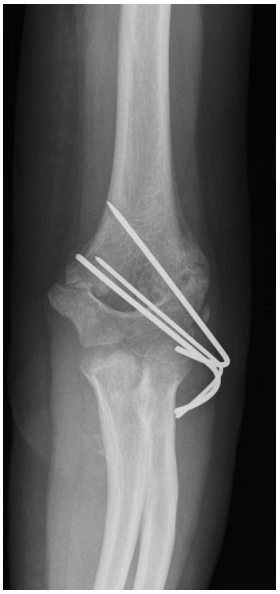
Nationwide Children's
When your child needs a hospital, everything matters.

Helping Hand™ Health Education for Patients and Families

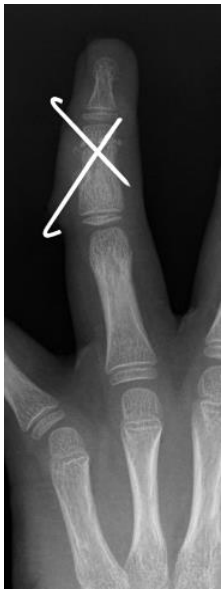
Percutaneous Pinning

Percutaneous in medicine means that something is pushed through the skin instead of cutting the skin open like in other surgeries. With percutaneous pinning, an orthopedic surgeon (bone doctor) pushes a metal pin or wire through the skin and into the bone. One end of the pin sticks out of the skin while the other stays in the bone (Pictures 1 and 2).

- This technique holds a broken bone (fracture) together and keeps it still until it heals.
- The number of pins needed depends on how bad the fracture is and where it is located.
- The surgeon will put the pins in in an operating room at either a surgery center or hospital. Your child will be asleep.
- The doctor may make a small incision (cut) into the skin to put the pins in.
- The pins are taken out in the doctor's office by a nurse practitioner or physician assistant. Your child will not need to go back into an operating room.



Picture 1 Pins brace broken bones in an elbow (humerus fracture).



Picture 2 Pins brace broken bones of the middle finger on a hand (phalanx fracture).

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Before Surgery

- To prepare for surgery, **your child cannot have any food or liquids after midnight the night before.** This includes mints, candy, or gum.
- If they need to take prescription medicines, ask the doctor if they can take them in the morning with a few sips of water.
- You will get a call the day or evening before surgery to tell you where to go and at what time. You need to come on time.
- Some patients are admitted to the hospital the night before surgery.

Right After Surgery

- Your child will go to a recovery room for a few hours after surgery. You can visit them when they wake up.
- Your child will likely have a splint, cast, or bandage on the limb. It will cover the pins.
- Their limb may be raised up (elevated) on a pillow or blanket with an ice pack over the surgical site.
- Your child will likely go home the same day.
- For arm casts or splints, your child will get a special type of sling called a collar and cuff (Picture 3, page 3).

First Few Days After Surgery

- Do circulation checks to check blood flow, a few times a day on the limb that has pins.
  - Press on a fingernail or toenail until it turns white. After you take your finger off the nail, its color should turn back to pink within 3 to 4 seconds.
  - Check to see if the skin looks a little blue or dark pink.
  - Ask your child if they have tingling, numbness, or no feeling in their finger or toes.
  - Check for swelling. If there is swelling, prop the limb up on a pillow. The swelling should get better.
- Have your child keep their limb raised above the level of their heart as much as possible. For example, the hand should be higher than their elbow. The foot higher than their hip.
- Ask your child to wiggle the fingers, toes, arms, and legs that don't have pins in them. This will help keep the blood moving (circulation).

- Ice the injured area. Put an ice bag over the splint or cast 1 to 2 times a day, for 20 minutes each time, for 1 to 2 days. Make sure the ice bag does not leak.
- If your child has a cast or splint on their arm, they should always wear a collar and cuff when out of bed. It will keep their arm slightly elevated and still (Picture 3).

Cast, Splint, and Bandage Care

- The splint, cast, or bandage must not get wet. This will help prevent skin problems or infection at the pin sites. Your doctor or health care provider will give you information on cast care if you need.
- If the cast or sling gets a little wet, use a blow dryer on **cool** setting for 5 to 10 minutes. Repeat as needed.
- Do not take off the splints or bandages at any time until you are told to do so.

Picture 3 When your child is up, they should wear a collar and cuff sling to keep their arm raised and still.

Pain

- Your child can take ibuprofen (Motrin®, Advil®) or acetaminophen (Tylenol®). Read the label to know the right amount (dose) for the age of your child.
- Do not give children aspirin or medicines for adults.

Activity

- Your child will need help getting dressed to prevent the fractured limb from moving any more than needed. Use the same guidelines for a fractured arm and a fractured leg.
  - Start with the injured limb first when putting on clothing.
  - Start with the uninjured limb first when taking off clothing.
- Your child will be able to return to school soon after surgery. For arm casts or splints, they need to always wear their collar and cuff (Picture 3).
- They will not be able to do physical activities or sports until the doctor says it is okay. This means no activities that could put them at risk of bumping into someone or falling.

Follow-up

- Your child will come to the clinic about 1 week after surgery. Most of the time, the health care provider will:
  - Examine the splint, cast, or bandage.
  - Take X-rays to make sure the pins are still in the right place.
  - Check the progress of healing.
- Your child will come back in 2 to 4 weeks. A health care provider will:
  - Take X-rays to examine the fracture.
  - Remove the pins if the fracture is healed enough.
  - Put on a splint or cast over the pins for another 1 to 2 weeks if there is not enough healing.
- Some children may have 1 more visit after the pins are taken out. This is to check how well the joint moves.
- If you can't keep an appointment, please call the clinic to reschedule.

Pin Removal

- Your child can take ibuprofen (Motrin®, Advil®) or acetaminophen (Tylenol®) before coming to the clinic.
- A special tool is used to take out the pins. It may hurt a little. There may be a tiny bit of blood. The pain will go away after the pins have been removed.
- Once all pins are removed, the staff will put on a bandage or a large Band-Aid®. Some children may get a splint or another cast. The splint can be taken off for bathing.

After the Pins Are Removed

Wound care:

- Leave the bandage or band-aid on for 24 to 48 hours. After that time is over, take if off and clean the pin sites.
- Wash the pin sites only with soap and water. Gently dry the area.
- Cover with a large bandage or Band-Aid. Do not put anything on the pin sites. Do not use ointments, creams, or lotions.

Activity

- Your child should begin moving the joint as soon as possible.
- The doctor or health care provider may give your child a list of exercises to do. These will help the joint get strong and help with stiffness.
- If your child does the exercises regularly, it is rare that they will need physical therapy.
- You can give your child ibuprofen or acetaminophen for soreness, if needed.

When to Call the Doctor

Call your child's doctor or health care provider if you have any questions or if your child has:

- Redness, swelling, pus, or drainage at the pin sites.
- Numbness, tingling, or a change in skin color on the limb that has the pins. For example, if the tips of finger or toes look bluish.
- Problems moving their finger or toes.
- Swelling that does not get better after 1 to 2 hours with the limb raised up above the level of the heart.
- Pain that will not go away or gets worse.
- A wet cast or splint that you cannot get dry using a blow dryer.
- A fever or temperature:
  - Of 104° Fahrenheit (F) or 40° Celsius (C) or above.
  - Above 102°F (38.9°C) for more than 2 days or keeps coming back.
  - That has been treated to bring it down, but it has not worked.
- A fever and:
  - Looks very ill, is very fussy, or very drowsy.
  - Is not eating or drinking and shows signs of dehydration – dry or sticky mouth, sunken eyes, dark urine, or not peeing (urinating).
  - Has a stiff neck, bad headache, very sore throat, painful stomachache, throwing up (vomiting), or diarrhea.
  - Has an unusual rash.
  - Has been in a very hot place, like an overheated car.
  - Has immune system problems that make them more likely to get sick, such as sickle cell disease or cancer, or takes a medicine that weakens the immune system.