



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

Helping Hand™

Health Education for Patients and Families

Cast: Hip Spica

Your child has a hip spica (SPY-ka) cast. This was called a body cast in the past. A hip spica cast keeps your child's hips (pelvis) and one or both legs in the right position to heal. They will not be able to move their thighs or bend at the hips.

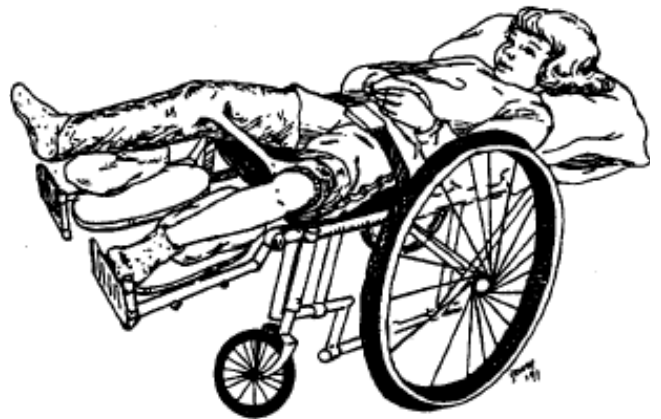
A child gets a hip cast when they break a bone in the thigh or have hip surgery. It can only be put on in an operating room. Your child will need to be put to sleep (sedated).

Caring for a child with a spica cast can be challenging for them and the whole family, especially if your child is used to doing most things for themselves. They will now need help with meals, bathing, going to the bathroom, and other activities. Someone will have to turn and position them regularly. They can't be left alone at home because of the danger of falls and injury.

Items needed for home care

To go home, your child may need:

- ☐ Pillows, blankets, and towels – to prop or keep them in a specific position and for comfort.
- ☐ Diapers – 2 diapers for children that are not toilet trained or who don't have good bowel or bladder control.
- ☐ Wagon or stroller (for babies or toddlers).
- ☐ A wheelchair (for older children). The hospital or the orthopedic clinic can help you get a reclining wheelchair that is the right size for your child (Picture 1). You will need a prescription to get it.
- ☐ Bean bag chair – optional, but not recommended for infants or toddlers.



Picture 1 Older children may use a reclining wheelchair with leg lifts. Arm rests and sides have been removed.

Types of hip casts

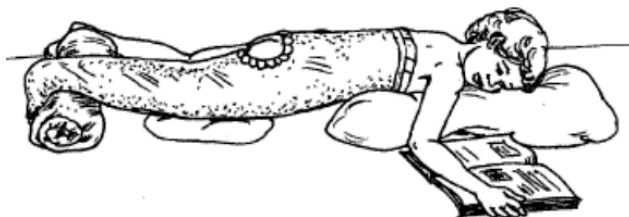
Casts are either waterproof or not. The health care provider will tell you which one your child has.

- The outer layers of most casts are made of waterproof Fiberglass®. Although fiberglass is waterproof, it doesn't mean that the cast can get wet.
- For a cast to be totally waterproof, the liner next to the skin needs to be made of a special material, either:
 - Delta-Dry® – a sponge-like material with holes, or
 - Gore-Tex® – a type of plastic with flat, little bubble wrap squares
- Waterproof liners are breathable. They move moisture away from the skin by letting water pass through them and drain out. Air can go into the cast to dry the skin. These liners:
 - keep the skin drier and cause less skin problems.
 - allow for better hygiene and less odor.
 - tear easily without proper care.
 - make cast care easier.
- Sometimes casts are made with plaster instead of fiberglass or have a cotton liner instead of a waterproof one. Plaster and cotton can soak up water, not dry out, which can cause skin problems.

Turning and positioning

- **You will need to turn your child every 2 to 3 hours from side to side and front to back when they are awake, during the day, and at night.** Regular turning and positioning are very important to help:
 - prevent bedsores
 - reduce swelling
 - increase comfort
 - keep up strength
 - prevent lung infections like pneumonia
- Place, or wedge, soft items against your child's body. Use pillows, towels, or blankets. They help:
 - hold a position.
 - prevent rolling or falling.
 - prevent harming the skin when a limb rests or rubs against a surface.
 - keep pressure off a body part and prevent bedsores from forming.

- While your child is on their stomach or back, make sure their toes hang in the air and do not rest or rub against anything (Picture 2). Prop their head, chest, and legs as needed.
- A young child can lie on a person's lap if they can be held safely.
- An older child can sit in a bean bag chair if they have good head control. Beanbag chairs are not safe for babies or toddlers.



Picture 2 Make sure your child's toes hang freely and do not rub against anything.

Lifting

- If your child needs to be moved to another place, when lifting them:
 - Always start by having them lie on their back.
 - Do not lift them by gripping or pulling under their arms. This could injure their muscles.
 - Never lift them by grabbing the crossbar between their legs if one is present.
 - Try to hold them with the injured leg or hip against your body.
 - If possible, hold onto a leg that does not have a cast and swings free.
 - Always bend your knees when lifting and putting them down.
 - Hold them close to your body to prevent hurting yourself.
- It is safest for 2 people to lift a child.
 - The first person holds the head and shoulders. The second person holds the child under the buttocks (bottom) and thighs.
 - Count to 3 and lift.
- When only one person is available to lift the child, wrap one arm beneath their shoulders and the other under the buttocks.



Picture 3 Keep the child's head and chest higher than their feet when toileting.

Toileting and diapering

- Try to keep your child's head and chest higher than their feet when they pee or poop (Picture 3). This helps urine and poop flow down and out of the cast. To do this:
 - Prop the head and body up with a pillow or blanket.
 - For infants in a crib, put a pillow or blanket under the head of the crib mattress.

- For children in diapers:
 - change their diaper as soon as it gets wet. Moisture makes the skin red and sore and can lead to skin breakdown.
 - Use diaper wipes to clean the diaper area. Put on a new diaper after the skin dries.
 - **Double diaper your child.** Use a smaller diaper or maxi-pad first. Tuck it inside the front and back of the cast. Smooth out the wrinkles. Put a larger diaper over it to cover and keep the first diaper in place (Picture 4).
 - Check diapers every 1 to 2 hours and at least once a night.
- For children who do not use diapers:
 - Turn them onto the side opposite their injury.
 - Place the bedpan under them. You may want to put a plastic sheet or diaper under the bedpan to keep the sheets from getting wet.
- Some children can sit on the toilet. This depends on how far the cast comes down the thigh and the angle of the cast at the hips. To use the toilet:
 - Your child should stand, turn, and sit using the leg that was not operated on.
 - They should not put weight on the leg that had the surgery.
 - Do not leave your child alone.
 - If they need help getting up, bend your knees, wrap your arms around them, and then lift. Do not pull on their arms.



Picture 4 A small diaper is tucked into the cast. Put a larger diaper over it to keep it in place.

Diarrhea

- If your child gets diarrhea, stop giving them fruit juices for a few days.
- If the buttocks look red or sore:
 - Turn your child on their stomach. Let their skin air dry as long as possible.
 - Clean your child's skin gently after each diaper change. Use warm water and a soft cloth or baby wipes. The wipes should not have fragrance, alcohol, or propylene. Gently wash the skin with mild soap and water only if the poop does not come off easily. Avoid scrubbing or rubbing.
 - Apply a thick layer of over-the-counter skin barrier or zinc oxide cream each time the diaper is changed. Only put it on skin that is not covered by the cast. Popular ones are petroleum jelly (Vaseline®) or cream with zinc oxide like Desitin®, Triple Paste®, A+D®, or Balmex®. These creams do not have to be completely washed off with each diaper change.

- If the cast gets dirty, wipe the urine, or poop, off right away with a damp washcloth or baby wipe. For a waterproof cast, you can flush the cast with lots of water or give your child a bath.

Bathing

- Personal hygiene is very important. Casts tend to hold heat and can make your child sweat. Wash the skin around the cast every day. Avoid rubbing the skin hard.
- To wash your child's hair, lay them across the bed or on a flat surface with their head hanging over. Place a bucket under them so that the rinse water drops into it. You can also use no-rinse, waterless shampoos instead.
- Bathing your child with a waterproof cast is different than how to bathe with a non-waterproof cast:

Waterproof cast	Non-waterproof cast
<ul style="list-style-type: none"> – The cast can get wet. – A Gore-Tex cast needs to get wet once a day. With a Delta-Dry cast, bathe your child at least 2 to 3 times a week. – 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. – After bathing, try to hold your child upright. Change their position every 10 minutes. This helps to let the water drain out and not pool in any one place. – Body heat will dry any water left inside the cast. You can also use a blow dryer on the cold setting. It may take 90 minutes for the skin to dry. – Keep the cast uncovered to speed drying. 	<ul style="list-style-type: none"> – The cast must not get wet. – Only give sponge baths until the cast is taken off. – Only use water on a damp washcloth. – If you must use soap, use as little as possible and wipe completely off. – If the cast gets wet, use a blow dryer on the cold setting for 5 to 10 minutes. Repeat as needed. – If the cast gets too wet and will not dry, call the orthopedic office. Your child may need to go back to the operating room to have a new one put on.

Odor

- Waterproof casts usually do not smell.
- Non-waterproof casts can start to smell after being on 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, try the following. Only do these 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.

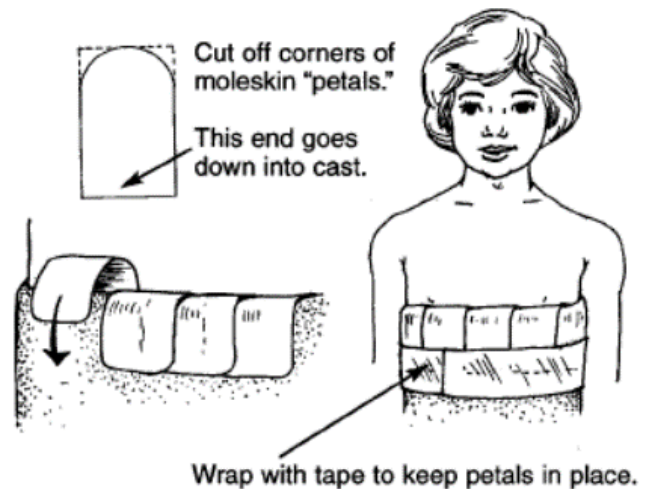
Skin care

- Check your child's skin 2 times a day for redness, swelling, or sores:
 - at all edges of the cast.
 - anywhere their skin touches a surface for a long period of time – toes, heels, and elbows.
- Red areas (other than the diaper area) may mean that you need to change your child's position more often. Call the orthopedic office if the areas stay red or pink for longer than 60 minutes after changing your child's position.
- Do circulation checks several times a day to see if the cast is too tight. If your child shows signs of problems, call the orthopedic office.
 - Press on a toenail until it turns white. The color should return to normal within 3 to 4 seconds after you take your finger off the nail.
 - Check to see if the skin on the toes looks bluish or dark pink.
 - Ask your child if they have tingling, numbness, or no feeling in their toes.
 - Check for swelling. If there is swelling, prop their leg up on a pillow. The swelling may not go away completely.
- **Do not massage the skin.** Massaging could damage the skin.
- Do not use lotions, oils, or powders on the skin near the opening or inside of the cast. Powders can form balls that fall into the cast and cause a pressure sore. Lotions will make the skin too soft and more prone to breakdown.

Petaling a non-waterproof cast

- Petaling is when you wrap tape inside and outside of a cast over the rough edges of a non-waterproof cast. Petaling protects the skin from irritation. There are 3 types of tape used to form 3 layers:
 - silk tape – sticks to the cast best. It gives a better surface for the moleskin and waterproof tape to stick to. It goes on the outside edge of the cast before the cast is petaled and is used again to secure the petals.
 - moleskin – a fuzzy, soft fabric
 - waterproof tape – used only in the groin area

- **Do not petal waterproof casts. The tape can tear the liner.**
- The orthopedist will petal a cast in the operating room. At home, you may need to replace moleskin petals, waterproof tape petals, and silk tape if they are soiled or falling off.
 - You will be sent home with supplies. The moleskin may be pre-cut for your child.
 - Do not take off the petals unless they are soiled or falling off.
- To replace moleskin petals on a cast:
 1. Gently remove the soiled and loose petals. Be extra careful to not rip the liner.
 2. Do not take off the silk tape under the moleskin unless it is loose.
 3. Cut strips of moleskin to the length needed. They should only be long enough to cover the edge of the cast and not peel off. You will wrap $\frac{1}{2}$ of each piece on the inside and the other half on the outside of the cast. If the moleskin is too long, it will be harder to remove.
 - Bigger casts may need moleskin cut to 4 to 6 inches long and 2 to 4 inches wide.
 - Infant casts may only need moleskin cut to 2 to 3 inches long and 1 to 2 inches wide.
 4. Cut off the edges of one side of the moleskin to round the corners (Picture 5).
 5. If needed, put a new strip of silk tape on the outside of the cast, next to the edge.
 6. Remove the plastic backing from the moleskin. Tuck the square end inside the cast with the soft side next to the skin. Use your fingers to gently push the moleskin under the cast. Make sure it is not wrinkled before pressing the sticky side to the cast. Wrinkles next to the skin can cause sores.
 7. Wrap the rounded end over the outside of the cast. Press it into place.
 8. Continue to overlap the moleskin petals until you have covered the area that needs repair (Picture 5).
 9. Use long pieces of silk tape on the outside of the cast to cover the edges of the moleskin (Picture 5). This helps prevent the edges from curling and keeps them in place.



Picture 5 Petal the cast with moleskin and secure the petals with silk tape.

- To replace waterproof tape in the groin area:
 1. Only use waterproof and silk tapes. Do not use moleskin.
 2. Gently remove the soiled and loose petals. Be extra careful to not rip the liner.
 3. Do not take off the silk tape that is under the waterproof tape unless it is loose.
 4. Cut the length of waterproof tape that you need. For infant casts, you may have to cut the width in half.
 5. If needed, line the outside of the cast with new silk tape. Do not cut the width of this tape in half.
 6. Gently fold about $\frac{1}{2}$ inch of waterproof tape on the inside of the cast. Use just enough to cover the edge, be secure, and not peel off. Make sure there are no wrinkles before pressing the sticky side to the cast.
 7. Overlap the strips of waterproof tape along the edges that need it.
 8. Cover the outside edges of the waterproof tape with silk tape.

Itching

Itching is a problem, especially in warm weather. To help reduce itching:

- Gently tap on the cast over the area that itches.
- Use a hair dryer on the cold setting to blow air into the cast.
- Use a room fan on a low setting to keep your child cool.
- Plan activities to take your child's mind off the itching.

Things to avoid:

- **Do not put objects inside the cast.** Sticks, hangers, or back scratchers may break the skin and cause an infection.
- Do not pull out the lining or padding from the cast.
- Do not keep your child in direct sunlight. It can make them sweat more and start itching.

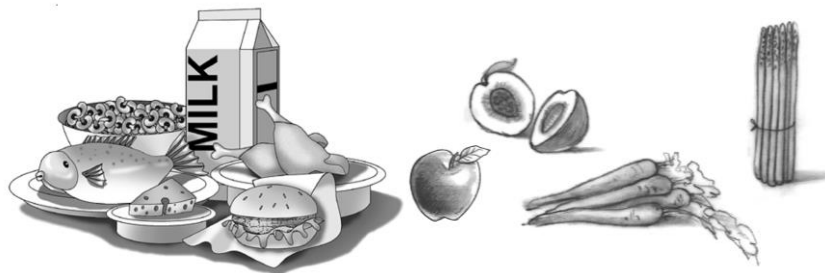
Pain medicines

- A child may have pain after their injury or surgery. The health care provider may prescribe pain medicine or recommend an over-the-counter (OTC) one, like ibuprofen (Motrin[®], Advil[®]) or acetaminophen (Tylenol[®]).

- For OTC medicines:
 - Be sure to read the label on the bottle to know the right dose for the age of your child.
 - Do not give aspirin to children.
 - Never give a child pain medicine made for adults.
- Sometimes, changing your child's position can help ease the pain.

Nutrition

- Your child may not be as hungry as usual due to:
 - being less active
 - getting full faster. Since the cast covers the belly, there is not much room for the stomach to expand after eating.
- It is important that your child eats a healthy diet and drinks enough liquids. This will help them heal faster, feel better, and prevent constipation.
- The diet should be high in calories, protein, and fiber (Picture 6).



Source: National Institute of Diabetes and Digestive and Kidney Disease, National Institutes of Health

Picture 6 Give your child foods high in protein, calories, and fiber.

- Give small meals and more often. This can help them get more calories in a day.
- Offer a variety of foods but not new foods that could upset their stomach or cause diarrhea.
- For constipation, put more fiber and fluids in your child's diet. Give more vegetables, fruit, fruit juices, and whole grain foods.
- When eating, to prevent choking:
 - The head should be higher than the rest of the body.
 - For younger children, do not give foods that might cause choking, like peanuts, popcorn, hot dog chunks, or grapes.

- For older children, if possible, let them sit in a chair to feed themselves. If they cannot sit in a chair, prop up their head or place them on their side to eat (Picture 7).
- Give them a straw to drink with.
- During meals, place a large T-shirt, towel, or bib over the front of your child's cast. This helps to keep the cast clean and dry from food spills.



Picture 7 Encourage your child to feed themselves.

How to keep your child active and help them cope

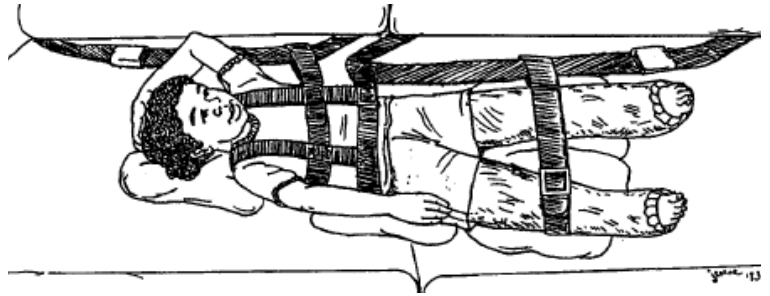
- Encourage your child to be physically active every day.
 - Have them wiggle their toes and fingers often.
 - Without moving inside the cast, ask them to squeeze tight, then relax the leg muscles.
 - Play active games with them that they can do safely, like tossing a ball or playing Simon Says.
- Continue to treat your child the same way as before getting the cast.
 - Expect the same behavior from them.
 - Although they will need help with some things, ask them to do as much as possible for themselves.
- To help them cope better:
 - Include them in family activities.
 - Move their bed to a room where they will be with their family more often.
 - Urge others to visit them.
 - Hold and cuddle your child. Give them lots of love and affection.

Safety tips

- Never leave your child alone.
- Place your child on their back when sleeping. Do not put them on their tummy.
- Put toys and books in easy reach.
- Put a baby monitor in their room or give them a bell or phone so that they can call you.

Transportation

- Your child will likely not be able to sit in their normal car seat. To travel safely, a Passenger Safety specialist can help you. Your child may need to have:
 - a bigger car seat, or
 - an E-Z On Vest. This vest straps your child, lying down, into the back seat of your car (Picture 8).



Picture 8 The E-Z On Vest® straps your child lying down into the back seat of a car.

When to call the orthopedic clinic:

If your child has:

- pain or burning under the cast, or if their pain increases.
- drainage oozing from the cast, or the cast has a foul odor (other than urine or poop).
- skin irritation, blisters, or open sores at the edges of the cast.
- signs of circulation problems – swelling, tingling, numbness, or changes in the color of their skin or toenails.
- too much itching and cannot take it.
- repeated vomiting or will not eat.
- a change in behavior. They are unusually irritable and cannot be comforted.
- something stuck in the cast, such as a toy.
- cracks or breaks in the cast, it will not dry, or the cast gets too loose or too tight.
- has a fever:

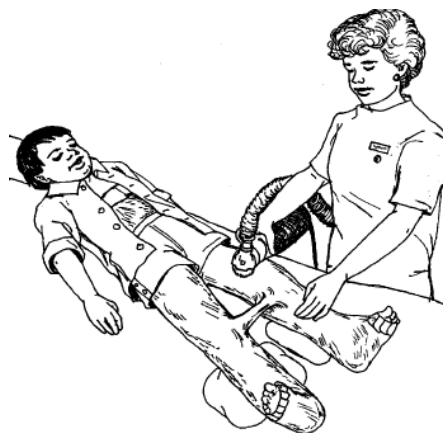
Age	Temperature
Younger than 3 months of age	– above 100.4° Fahrenheit (F) or 38° Celsius (C)
Older than 3 months of age	– 104° F (40° C) or above – above 102° F (38.9° C) for more than 2 days or keeps coming back – treated to bring their fever down, but it hasn't worked

Any age – has a fever and:	
– Has an unusual rash.	– Looks very ill, is very fussy, or very drowsy
– Has been in a very hot place, such as an overheated car.	– Is not eating or drinking and shows signs of dehydration – dry or sticky mouth, sunken eyes, dark urine, dry diapers, or not urinating.
– Has a stiff neck, a bad headache, very sore throat, a painful stomach ache, vomiting, or diarrhea.	– Has immune system problems that make them more likely to get sick, such as sickle cell disease or cancer, or takes medicine that weakens the immune system.

Call 911 if your child has trouble breathing, has a seizure, or is hard to wake up.

Follow-up appointments

- It's important to keep your child's appointments. If you can't keep an appointment, call to reschedule.
- Your child will have X-rays taken from time to time while they are in the cast to check healing.
- When the cast is ready to come off, it will be removed at the clinic, not in the hospital.
- To remove the cast, the health care provider will cut it with a special saw (Picture 9).
 - 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.
- After the cast is off, at first, your child may:
 - walk with a slight limp, their leg may turn out, or have pain when bending their knee.
 - have dry skin, and the thigh muscle may be smaller.



Picture 9 A special cast saw is used to remove the cast.

These things will go away once your child gets stronger, starts to walk, and starts doing their regular activities.

If you have questions, please call Nationwide Children's Hospital Orthopedic Clinic at (614) 722-5175.