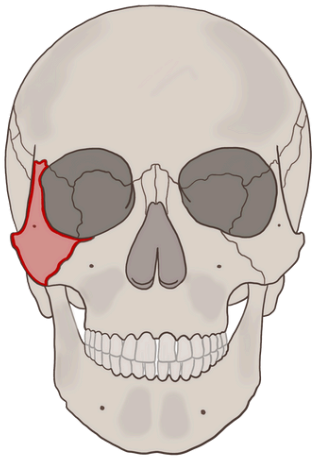
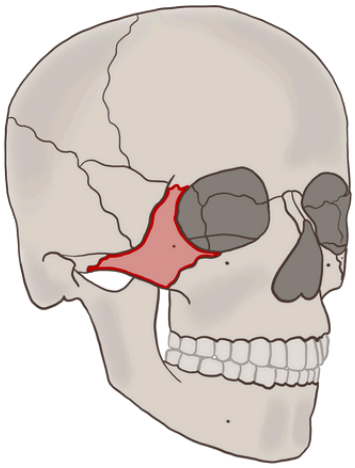
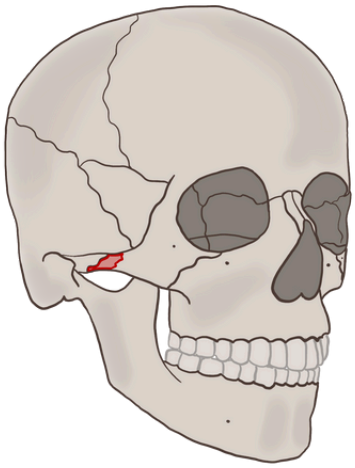
ONTARIO ASSOCIATION OF CRANIOFACIAL TRAUMA SURGEONS

(OACTS)

ZYGOMATIC COMPLEX FRACTURE







ZYGOMATIC COMPLEX

ISOLATED ARCH
(FOR COMPARISON)

What is it?
Fracture of the zygoma (cheekbone), that also provides support to the eye

How does it happen?
A low or high impact force (e.g., assault, vehicle collision, sports, fall, trauma)

Signs of a zygoma fracture:
- Flattening of the cheekbone
- Palpable bony deformity
- Swelling around eye and cheek (may hide bony deformities)
- Numbness to cheek and upper teeth
- Possible eye findings including red eye (subconjunctival hemorrhage), vision changes

How is it diagnosed?
CT of facial bones

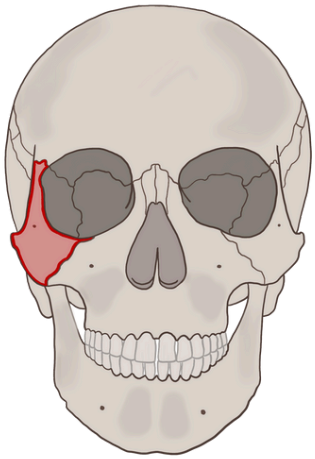
Indications for surgery
1. To support the eye and bony framework
2. Bone fragments impinging on the eye
3. To correct a cosmetic deformity (cheekbone flattening)

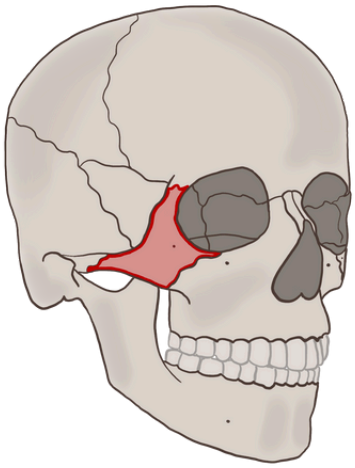
Risks of surgery
- Risks of general anesthetic
- Infection
- Bleeding (from nose)
- Scarring
- Facial asymmetry, poor cosmetic result
- Hardware failure, exposure, or infection
- Globe injury, corneal abrasions, rare chance of blindness (1 in 100,000)
- Double vision, vision loss
- Ectropion (drooping of lower eyelid)
- Numbness to lower eyelid and cheek (infraorbital nerve paresthesia)
- Trismus

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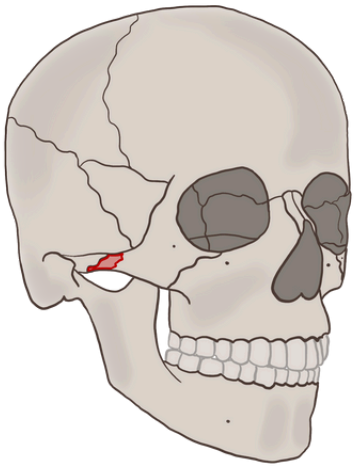
(OACTS)

ZYGOMATIC COMPLEX FRACTURE





ZYGOMATIC COMPLEX



ISOLATED ARCH
(FOR COMPARISON)

Surgical Incisions to Expect
Every fracture and incision is different, surgical type and exposure will depend on each unique patient fracture.

Please speak to your surgeon to gain a better understanding of what to expect.

Typical incisions depend on displacement of bone and quantity of plates/screws needed and may be:

- hidden in the mouth
- at the upper/lower eyelid crease
- in the scalp (coronal)

If your injury involved a cut on your face, it may be used to surgically expose the fracture. If you have sustained other fractures at the same time, incisions may differ.

Tips Before Surgery
Surgery does not necessarily need to be done immediately. Try and maintain good oral hygiene (even if painful) to avoid infection. You may be placed on sinus precautions.

Sinus precautions include:

- Avoid blowing your nose: this can cause your fracture to increse in size and can cause worsening swelling
- Sneeze only with your mouth open and avoid pinching your nostrils
- Do not use a straw, drink directly from a cup
- Keep the head of your bed elevated at 30°: this will help reduce swelling

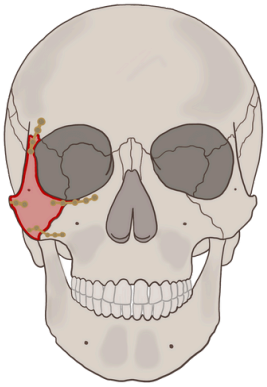
Present to the emergency room if you experience vision loss, inability to move your eye, new bulging of eye, or uncontrolled bleeding (most likely from the nose).

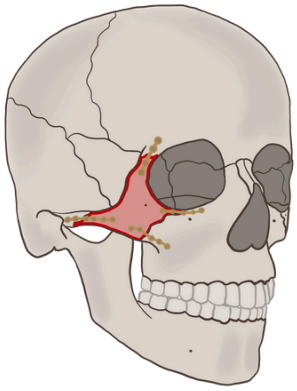
ONTARIO ASSOCIATION OF CRANIOFACIAL TRAUMA SURGEONS

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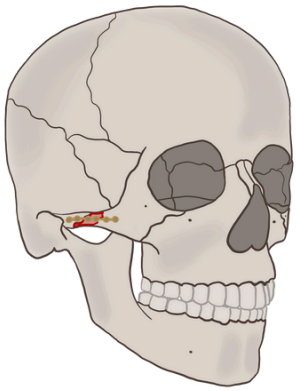
ZYGOMATIC COMPLEX FRACTURE

POST-OPERATIVE CARE





ZYGOMATIC COMPLEX



ZYGOMATIC ARCH

(FOR COMPARISON)

Treatment

Surgical Management

- Non-displaced fractures: if fracture is non-displaced or minimally displaced, stable, and there are no eye findings, you may not require surgery and will be under observation
- Displaced/mobile fractures: open reduction internal fixation (ORIF) procedure is needed using plates and screws to stabilize the fracture
- Fractures involving orbital floor: reconstruction to prevent sinking of the eye (see orbital floor handout)

Additional management:

- You will be kept upright (at least 30°) after surgery to decrease pain and swelling
- Rinse mouth regularly with chlorhexidine/listerine, a child's toothbrush can be used to clean outside of teeth
- Sinus precautions will continue for 6 weeks including:
  - No nose blowing
  - Sneeze with your mouth open only and don't pinch nostrils
  - Do not use a straw, continue to drink directly from a cup

Medications

Pain control: acetaminophen, NSAIDs, and/or opioids as prescribed
Antibiotics: may be prescribed if fracture involves teeth, gums, mucosa
Sore throat/nasal congestion: over the counter nasal decongestant (e.g., Benadryl)

Diet

- Soft, high-calorie diet for 6-8 weeks
- No chewing

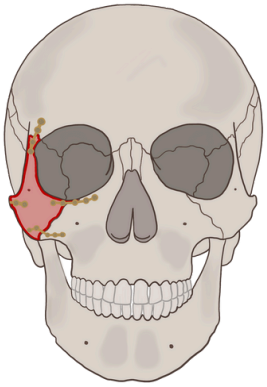
If you have sustained other fractures at the same time, consult the corresponding handout for any diet restrictions.

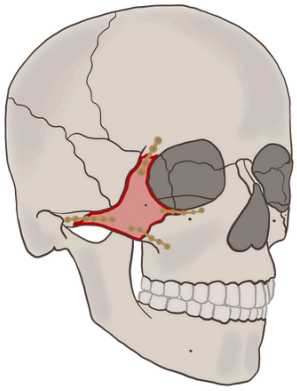
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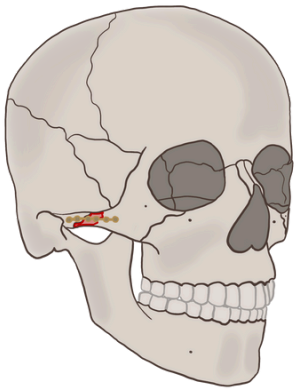
ZYGOMATIC COMPLEX FRACTURE

POST-OPERATIVE CARE





ZYGOMATIC COMPLEX



ZYGOMATIC ARCH

(FOR COMPARISON)

Activity

- Physical activity should be kept to a minimum for at least 6-8 weeks after surgery
- Contact or other sports should be avoided for 3 months to minimize the risk of another fracture
- Avoid dental work (dental cleaning is fine) around the fracture sites for 3 months
- An airplane/neck pillow is recommended when sleeping to keep the head straight
- Flying after orbital fracture repair in commercial flights is safe
- Be cautious around young kids and dogs

Wound Care

- For the first 48 hours after surgery, use ice packs to help minimize swelling
- Sutures inside the mouth will dissolve in 3-4 weeks
- Surgical tape that is applied to the eyelid incision should be left alone until removed by the surgeon
- You may start showering after your surgery unless if instructed by your surgeon to do otherwise
- If incision was done in hair (bicoronal), you can wash your hair immediately after surgery and apply polysporin

Seek care if you experience:

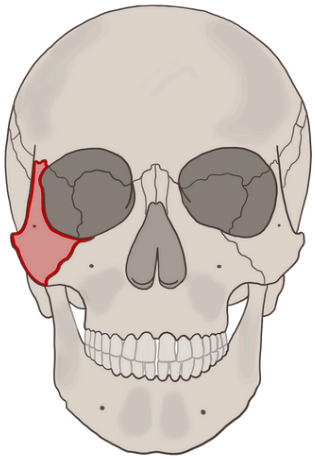
- Fever over 38°C, new redness, swelling pus, or foul odour discharge
- Acute change in vision, double vision, or vision loss
- Inability to move eye
- Acute onset pain around eye with bulging (retrobulbar hematoma)

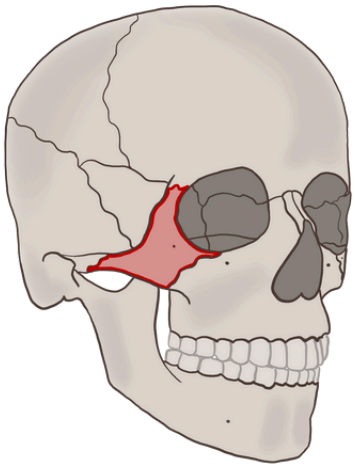
Please contact your surgeon or present to nearest emergency department.

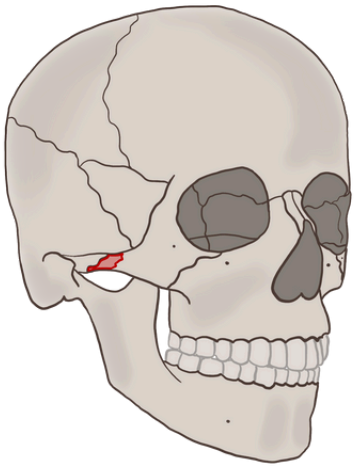
ONTARIO ASSOCIATION OF CRANIOFACIAL TRAUMA SURGEONS

(OACTS)

ZYGOMATIC ARCH FRACTURE







ZYGOMATIC COMPLEX
(FOR COMPARISON)

ISOLATED ARCH

What is it?
Fracture of the zygomatic arch which is thin piece of bone which bridges the body of the zygoma (cheekbone) and temporal bone (side of head)

How does it happen?
A low or high impact force (e.g., assault, vehicle collision, sports, fall, trauma)

Signs of a zygoma fracture:
- Flattening of the cheekbone
- Palpable bony deformity
- Swelling around eye and cheek (may hide bony deformities)
- Decreased mouth opening (oral trismus)

How is it diagnosed?
CT of facial bones

Indications for Surgery:
1. Persistent inability to open the mouth or decreased mouth opening
2. To correct a cosmetic deformity like an asymmetry of the face (cheekbone flattening)

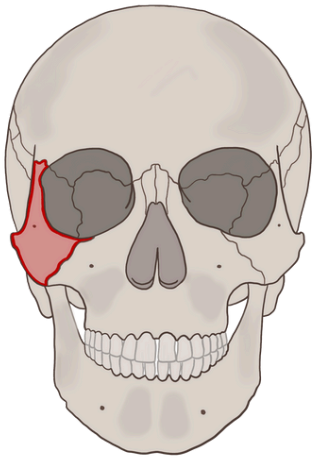
Risks of surgery
- Risks of general anesthetic
- Infection
- Bleeding (from nose)
- Scarring
- Facial asymmetry, poor cosmetic result
- Hardware failure, exposure, or infection
- Trismus

*Smoking and alcohol use are associated with a higher rate of complications.

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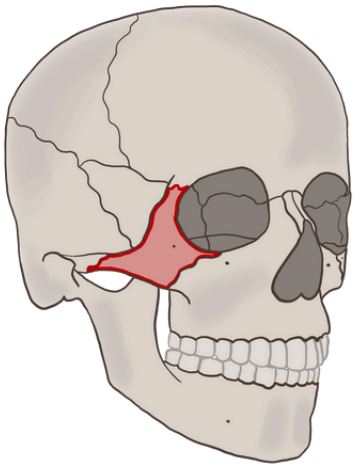
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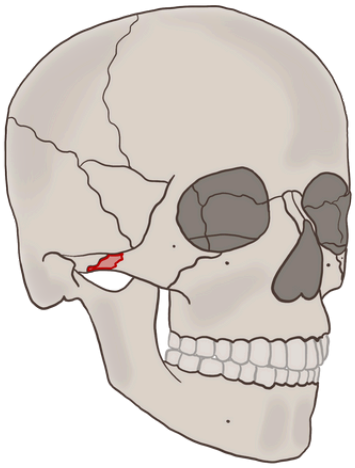
ZYGOMATIC ARCH FRACTURE



ZYGOMATIC COMPLEX

(FOR COMPARISON)





ISOLATED ARCH

Surgical Incisions to Expect

Every fracture and incision is different, surgical type and exposure will depend on each unique patient fracture.

Please speak to your surgeon to gain a better understanding of what to expect.

Typical incisions:

- hidden in mouth
- hidden in the hairline

If your injury involved a cut on your face, it may be used to surgically expose the fracture. If you have sustained other fractures at the same time, incisions may differ.

Tips Before Surgery

Surgery does not necessarily need to be done immediately, and can be done once swelling has decreased.

Before surgery:

- Try and maintain good oral hygiene (even if it's painful) to avoid infection
- Keep the head of your bed elevated at 30°: this will help reduce swelling

This fracture type does not require sinus precautions, however, if you have other fractures, please consult the appropriate handout to learn if you need to be on sinus precautions and what that entails.

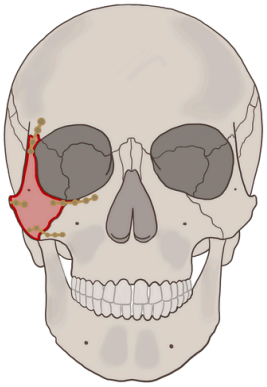
Present to the emergency room if you experience uncontrollable pain, or bleeding (most likely from the nose).

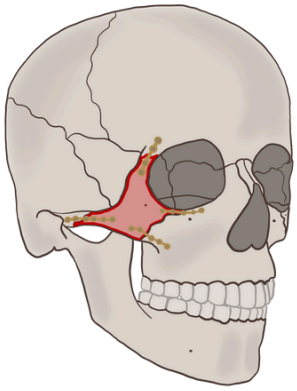
ONTARIO ASSOCIATION OF CRANIOFACIAL TRAUMA SURGEONS

(OACTS)

ZYGOMATIC ARCH FRACTURE

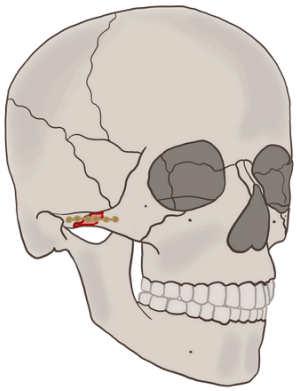
POST-OPERATIVE CARE





ZYGOMATIC COMPLEX

(FOR COMPARISON)



ZYGOMATIC ARCH

Treatment

Surgical Management

- Non-displaced fractures: if fracture is non-displaced or minimally displaced, and stable, you likely will not require surgery and will be under observation
- Displaced/depressed fractures: open reduction internal fixation (ORIF) procedure is needed using plates and screws to stabilize the fracture
  - This can be done through a very small incision in the hairline or the mouth

Additional management:

- You will be kept upright (at least 30°) after surgery to decrease pain and swelling
- Rinse mouth regularly with chlorhexidine/listerine, a child's toothbrush can be used to clean outside of teeth
- You will require physiotherapy to work on mouth opening exercises to regain normal mouth opening

Medications

Pain control: acetaminophen, NSAIDs, and/or opioids as prescribed

Antibiotics: may be prescribed if fracture involves teeth, gums, mucosa

Diet

- Soft, high-calorie, diet for 6-8 weeks
- No chewing

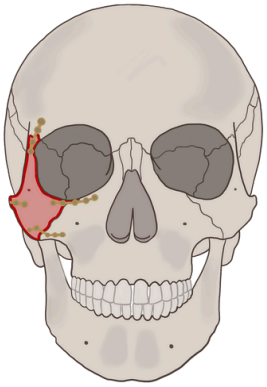
If you have sustained other fractures at the same time as your zygomatic arch fracture, you should consult the corresponding handout for any diet restrictions.

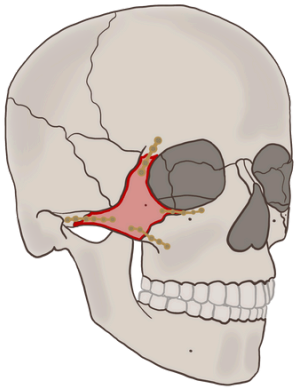
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ZYGOMATIC ARCH FRACTURE

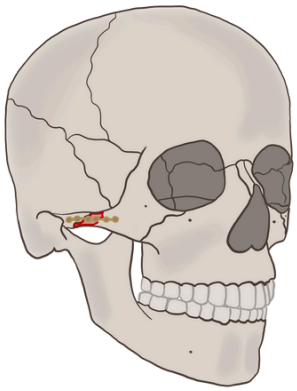
POST-OPERATIVE CARE





ZYGOMATIC COMPLEX

(FOR COMPARISON)



ZYGOMATIC ARCH

Activity

- Physical activity should be kept to a minimum for at least 6-8 weeks after surgery
- Contact or other sports should be avoided for 3 months to minimize the risk of another fracture
- Avoid dental work (dental cleaning is fine) around the fracture sites for 3 months
- An airplane/neck pillow is recommended when sleeping to keep the head straight
- Be cautious around young kids and dogs

Wound Care

- For the first 48 hours after surgery, use ice packs to help minimize swelling
- Sutures inside the mouth will dissolve in 3-4 weeks
- Sutures/staples in hairline will either dissolve or need to be removed at a follow-up appointment
- You may start showering after your surgery unless if instructed by your surgeon to do otherwise
- If incision was done in hair (coronal), you can wash your hair immediately after surgery and apply polysporin

Seek care if you experience:

- Fever over 38°C
- New redness
- Swelling pus
- Foul odour discharge

Please contact your surgeon or present to nearest emergency department.