

Facial Reconstruction Surgery for Gender Affirmation

Thank you for choosing the UCHealth Integrated Transgender Program - Anschutz Medical Campus at the University of Colorado Hospital. We are excited that you are taking these steps to affirm who you are. We want to help you as you move toward a physical appearance that fits with your gender identity.

This booklet gives you the information to learn about gender-affirming surgeries and what to expect as a patient with our program. Please feel free to contact our office with questions or to talk with one of our providers any time.

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What is gender-affirming surgery?

Gender-affirming surgery is a "standard of care" treatment to reduce gender dysphoria. Standard of care means that doctors and medical experts believe this is the best treatment for a medical condition.

Gender dysphoria can happen when a person's gender identity is not the sex that was assigned to them at birth. The goal of gender-affirming surgery is to change the features of the body which often cause this dysphoria. The surgeries will create body features that match your gender identity. These surgeries cannot be reversed.

Many studies have shown that surgery, along with hormone therapy, can lessen gender dysphoria in many people. Patients who have had gender-affirming surgery say they are very satisfied and have a better quality of life because of their surgeries.

We know that many of you have had problems because you were not able to get treatment for gender dysphoria. You may have struggled with personal growth. You may have felt that your life is not as fulfilling as it should be. We know that gender dysphoria can hurt your:

- Mental health
- Emotional health
- Physical health

Who is a good candidate for gender-affirming surgery?

The World Professional Association for Transgender Health (WPATH) says that having surgery as a standard of care for gender dysphoria should be based on 2 things. First, each person's unique health care concerns and second, their level of dysphoria.

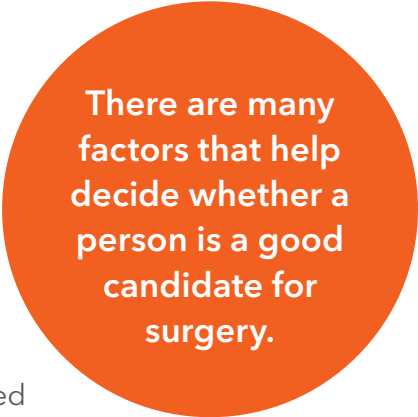
While surgery is a standard of care in transgender health, not every person is a good surgical candidate. Our surgeons must look at all of a person's risk factors and decide if surgery could be harmful to some people. There are many factors that help decide whether a person is a good candidate for surgery.

To be considered a good surgical candidate for facial reconstruction surgery for gender affirmation, you must meet these criteria (some of these are based on WPATH guidelines):

- Be at least the "age of majority." This is most often 18 years or older (with some exceptions) and be able to make informed decisions (decisions based on facts).
- A history of long-lasting gender dysphoria that is well-documented by a licensed mental health provider. A referral letter that supports this must be written by this provider.
- A history of taking feminizing hormones for at least 12 consecutive months, and a referral letter from your hormone provider giving details about this.
- If you have any major medical or mental health problems, they must be fairly well-controlled by a primary care doctor or mental health provider.
- Body mass index (BMI) of 35 or less. This is a measure of your body fat based on your height and weight.
- Have at least 1 support person who will be able to help you for at least 2 weeks after surgery.
- Have a stable living environment that is safe and lets you rest and heal after surgery.

A person would not be considered a good candidate for surgery for any of these reasons:

- Significant, active substance abuse such as:
 - IV drug use
 - Alcoholism
 - Tobacco use
- Unstable living environment such as:
 - Not having a home to live in.
 - Not able to get basic needs like water, food or electricity.
- Uncontrolled or untreated medical or mental health issues such as:
 - Diabetes (HbA1c greater than 7.5)
 - Severe mental health diagnoses including psychotic disorders.Sometimes, surgery can be considered if these issues are well-controlled with medicine and psychotherapy.



There are many factors that help decide whether a person is a good candidate for surgery.

Some patients have a higher risk of problems after surgery and problems healing after surgery.

People are at higher risk if they have certain medical issues, such as:

- Diabetes
- Autoimmune disease
- Bleeding or clotting disorders
- High BMI
- Heart failure
- Lung disease

Each person's surgery case is reviewed separately by our team. We will review your health records and evaluate your risk. If you are a good surgical candidate, you will need your primary care doctor to help you to get as healthy as possible before surgery.

Facial reconstruction surgery for gender affirmation.

Facial reconstruction surgery for gender affirmation means having one or more surgery that will help change your face. The result is to have your physical appearance match who you really are. Studies have shown a huge improvement in quality of life for patients who have facial procedures. The types of facial reconstruction surgery for gender affirmation we offer are:

- Frontal bone (forehead) contouring
- Hairline advancement
- Brow lift
- Malar (jawbone) contouring
- Rhinoplasty (nose surgery)
- Upper lip lift
- Chin contouring (genioplasty)
- Jaw (mandible) contouring
- Thyroid cartilage reduction (tracheal shave)
- Autologous (your own tissue) fat-grafting to the face
- Face lift
- Neck lift

If your insurance does not cover some or all of these procedures, we can give you a quote for the cost if you pay for the procedures yourself. We also perform all of these procedures at our cosmetic clinic.

Types of facial reconstruction surgery for gender affirmation.

There are a many different surgeries we can perform on your face to give you a more feminine appearance. Some of the surgeries can be done at the same time, but some will need to be done at different times. Facial reconstruction surgery for gender affirmation include:

Forehead contouring.

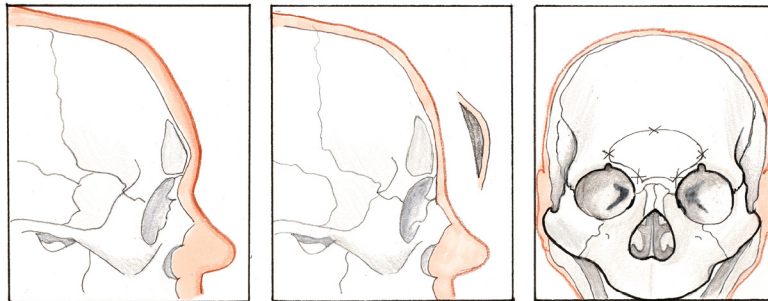
There is a big difference in the forehead shape of males and females. For many patients, contouring (changing the shape) of the forehead is one of the most important facial reconstruction surgeries for gender affirmation and gives them a more feminine appearance.

In a male forehead, the frontal bone is more prominent (sticks out) in different areas compared to a female forehead that is mostly smooth and rounded. Each person has a different forehead "type." This is based on the shape of your forehead and the structures under the bone.

Based on your anatomy, your surgeon will decide your forehead type, which will help decide the type of surgery you will need.

- **Type III:** Type III is the most common type (more than 90% of people). The forehead protrudes (sticks out) above the eyebrows. This is changed with a surgery called osteotomy. The part of the bone that protrudes is cut, removed and smoothed down. It is then put back in place and attached to the bone next to it. This is usually done with very thin metal plates and screws. The bone must be removed before it is shaved down because the sinus is directly under it. Below is an drawing of this surgery.

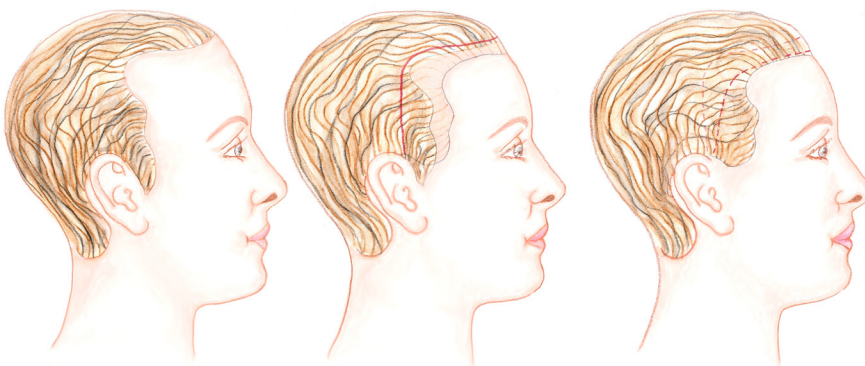
Also during this surgery, the surgeon will shave down the upper part of your orbit bones (eye socket) at the same time. This gives your face a smooth transition from the forehead to the brows.



Hairline advancement.

A female hairline is most often a couple centimeters lower than a male hairline. During this surgery, the surgeon makes an incision (cut) along the hairline, raises the scalp, and brings the hairline forward.

There are 2 common incision patterns depending on your current hairline. Your surgeon will help decide which incision pattern will make sure the scar is hidden. Because the hair is thinner at the temples, you may need to have a hair transplant a few months after this surgery. If you have this procedure done, you will most likely have a temporary drain placed during surgery.



Brow lift.

This procedure may also be done at the same time as the hairline advancement. Often, male eyes are deeper set, and a brow lift can often open the eyes more and give an appearance that is more feminine. During this procedure, the surgeon may shave the bone of your upper eye sockets.

Rhinoplasty (surgery to the nose):

This procedure is often done at the same time as forehead contouring because smoothing the forehead can make the nose look larger. During this procedure, we will smooth any "step-offs" from the forehead to the nose. A step-off is when 2 bones do not come together evenly.

Next, we use surgical procedures to make the nose and nostrils smaller. We may need to use a piece of tissue (called a graft). This is taken from your own rib cartilage or the rib cartilage of a cadaver. During this surgery we make sure your nasal passages stay open, so you don't develop breathing problems. If you already have breathing problems, we can usually repair them during the same surgery.

Upper lip lift.

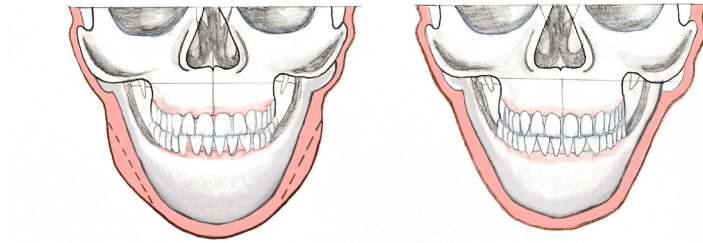
The area of skin that is between the upper lip and base of the nose is often longer in a male face compared to a female face. The female upper lip is also often fuller and more turned up, showing the teeth slightly. The goal of a lip lift is to shorten the area above the lip and make the upper lip more feminine in appearance. The surgeon will measure the amount of skin and tissue to remove and then pull the remaining skin up toward your nose and close with stitches. Your scar will be hidden at the base of your nostrils.

**Chin contouring (genioplasty).**

A female chin is often shorter in vertical length and narrower than a male chin. The surgery to change the shape of the chin is called a genioplasty. The surgeon will most often cut off a piece of your chin bone in the shape of a T and reattach the bones together to shorten your chin and make it less wide. The bones are reattached with metal plates and screws. Sometimes, chin contouring can be done simply by shaving off some of the superficial layers of the bone. Chin contouring is often done at the same time as mandible contouring to give the entire lower jaw a more feminine appearance.

Mandible (jawbone) contouring.

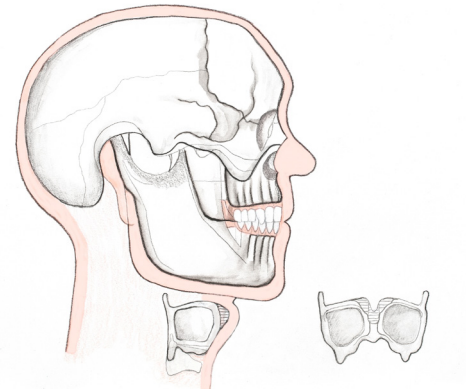
The goal of this procedure is to narrow the jaw. Often, the male jaw is wider than the female jaw. This procedure is done at the same time as the chin contouring. This lets us reshape the jaw to match the chin. The surgeon uses a tool to shave off layers of the jawbone. The procedure is done from the inside of your mouth so will not have any external skin scars after this procedure. If you have jaw misalignment, you may need to have this fixed by a separate surgery before having mandible contouring.



Thyroid cartilage reduction or excision (chondrolaryngoplasty).

The thyroid cartilage, which is often called the “Adam’s apple,” is often thought of as a masculine feature and is often more prominent (sticks out more) in males.

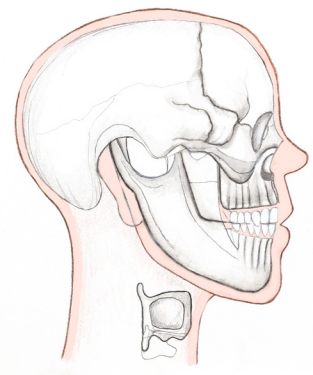
The surgery to remove the thyroid cartilage has 2 different approaches—direct and indirect. The more common approach is indirect, where an incision (cut) is made under the chin for a less visible scar, and then the prominent cartilage is shaved off. This will create a smoother appearance of the front part of the neck.



Fat-grafting to face:

This procedure uses your own subcutaneous fat tissue (fat that is under your skin) from other areas of your body such as the belly or flanks. The fat is collected using liposuction. The fat is processed to remove all the unnecessary cells to make it purer, and then it is injected into areas of the face to create softer, rounder features that look more feminine. Common areas to inject fat are the:

- Lips
- Cheeks
- Nasolabial folds (lines on the sides of the mouth)
- Temporal regions
- Under-eye area



Risks and complications of surgery.

Although most people have very good results, there are risks to any surgery such as postoperative risks and possible complications. We will be there with you through any complications that may happen.

General risks:

- Infection, bleeding, fluid collection (such as seroma, hematoma).
- Delayed wound healing.
- Injury to nearby structures, organs, nerves or vessels.
- Asymmetry or contour irregularities that need more surgery to fix.
- Changes in sensation, chronic pain.
- Not being satisfied with the results.
- Abnormal scarring, including keloids.

The specific risks of each surgery:

Forehead contouring:	Hairline advancement:	Rhinoplasty:	Chin contouring:	Mandible contouring:
Frontal sinus infection	Skin death (necrosis) of the scalp	Trouble or worsening breathing	Nerve injury that causes numbness or pain or problems with facial movement	Nerve injury that causes numbness or pain or problems with facial movement
Injury to the frontal sinus	Hair loss	Nasal septum perforation	Hardware or implant malposition, infection or extrusion requiring removal	Sagging skin or soft tissue after the procedure
Hardware or implant malposition, infection or extrusion requiring removal	Visible scars	Hardware or implant malposition, infection or extrusion requiring removal	Fracture of jawbone (mandible)	
Malunion or non-union of the bone		Nasal bleeding and crusting	Bone cell death (necrosis)	
Hair loss		Empty nose syndrome	Malunion or non-union of the bone	
Nerve injury that causes numbness or pain or problems with facial movement				
Brow lift:	Upper lip lift:	Autologous fat-grafting:	Thyroid cartilage reduction:	
Temporary or permanent numbness on the forehead	Smile defects	Fat necrosis (death of fat cells)	Temporary or permanent voice changes	
Hair loss		Fat resorption that needs more fat-grafting sessions	Sore throat, hoarseness	
Nerve injury that causes numbness or pain or problems with facial movement		Injury to structures or organs from liposuction	Swelling of neck and trouble swallowing	
			Need for tracheostomy (extremely rare)	

Preparing for surgery.

With any kind of surgery, there are several steps to go through before you go to the operating room. Here is some information about what happens before your surgery.

Before your first appointment:

- You will need to get some referral letters from your health care providers for insurance approval. The letters must include:
 - The length of your dysphoria and previous treatment(s).
 - The length of your hormone therapy treatment.
 - A statement of medical necessity (why this surgery is required).
- Your mental health providers must write 1 or 2 of the letters.
- The provider who gave you hormone treatments must write 1 of the letters.
- If you are able to bring these letters with you to your first appointment and we feel that you are a good surgical candidate, we can ask for insurance approval right away. This will speed up the process of getting a surgery date set for you.
- We know that for some gender-affirming surgeries, WPATH only needs 1 letter from a mental health provider, but some insurance companies need 2 letters from mental health providers.
Please call your insurance company to find out how many letters they need. If they need 2 letters from mental health providers, you will need to get a second one.

Please remember, many insurance companies do not cover these surgeries. We will give you a quote for how much the surgery will cost if your insurance company does not cover these procedures.

Your first appointment:

You will meet with the surgeon and the physician assistant, as well as other members of the team. At this appointment:

- We will completely review your medical, surgical and social history.
- We will talk about your goals and any concerns. You will have plenty of time to ask any questions you may have.
- You will learn about:
 - The different kinds of surgery.
 - How long you will stay in the hospital (if needed).
 - Risks and benefits of the surgery.
 - What to expect after the surgery.
- Before your surgery we will:
 - Do an exam of your face.
 - Take measurements and photos of your face.
 - Decide if more lab data or tests must be done before surgery.
- We will often have you get a CT of your face. This is so we can study your anatomy and plan your surgery.
- If you use tobacco products, you will be told to stop. You will have a nicotine test about 2 weeks before surgery and on the day of surgery. These must be negative for you to have surgery.
- Please review this booklet for other reasons that could keep you from having surgery.

**If you use
tobacco products,
you will be told
to stop.**

After your first appointment:

- If you did not give us the referral letters at your first appointment, you will need to get them now. We need to send these letters to your insurance company to get approval for the surgery. The letters need to include:
 - The length of your dysphoria and treatment(s) you have already had.
 - The length of your hormone therapy.
 - A statement of medical necessity (why this surgery is needed).
- You must get a letter from:
 - Your mental health provider
 - Your hormone treatment provider
- You will fax these to our office at 720.848.0801 or send them through your My Health Connection account.
- You need 1 letter from your mental health provider and 1 letter from your hormone provider.
Remember to call your insurance company because some companies need 2 letters from mental health providers.
- Depending on your current and past medical history, we may need a letter from your primary care doctor approving you for surgery.
- You will need to choose a support person that will be able to drive you home from surgery and stay with you for the first 24 hours after surgery.
 - We need to have the name of your support person before we can give you a surgery date.
- You will likely need a CT of your face before surgery. We will order the CT imaging at your first appointment. Someone will call you to schedule this, usually within a few weeks.
- If you live outside the Metro Denver area (more than 2 hours from the hospital), you should make plans to stay in the Denver area for 10 to 14 days after surgery.
 - This will be important for so that you can get to all your follow-up visits.
- If you use tobacco products, you will be told to quit at least 6 to 8 weeks before your surgery.
 - You will have a nicotine test about 2 weeks before surgery and on the day of surgery. These must be negative for you to have surgery.
- Once all of these things are done, we will call you to schedule your surgery. We will also schedule a preoperative appointment.

Preoperative appointment:

- At this appointment we will:
 - Talk about the operation with you.
 - Make sure nothing has changed in your medical history.
 - Give you another physical exam.
- You will finish your paperwork and we will talk about your instructions, including:
 - What medicines to stop taking before surgery.
 - How to take care of your incisions after surgery.
 - Where to go on the morning of your surgery.

Before your surgery day:

- You need to stop using all tobacco and marijuana products 6 to 8 weeks before surgery. You will have a nicotine test about 2 to 4 weeks before surgery and again on the day of surgery. These tests must be negative for you to be able to have surgery.
- You will discuss with your doctor if hormones have to be stopped.
- You may continue to use most of your normal skincare products before surgery.
 - Please note: Some products (such as isotretinoin) have to be stopped before surgery. Talk about this with your surgery team.
- Please call the surgery check-in desk to confirm the time you should arrive. Call between 2 and 4 p.m. the day before your surgery: 720.848.6070.

What to expect after surgery and discharge from the hospital.

Sometimes after surgery, you will spend 1 night in the hospital. This is to make sure you do not have any problems after surgery with:

- Breathing
- Bleeding
- Large fluid collections

What to expect after forehead contouring, hairline advancement or brow lift surgeries:

You will probably have a drain that will be taken out the day after surgery, and before you leave the hospital or about 1 week after surgery. This will be determined by your surgeon. You will have a dressing (bandages) on your head that we will also take off the day after surgery. Your incisions can be left open to the air after the dressings are taken off.

You can eat a normal diet right away after surgery. We will make sure you are able to get up and walk around before you leave the hospital.

It is normal for you to have some swelling and bruising of your forehead and around your eyes. This usually starts to get better after the first 1 to 2 weeks. But some swelling may last for many weeks to months.

Restrictions after forehead contouring, hairline advancement or brow lift surgeries:

- You can take a shower 72 hours after surgery. You can let the water run over the incisions but do not spray the surgical sites directly with water.
- Sleep flat on your back for the first 8 weeks.
- Do not put any direct pressure on your face for the first 8 weeks.
- Keep your head raised above the level of your heart as much as possible for the first 2 weeks. This is to help decrease the swelling.
- You may apply iced compresses (ice packs) to your eyes for 15 to 20 minutes every 2 hours when you are awake:
 - Do this for the first 3 days after surgery.
 - Do not use any pressure on your forehead or nose.
- For the first 2 weeks after surgery, do not do any activities that will put more pressure on your face. This includes bending down to reach your toes.
- No strenuous activity for the first 4 weeks after surgery.
- The scalp staples will be removed about 2 weeks after surgery.

Pain control:

- After surgery, you will be given opioid medicines for a short period of time.
- You will also be told to take Tylenol (acetaminophen) on a regular schedule. You may start taking NSAIDs 2 days after your surgery, including:
 - Ibuprofen
 - Advil
 - Motrin

What to expect after rhinoplasty:

This surgery can be the most uncomfortable facial surgery, especially for the first 1 to 2 weeks. A metal or plastic splint is over your nose to protect it. If you had any septal work done, you may have splints inside your nostrils. These splints will stay in place for about 1 week after surgery until your first follow-up visit.

You will have an incision under your nose that you will need to keep clean. It is normal to have swelling and bruising around the eyes and a stuffy nose after surgery. This can last for the first few weeks. It will continue to get better, but you will have some swelling that lasts for months.

Restrictions after rhinoplasty:

- You will be able to shower from your neck down after surgery.
 - You will not be able to get your face wet until after the first postoperative appointment.
 - The nasal splint should stay dry at all times.
- You will have to clean the nasal incision with a hydrogen peroxide-saline solution 2 times a day. You make this by mixing 50% hydrogen peroxide with 50% saline.
- You will also put antibiotic ointment on the nasal incision 2 times a day.
- You will have a drip pad under your nose. Change this pad each day (as often as needed) until the drainage stops. Once your nose stops dripping, you can stop using the pad and tape.
- You need to sleep on your back for the first 8 weeks.
- Do not put any direct pressure on your face for the first 8 weeks.
- Do not let anything, including eyeglasses, rest on your nose for at least 4 weeks.
 - Please note: Glasses should be taped to your forehead.
- Keep your head raised above the level of your heart as much as possible for the first 2 weeks. This is to help lessen the swelling.
- You may apply iced compresses (ice packs) to your eyes for 15 to 20 minutes every 2 hours when you are awake:
 - Do this for the first 3 days after surgery.
 - Do not put any pressure on the nose.
- Do not rub or blow your nostrils for the first 4 weeks after surgery.
 - Sneezing should be done through the mouth.
- For the first 2 weeks after surgery, do not do any activities that increase the pressure on your face. This includes bending down to reach your toes.
- No strenuous activity for the first 4 weeks after surgery.
- Do not eat foods that require moving the lips too much (such as corn on the cob) for the first 2 weeks.
- Nasal congestion is common during the first 2 weeks. You may use normal saline nasal spray and over-the-counter nasal decongestant sprays.

Pain control:

- After surgery, you will be given opioid medicines for a short period of time.
- You will also be told to take Tylenol (acetaminophen) on a regular schedule. You may start taking NSAIDs 2 days after your surgery, including:
 - Ibuprofen
 - Advil
 - Motrin

What to expect after a lip lift:

You will have stitches at the base of your nose. We put antibiotic ointment over the incision at the end of the surgery.

Restrictions after a lip lift:

- You will have to clean the incision with a hydrogen peroxide-saline solution 2 times a day. You make this by mixing 50% hydrogen peroxide with 50% saline.
- You will also apply antibiotic ointment to the incision 2 times a day.
- Do not put any direct pressure on the area for the first 4 weeks.
- Keep your head elevated above the level of your heart as much as possible for the first 2 weeks. This is to help lessen the swelling.
- Do not rub or blow the nostrils for the first 4 weeks after surgery.
 - If you need to sneeze, you should sneeze through your mouth.
- No strenuous activity for the first 2 weeks after surgery.
- Do not eat foods that make you move your lips too much (such as corn on the cob) for the first 2 weeks.

What to expect after mandible contouring (genioplasty):

After surgery, you may drink clear liquids right away. After 48 to 72 hours, you will be able to move to a soft diet (thick liquids or soft foods). You will need to stay on this soft diet and not eat any hard foods that need a lot of chewing for the first 6 weeks.

Most often, all of your incisions will be on the inside of your mouth and the stitches will dissolve. We will give you a mouthwash to use 2 times a day and after every meal.

It is normal for you to have some swelling and bruising of the chin and jaw area. Most of this goes away after 2 to 3 weeks. You may also have some tingling or numbness in your chin or lips. This should get better in the first few weeks, but it could last for months.

Restrictions after mandible contouring surgery:

- You may shower after surgery.
- You need to sleep on your back for the first 8 weeks.
- Do not put any direct pressure on your lower face for the first 8 weeks.
- Keep your head elevated above the level of your heart as much as possible for the first 2 weeks. This is to help lessen the swelling.
- No strenuous activity for the first 4 weeks after surgery.
- Stay on a soft diet for the first 6 weeks after surgery.
- Do not drink hot drinks or eat spicy foods for the first 2 weeks after surgery. They can irritate the incisions.
- Use mouthwash 2 times a day and after every meal for the first 2 weeks.

Pain control:

- After surgery, you will be given opioid medicines for a short period of time.
- You will also be told to take Tylenol (acetaminophen) on a regular schedule. You may start taking NSAIDs 2 days after your surgery, including:
 - Ibuprofen
 - Advil
 - Motrin

What to expect after thyroid cartilage reduction or excision surgery (chondrolaryngoplasty):

You will have a small incision on your neck with stitches and a dressing over it (either surgical glue or tape). We will make sure you are able to drink and eat without any problems before you leave the hospital. You will start with a soft diet and move to a regular diet, as long as you have no problem with swallowing.

It is normal to have some hoarseness or voice changes for the first few weeks. This should not last and should get better.

Restrictions after thyroid cartilage surgery:

- You may shower 2 days after surgery.
- You need to sleep on your back for the first 2 weeks.
- Do not put any direct pressure on the front of your neck for the first 2 weeks.
- Keep your head elevated above the level of your heart as much as possible for the first 2 weeks. This is to lessen the swelling.
- No strenuous activity for the first 3 weeks after surgery.
- Do not shave the area around the incision for the first 4 weeks after surgery.

Call our office right away during office hours at 720.848.0800 or go to the ER if you have any of these:

- Fever (more than 100.4 F)
- Nausea or vomiting
- A heart rate more than 100 beats a minute that does not slow down
- Incision sites that have:
 - Pain that is getting worse
 - Redness
 - Drainage
- Chest pain
- Shortness of breath
- Bleeding from your nose that does not get better if you press on it lightly or use nasal spray
- Trouble breathing or swallowing
- Changes in vision
- Weakness or numbness in your arms or legs

Lifelong follow-up and preventative care:

The WPATH standards of care says it is important for you to have lifelong follow-up with your primary care physician and transgender health providers. You need to have medical screenings for the rest of your life.

Checklist for surgery:

- 1 or 2 letters from mental health providers
- 1 letter from your hormone provider
- Approval from your primary care doctor (if your surgeon decides you need this).
- Have a CT of the face done.
- Stop all smoking or tobacco products 6 to 8 weeks before surgery.
There is a nicotine test about 2 weeks before surgery.
- Choose a support person to drive you home and help you after the surgery.
- A safe and stable living environment.

Pain control:

- After surgery, you will be given opioid medicines for a short period of time.
- You will also be told to take Tylenol (acetaminophen) on a regular schedule. You may start taking NSAIDs 2 days after your surgery, including:
 - Ibuprofen
 - Advil
 - Motrin

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