in the site and not flushing it out it slows the healing process so please keep your hygiene of the site very good.

## APPENDIX 5: ANTIBIOTICS DURING AND POST SURGERY

The mouth contains many bacteria that love to infect the site of surgery, usually about day 5-10 post procedure. During the surgery and whilst an inpatient you are given antibiotics via the IV cannula placed by the anaesthetist and subsequently oral antibiotics for home for 5 days.

The evidence suggests that this can reduce your chance of a postoperative infection. It is my recommendation that you take your antibiotics at home to prevent an infection.

Sometimes antibiotics can make you sick, e.g. nausea, vomiting or diarrhoea. If this is the case please stop them immediately and the above symptoms should settle. Also they can cause swelling or a rash, typically on your trunk, arms, neck or face. If this occurs it's a sign of an allergy and please cease them immediately. If the rash is itchy and annoying or blistered like welts please take Claratyne or Telfast. These are antihistamines and can settle the rash and symptoms quickly