



**NATIONWIDE CHILDREN'S**  
*When your child needs a hospital, everything matters.*

## **Helping Hand™**

*Health Education for Patients and Families*

# **Cast and Splint Care**

Your child needs a cast or splint. They may get a splint before or after getting a cast. Casts and splints keep an injured area, like an arm or leg, from moving so that it can heal.

Movement can cause pain, delay healing, or make the injury worse.

Your child's cast may be waterproof. The outside of most casts are made of waterproof Fiberglass®, but the inside liner must also be made of a waterproof fabric for the cast to be waterproof. Your child's doctor or health care provider will tell you which cast they have.

- Waterproof liners:
  - Are breathable. They move moisture away from the skin by letting water pass through and drain out. Air can go into the cast to dry the skin.
  - Tear easily without proper care.
- Non-waterproof liners:
  - May be used if your child is allergic to the waterproof liner.
  - Soak up water and do not dry out quickly.

## **After Getting a Cast**

- Right after getting a cast:
  - It will feel warm and damp. It will take a few hours for it to harden and become cool.
  - The toes and fingers on the injured limb may be a little blue or pale. Their color should go back to normal within 10 to 15 minutes.
- For the first few days, the fingers or toes on the injured limb may be swollen. To help the swelling go down:
  - Put cold packs directly over the injury and on top of the cast or splint for 24 to 48 hours. You can use one-time-use or reusable ice packs, a sealed plastic bag filled with ice, or a bag of frozen vegetables. Change the pack when it starts to melt or when it's no longer cool.

- For a non-waterproof cast or splint, protect it from getting wet by placing a cloth between the cast and the cold pack or putting the icepack in a plastic bag.
- Keep the hurt arm or leg raised above the level of the heart as much as possible.
  - Fingers must be higher than your child's elbow.
  - Toes should be higher than the level of their nose.
- **Do not put anything over the cast or splint until it is completely dry.**
- Do not let anyone sign the cast until it has been on for 24 hours.
  - The cast may be signed with a marker or ink pen.
  - Do **not** use paint, oil-based materials, duct tape, or stickers on the cast. These things will clog the pores of the cast and keep air from getting to the skin.
- Do not let your child walk on the cast or splint unless they are told they can. Putting weight on the cast could damage it or harm the skin inside.
- It's normal for your child to have some pain and discomfort at first. The doctor or health care provider may give you a prescription for pain medicine or suggest an over-the-counter (OTC) medicine, like ibuprofen (Motrin<sup>®</sup>, Advil<sup>®</sup>) or acetaminophen (Tylenol<sup>®</sup>).
  - Read the label on the bottle to know the right dose for the age of your child. Do not give more than the recommended amount.
  - **Do not give aspirin to children.**
  - Never give a child pain medicine that's made for adults.

## Circulation Checks

It's important to check for problems with blood flow (circulation) in the injured limb. Do circulation checks on the fingers or toes of the injured limb every day. Any of the following changes may mean that there's a problem or that the cast is too tight.

The fingers or toes should have no swelling or changes in:

- Skin color
  - Press on a nail bed until it turns white. The color should return to normal within 3 to 4 seconds after you take your finger off the nail.
  - The fingers and toes should not be pale or bluish.
- Temperature – The fingers and toes should feel warm.
- Sensation – There should be no tingling, numbness, or feeling like the limb is asleep.
- Movement – The fingers or toes should move freely.

## Skin Care

- Check the skin around all edges of the cast each day for red, dry, swollen, cracked, blistered, or bleeding areas.
- For rough edges on a cast:
  - Use an emery board, nail file, or sandpaper to smooth rough spots on the edges of a **waterproof** cast.
  - Wrap silk or moleskin tape on the inside and outside edges of a **non-waterproof** cast. This is called petaling the cast. The doctor or health care provider will show you how to do this.
- Do not use lotions, oils, or powders on the skin near or inside the cast. Powders can form balls that could fall into the cast and cause skin problems. Lotions will make the skin too soft and more prone to break down.
- Check for signs of an infected sore or wound.
  - Pain
  - Fingers or toes change color
  - Fever
  - Strong, bad smell from cast

## Pressure Sores or Ulcers

When an elbow or heel presses against the inside of the cast for a long time, it can stop blood flow to that spot. The skin at that spot can get a sore or ulcer (pressure sore).

- Watch for signs of a pressure sore starting:
  - Children who can't tell you what is happening, may just cry a lot.
  - Other children may complain of pain getting worse, pain in a new spot under the cast or splint, or numbness, tingling, burning, or stinging in a new place.
- To prevent pressure sores:
  - Have your child change positions every 2 to 3 hours when lying down or sitting.
  - Place or put pillows, towels, or blankets under or beside the cast to hold it in position.
  - With leg casts, let heels and toes hang in the air. Do not let them rub against anything.

## Itching

If your child complains of itching:

- Thump or knock gently on the cast.
- Blow air into the opening of the cast. Use a hair dryer on a cool setting.

- Do not massage the skin. It can damage the skin.
- **Do not stick anything inside the cast or splint.** This may injure the skin and lead to infection. It could also wrinkle or tear the lining of the cast.
- Do not pull out or tear the lining of the cast. Do not add more padding.

## Bathing and Cast Care

- Your child's doctor or health care provider will tell you if they can:
  - ☐ Take a bath                      ☐ Take a shower                      ☐ Have sponge bathes only
  - ☐ The **splint** can be taken off. Their skin must be completely dry before the splint is put back on.
- Bathing with a waterproof cast is different than bathing with a non-waterproof one.

Waterproof cast	Non-waterproof cast
<ul style="list-style-type: none"> <li>– The cast can get wet. Your child can take a bath or shower without covering the cast.</li> <li>– Avoid bathing in really soapy water. Flush well with clean water to make sure the soap is all rinsed off. Soap left on the body can cause itching.</li> <li>– After bathing, try to hold your child's casted limb upright. This helps to let the water drain out and not pool in any one place.</li> <li>– Body heat will dry any water left inside the cast. You can also use a hair dryer on the cool setting. It may take several minutes for the skin to dry.</li> <li>– Keep the cast uncovered to speed drying.</li> </ul>	<ul style="list-style-type: none"> <li>– The cast must not get wet. You must cover and seal it with a plastic bag when bathing or showering.</li> <li>– It might be easier to give sponge baths until the cast is taken off.</li> <li>– Only use water on a damp washcloth to clean the outside of the cast.</li> <li>– If you must use soap, use as little as possible and wipe completely off, or use waterless soap.</li> <li>– If the cast gets wet, use a hair dryer on the cool setting for 5 to 10 minutes. Repeat as needed.</li> <li>– If the cast gets too wet and will not dry, call the orthopedic office. Your child may need to have a new one put on.</li> </ul>

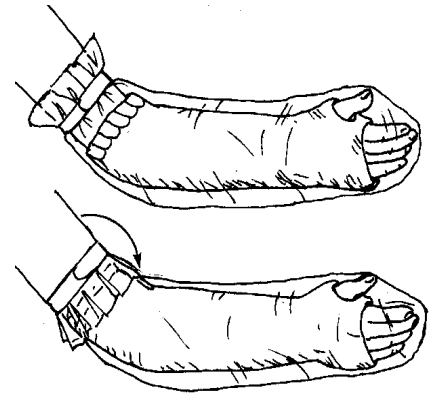
## Bathing with a Non-Waterproof Cast

To prevent a cast from getting wet:

1. Cover it with a plastic bag and seal it.
2. Make sure the plastic bag or trash bag has no holes. Gather the open end above the cast. Tape it snugly all the way around the arm or leg (Picture 1).

**Do not use rubber bands.**

3. Fold the plastic bag down over the tape.
4. Tape the folded edge of the bag to the skin, all the way around your child's arm or leg. Try to tape the bag in a different place each time to prevent skin irritation.
5. Keep the cast out of the water as much as possible. Do not let your child put the cast into water or a stream of water.
6. Take the bag off as soon as the bath or shower is over. Check to be sure that the cast did not get wet.



**Picture 1** Use a plastic bag and tape to protect the cast from getting wet.

If your child has a splint that they can't take off, follow steps above.

## Dressing

- When getting dressed, put the injured arm or leg into the clothing first.
- When undressing, take off clothes from the uninjured arm or leg first.

## Odor

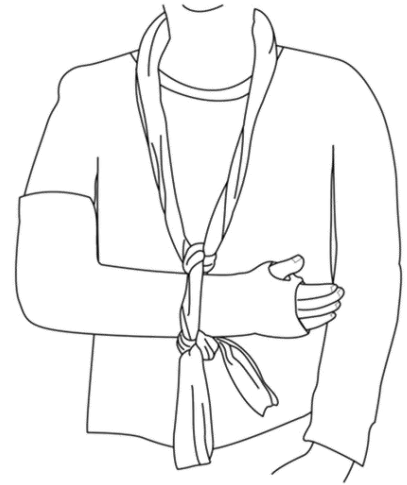
- Waterproof casts usually do not smell.
- Non-waterproof casts can start to smell after being on for a long time. This is normal.  
**A new cast will not be put on just because it is dirty or smells bad.**
- To help treat odor, you can try the following on the **outside** of the cast:
  - Use a baby wipe or slightly damp washcloth to wipe off the outside of the cast.
  - Spray a small amount of Febreze® on it or rub the outside with a scented dryer sheet.
- If the cast smells very foul or you see drainage oozing out of it, call the orthopedic office.

## Activity

- Ask your child's doctor or health care provider what activities are safe for them to do. They should avoid running, active games, and rough play.
- With a waterproof cast, your child may swim in pools. They must rinse the inside of the cast with clean, fresh, water after swimming. No swimming in oceans, lakes, or ponds.
- If your child has a splint, they shouldn't take it off unless their doctor or health care provider says it is okay. They should also know how to put it back on.

Your child may need to:

- Use crutches or a walker. Make sure they know how to safely use them.
- Wear a collar and cuff sling, depending on what kind of arm cast or splint they have. They should wear it at all times when they are up and out of bed (Picture 2).
- Find help carrying books or bags at school and going up and down stairs. They should avoid crowds where they could bump into someone or fall.



**Picture 2** If your child has a collar and cuff sling, they should wear it at all times when up and out of bed.

## When to Call the Doctor or Orthopedic Clinic:

Call your child's doctor, health care provider, or orthopedic clinic if they have:

- Pain or burning under the cast or if their pain gets worse.
- Drainage oozing from the cast or the cast has a bad smell.
- Skin irritation, blisters, or open sores at the edges of their cast.
- Signs of circulation problems – swelling, tingling, numbness, or changes in the color of their skin, fingernails, or toenails.
- Too much itching and need advice.
- Something stuck in their cast, such as a toy.
- Cracks or breaks in the cast, it will not dry, or the cast gets too loose or too tight.
- Problems putting a splint back on.

- A fever:

Age	Temperature or Fever
Younger than 3 months old	– Above 100.4° Fahrenheit (F) or 38° Celsius (C)
Older than 3 months old	<ul style="list-style-type: none"> <li>– 104° F (40° C) or above</li> <li>– Above 102° F (38.9° C) for more than 2 days or keeps coming back</li> <li>– Treated to bring their fever down, but it hasn't worked</li> </ul>

## Getting your Cast or Splint Off

- A special saw is used to cut off a cast (Picture 3).
  - The blade will not touch your child's skin.
  - The saw blade vibrates back and forth. It does not spin around like other saws.
  - It makes a loud noise like a vacuum cleaner, which can make some children anxious. It might help to bring headphones for your child to use or something to distract them, like a special toy or a stuffy.
  - Your child will feel the vibration, and maybe some heat from the blade, but no pain.



**Picture 3** A special saw is used to cut off the cast. It vibrates but does not hurt or touch the skin.

- After a cast is taken off, the following things are normal to see. They will go away once your child gets stronger, walks or uses the arm, and returns to their regular activities.

Your child may:

- Feel stiffness, soreness, pain, or have a little swelling in the limb.
- Not be able to straighten or bend the limb all the way.
- Limp or walk funny. For a few weeks, the foot may turn in or out while walking.
- Be afraid to use the broken limb, such as putting weight on the leg or picking up things with the arm.
- See that the limb is smaller and weaker than the other limb, since the muscles have not been used.

- Have darker, thicker, and longer hair on the limb for a few weeks.
- See changes in the skin. The skin may be lighter or darker, have yellow, dry, flaky patches, and be sensitive and tender to touch.

## Care After the Cast is Off

- Wash the skin gently. It may take a few days for the skin to go back to normal.
  - **Do not rub, scrub, scratch, pick, or peel the skin.** It can make it more sore, red, and irritated.
  - Soak the arm or leg in warm water. Use mild soap and a soft cloth. Pat the skin dry and leave it open to the air.
  - If needed, apply a scent-free lotion to soften the skin. It may also help with itching.
- For open wounds that were under the cast, your doctor or health provider will give you wound care instructions. If there are scabs on the wound, do not pick them off.
- Sometimes, your child will get special exercises to help improve the strength and movement of the limb.
  - Start with slow, gentle movements followed by periods of rest. Don't overdo it!
  - Getting back to normal walking, running, or using the limb may take several weeks. In general, it may take the same amount of time that your limb was in a cast. Every person is different.
  - Physical therapy is not always needed. Your health care provider will let you know if your child needs it.
- To relieve joint stiffness, try warm, soaking baths.
- Ask your child's doctor or health care provider about giving OTC pain medicine.

## When to Call the Doctor After the Cast is Off

Call your child's doctor or health care provider if they have:

- Pain or swelling that does not go away or gets worse.
- Problems moving the limb after a few weeks.
- Skin problems that do not improve.