



## JAW FRACTURES

### **INFORMATION FOR PATIENTS WITH JAW FRACTURE(S)**

The information contained herein is important. You should read it carefully and ask any questions that you might have about the information. You may have sustained other facial injuries in addition to the jaw fracture(s) that are not discussed here. You may wish to discuss these other injuries with your surgeon.

#### **General Information:**

Jaw fractures are a very common result of facial trauma. Fractures can involve the upper jaw (maxilla), lower jaw (mandible) or both. The goals of treatment are to provide for the formation of a solid union between the bone fragments, reestablish as normal a bite as possible and return the jaw to as normal function (chewing, etc.) as possible. Some fractures can be treated simply by wiring the jaws closed until the fractures have healed. Other fractures must be surgically exposed through incisions in the mouth, on the face or both. After exposure of the fracture(s), the bone fragments are manipulated into a satisfactory alignment and then secured with bone plates and screws. Uncomplicated jaw fractures generally heal in 4-6 weeks.

After an adequate period of healing, the wires holding the jaws closed are removed and the jaws are examined to determine if any mobility exists between the bone fragments. If the jaws are not completely healed, the wires holding

the jaws closed will be replaced until satisfactory healing occurs. If the fractures are stable, jaw opening exercises are started at this time. Depending on the nature of your fractures you may be instructed to wear small elastics between your maxilla and mandible. At the end of this period if the fractures remain stable and the bite is stable, the arch bars are removed. Removal of the arch bars is usually performed in the office with local anesthesia and intravenous conscious sedation approximately 7 weeks following treatment of the fracture(s).

## **Swelling:**

Swelling of the face is common with jaw fractures and usually increases after surgical treatment of the fractures. Swelling begins to subside approximately 72 hours following surgery. You can decrease swelling by sleeping with your head elevated on two pillows for the first 5 nights. A dramatic increase in swelling after you have been discharged from the hospital may indicate infection, and you should contact your surgeon.

## **Pain:**

Most of the pain associated with jaw fractures occurs from bone fragments shifting and moving. Therefore, this pain decreases after the fracture is stabilized with treatment. Pain after treatment comes from placement of the dental wires but is temporary. The teeth to which the wires are secured often become sensitive to hot and cold liquids, but this too is a temporary problem. A prescription for liquid pain medication will be provided when you leave the hospital. You should begin taking pain medication at the first sign of discomfort. For moderate pain, take a dose (400-600mg) of liquid Ibuprofen (children's Motrin) every 4-6 hours as needed for pain. Do not exceed the maximum daily dosage suggested on the bottle. Do not take Ibuprofen if you are intolerant of this medication or have a history of stomach ulcers or kidney disease. For severe pain, 2-3 teaspoons of the prescribed liquid narcotic medication (hydrocodone/acetaminophen) should be taken as needed. It is best to take pain medication with a small snack or following a meal to avoid stomach upset. The prescribed pain medicine will make you groggy and will slow down your reflexes. Do not operate a motor vehicle or machinery (lawn mower, etc.) while taking the pain medication. Do not drink alcoholic beverages. Notify the clinic if you are experiencing pain that is not improving 3-5 days after surgery. Do not take any of the above medication if you are allergic or have been instructed by your doctor not to take it.

**We recommend the following protocol for optimum pain management:** Take each medication with a small snack and full glass of liquid.

Immediately Following Surgery: 1 Prescription Pain Pill

3 Hours Later: Ibuprofen dosage

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NOTE: The dosage of the prescription pain medication can be increased to 1 1/2 to 2 pills if needed for pain management.

## **Antibiotic:**

Be sure to take the prescribed antibiotics as directed to help prevent infection. Discontinue antibiotic use in the event of a rash or other unfavorable reaction and notify our office. Otherwise, please finish your entire course of antibiotic. Antibiotics can sometimes cause an upset stomach. If this is the case, it is advisable to take acidophilus or pro-biotic tablets along with your antibiotic. Call our office if you have any questions.

Women taking oral contraceptives: Antibiotics that you have received for your surgery may make your oral contraceptive less effective. You should use an alternate form of birth control until your normal menstrual cycle.

## **Nausea/Vomiting:**

Nausea and vomiting may occur following general anesthesia to repair your fracture(s). Because there are only fluids in your stomach, vomitus can escape through your nose and mouth around the last molar teeth. You will receive a prescription for nausea medication at the time of discharge. You should notify our office if this medication is not relieving the nausea.

## **Diet:**

Your diet will be liquid during the healing period, whether or not your jaws are wired closed. We recommend that you have four or five meals per day. We recommend that you supplement your diet with three cans of ready-to-drink high calorie supplement (Boost, Ensure, etc.) each day. High calorie, high protein intake is very important. Nourishment should be taken regularly. You should prevent dehydration by taking fluids regularly. At least 1 liter of liquid should be taken daily. Try not to miss a single meal. You will feel better, have more

strength, less discomfort and heal faster if you have good calorie intake. After adequate healing has occurred (usually 6 weeks following surgery), your diet will be advanced to solid foods. Caution: If you suddenly sit up or stand from a lying position you may become dizzy. If you are lying down following surgery, make sure you sit for one minute before standing.

## **Oral Hygiene:**

Good oral hygiene is very important for adequate healing and preventing infection. You should begin brushing your teeth the day following surgery. Brush your teeth following each meal. A child's soft toothbrush can be utilized for this purpose, paying particular attention to keeping the brush in direct contact with the teeth. It is very important to keep your mouth clean as the wounds are healing. You can decrease the accumulation of debris on the inside surface of your teeth and tongue by rinsing with warm tap or salt water after each meal/snack. You will take home a bottle of Chlorhexidine mouth rinse from the hospital. Rinse with warm salt water (1/2 teaspoon of salt in a cup of warm water) six times a day. Continue this procedure until healing is complete. Do not use a water-pik for 2 weeks after surgery.

**REMEMBER:** I clean wound heals better and faster

## **Arch Bars/Wires:**

You have arch bars secured to your teeth with wires. Any sharp wires that irritate the inside of your lips and cheeks can be covered with a small pinch of soft wax. This wax is available at the time of hospital discharge, and the nurses in our office can supply you with additional wax as needed. Remove all of the wax at least once a day before brushing. If you break or loosen any wires, please contact the office so that the wires can be replaced or adjusted.

## **Bone Plate/Screws:**

Your fracture(s) may have been repaired using small bone plates and screws. This hardware is designed to be left in place indefinitely. Occasionally because of irritation of overlying gum tissue or skin, a plate may need to be removed. This can usually be done as an outpatient procedure.

## **Nasal Stuffiness:**

Nasal stuffiness is especially bothersome when the jaws are wired closed. Stuffiness should be initially treated with Afrin nasal spray. If this does not clear the nose, then you should contact our office. Occasionally, a person with nasal stuffiness and jaws wired closed may experience some shortness of breath. While the Afrin is allowed to work, the shortness of breath can be very easily relieved by holding the lips and cheeks away from the teeth with a spoon handle, toothbrush, or other such object. This maneuver will improve mouth breathing until the nose can be cleared. You should use a bedside humidifier at night while your mouth is wired closed. Please contact your surgeon if you have nasal stuffiness that is not relieved by the nasal spray.

## **Activity:**

If other injuries allow, you may do anything that you feel up to with the exception that you should not swim until the wires holding your jaws closed have been removed. Jogging or aerobics may lead to some increase in pain and should be limited to that amount that is easily tolerated. You may return to work when you feel up to it. If you have any questions about your activity and work, please discuss them with your doctor/nurse.

## **Jaw Opening Exercises:**

At least some temporary restriction in jaw opening is very common following treatment of a jaw fracture(s). This can be a more serious problem with fractures that involve the jaw joint. You will be instructed in jaw opening exercises after satisfactory healing of the fracture(s) has occurred. Once you have been instructed to begin exercising, you should exercise 3-4 times a day for five minutes. Your progress will be measured each time you return for follow-up visits.

## **Complications:**

The following is not meant to be a complete discussion of all possible complications but includes those complications that we believe to be the most important:

## **Infection:**

Any jaw fracture but especially lower jaw fractures may become infected. Increased swelling, pain and/or skin redness may suggest that you have an infection. If you experience any of these problems after leaving the hospital, contact our office. If you have been provided with a prescription for antibiotics, it is important that you begin taking these immediately after leaving the hospital and continue them as directed. Unless instructed otherwise, you should not take the antibiotics for more than five days after discharge from the hospital, even if there is some antibiotic left over. If you do become infected, management of infection is usually straightforward, but hospitalization may be required. Infection of the bone can lead to failure or delay of healing and may require long-term antibiotic treatment and/or additional surgery.

## **Delayed Healing:**

For several reasons, a fracture may heal slowly. This may require a longer than usual period of having the jaws wired closed. It may also require a second operation to modify stabilization of the bone fragments. In rare circumstances the fracture will require a bone graft for satisfactory healing.

## **Failure of Healing:**

For a number of reasons, despite an adequate period of healing, a fracture may remain mobile. Additional treatment will be required, often involving another surgical procedure, possibly including placement of a bone graft from the hip to allow for satisfactory bone healing.

## **Malocclusion:**

Though one of the goals of jaw fracture treatment is to reestablish a satisfactory bite, this is not always achieved. Bite problems (malocclusion) after complete healing of the fracture(s) may require a surgical procedure for correction. Minor bite disturbances can often be improved with a slight adjustment of the chewing surfaces of the teeth. Fractures involving the jaw joint are most often associated with a long-term bite change.

## **Tooth Loss:**

Teeth in the line of fracture may be lost either at the time of fracture treatment or at some later point, usually during the healing period. Missing teeth can usually be replaced with dental implants or a dental prosthesis after fracture healing has occurred.

## **Numbness:**

Many jaw fractures produce nerve damage that may lead to numbness, partial or complete, involving the lower lip, chin, teeth, gums, cheeks, or upper lip on one or both side of the face. Usually there will be a slow return of sensation, though occasionally the numbness is permanent when the injury to the nerve has been severe.

## **Jaw Joint Problems:**

Jaw joint (TMJ) problems can occur following any lower jaw fracture but are most common when the fracture extends into the joint. Decreased jaw opening, joint pain, arthritis, and/or fusion of the joint surfaces can occur. Importantly, pre-existing jaw joint abnormalities may be aggravated by a lower jaw fracture. Most joint problems can be managed with medical treatment, but occasionally surgery may be required. If a fracture extends into the joint, jaw opening exercises are very important to re-establish adequate mouth opening.

## **Questions/Problems:**

It is our desire that your recovery be as smooth and pleasant as possible. Following these instructions will assist you, but if you have any questions or concerns about your progress, please call the office [Boulder Office Phone Number 303-444-2255](tel:303-444-2255). We are available 24 hours a day.

*Thank you for trusting us with your oral and maxillofacial surgery needs.*

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