

# **Helping Hand™**

# **Cast: Hip Spica or Body Cast**

Your child has been placed in a hip spica (SPY-ka) cast or body cast. A hip spica cast keeps your child's pelvis and one or both legs from moving. This type of cast is used if a child has a broken bone in the thigh or has had hip surgery. The cast holds your child's legs in the right position for healing. The cast is made of either plaster of Paris or Fiberglas<sup>®</sup> casting tape or sometimes a combination of both.

This cast will cause changes in your lives for a while, especially if your child is used to doing most things for him or herself. Your child is now very dependent on you and other people. He will need help with eating, bathing and going to the bathroom. Someone will have to turn and position him regularly. He cannot be left alone at home because of the danger of falls and injury.

Patience will be needed while your child is in this cast. It may be hard for the whole family to adjust but it can be a positive time as well. We hope to help make this adjustment as easy as possible for you and your child.

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#### **Items Needed or Home Care**

If a wheelchair will be needed, your child's doctor will give you a prescription for a reclining wheelchair with leg lifts and removable sides (Picture 1). Call your insurance company to see if they will pay for wheelchair rental and where they want you to get it. (Refer to the Helping Hand: *Casted Leg: Home Equipment Needs*, HH-II-104).

The hospital will provide the following items: ☐ Kit for taping (petaling) the cast (moleskin, waterproof tape, silk tape and tongue blade) ☐ EZ-on Vest<sup>®</sup> or Spelcast<sup>®</sup> to use in the car (get this from Occupational Therapy) ☐ Car seat ☐ Wash basin ■ Bedpan/urinal Picture 1 A reclining wheelchair with leg lifts ☐ Pillows, blankets for older children. (Sides have been removed.) ☐ Diapers (if your child is not yet toilet trained or doesn't have good bowel or bladder control) ■ Wagon (for infants or toddlers) Auto mechanic's "creeper" for toddlers (optional) ☐ Bean bag chair - optional (not recommended for infants or toddlers) The cast may be put on in surgery, the Emergency Department or the Orthopedic Clinic. Some casts have a bar between the legs that holds the legs in proper position. This bar adds strength

# After the Cast Is Applied

Gortex® liner.

- Leave all areas of the cast exposed to air until it is completely dry. A plaster cast takes between 48 and 72 hours to dry. A Fiberglas<sup>®</sup> cast takes about 24 hours to dry.
- **Do not** write on the cast until it is completely dry. When writing on a cast, use crayons, water-based felt tip markers or pens. **Do not** use paint or oil-based materials. These clog the pores of the cast and don't allow the cast to "breathe."

to the cast. Most hip spica casts have a Gortex<sup>®</sup> liner to protect the skin. Do not remove the

# **Petaling the Cast**

Petaling the cast protects your child's skin and the edges of the cast. "Petals" of moleskin or tape are cut to cover the edges of the cast. Petal all edges - the chest, the groin opening and the leg openings. Your nurse can show you how to do this.

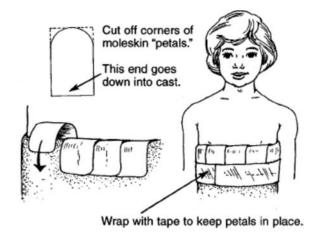
- Do not petal a cast while it's wet. (The "petals" of moleskin or tape will not stick.)
- You will be given a starter kit to take home with you. The kit includes: moleskin (pink, fuzzy material in a sheet), silk tape, waterproof tape, a tongue blade and Peri-wash.

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### Petaling the Cast, continued

To petal the cast:

- 1. Cut strips of moleskin 2 to 4 inches wide and 4 to 6 inches long. The size will depend on the area to be covered.
- 2. Remove the plastic backing from the moleskin and place the edge inside the cast next to the skin. Use a tongue blade or your fingers to gently push the moleskin under the cast. (About 3 to 4 inches of moleskin should extend over the edge of the cast.)
- 3. Overlap the pieces. Make sure they are not wrinkled inside the cast. (Wrinkles next to the skin can cause sores.)



**Picture 2** Petal the cast and tape the petals down around the chest.

- 4. Bring the other part of the petal onto the outside of the cast. Continue this until you have gone all the way around the opening (Picture 2).
- 5. In the diaper area, use silk tape petals on the cast. Then place waterproof tape completely over the silk petals (follow steps 1 to 5). Most pharmacies sell waterproof tape. If you do not have waterproof tape, try bookbinding or electrical tape available at a hardware store. Do not use moleskin in the diaper area.
- 6. Using a long piece of tape, tape the petals down around the chest and feet (Picture 2). This helps keep the edges of the petals in place.
- 7. Replace petals when they fall off or get dirty.

# **Turning and Positioning**

You need to turn your child on his side, back and stomach. Change the position every 2 to 3 hours during the day and 1 to 2 times at night if your child is awake.

Turning helps to:

- Make your child more comfortable, reduce swelling and prevent pressure sores.
- Prevent pneumonia and keep up your child's strength.

You may turn your child more often. To make turning easier, have your child raise his arms above his head while you are turning him.

- When your child is on his stomach, place pillows under the head, chest, abdomen and legs. Make sure your child's toes are off the edge of the bed. Place them over a pillow or blankets. Your child is not able to lift his toes off the bed to reduce the pressure.
- When your child is on his back, keep his heels off the bed or pillow by placing a pillow under the cast. This helps avoid pressure and prevents sores.

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# Turning and Positioning, continued

- Protect your child from rolling or falling.
  Place chairs around the bed and surround your child with pillows.
- A toddler may be placed on his stomach on an auto mechanic's creeper (Picture 3). Place pillows under your child's chest and fasten the straps on the creeper securely. Block all stairways and watch your child closely while he is on the creeper.



**Picture 3** A toddler can get around on a mechanic's "creeper."

- You may place an older child on a bean bag chair.
  Beanbag chairs are not safe to use for infants or toddlers.
- Your child may also use a reclining wheelchair or be propped up with pillows.
- Always support your child's back, buttocks and legs with pillows or blankets. Pillows also help to keep the edges of the cast from causing too much pressure.

### Lifting

- Do not lift your child by gripping only under the arms. This could cause muscle or tissue damage.
- Support your child's knees and hips when turning him.
- Keep your own back straight to keep from hurting yourself.
- When lifting your child, bend your knees. Carry your child close to your body.

# Clothing

- Pants and underwear should be 1 to 2 sizes larger than normal. Shorts and sweat pants are best. Split them between the legs and fasten with Velcro, snaps, buttons, or ties. Split underpants between the legs and fasten in the same way. Put on your child over the head and pull down.
- Socks a few sizes larger will fit over the cast.
- Girls may wear dresses, extra-large shirts or sun dresses.
- Large T-shirts or nightshirts may be worn by boys or girls.
- Jumpers that snap between the legs can be used for infants.

# **Bathing**

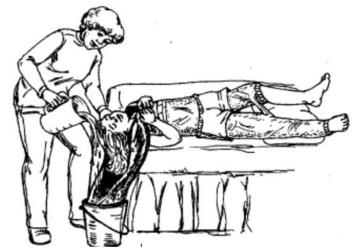
**Personal hygiene is very important.** The cast holds in the heat and makes your child perspire. Wash the skin around the cast every day. **DO NOT get the cast wet!** 

# Washing Your Child's Hair

Wash your child's hair as often as needed. Wash a small child's hair in the kitchen sink.

An older child can stay on the bed for a shampoo. To wash hair this way you will need a large bucket, containers of water, shampoo and a large plastic trash bag:

- 1. Split the trash bag down the side seams. Open it out.
- 2. Prop your child's head over the edge of the bed. Put the bucket on the floor under your child's head.
- 3. Place one end of the trash bag under your child's head. Have your child hold the edges of the bag around his neck. Place the other end of the bag in the bucket.
- 4. Pour water over the hair (Picture 4).
- 5. Shampoo, rinse and towel dry.



**Picture 4** Shampoo your child's hair as often as needed.

# **Using the Bedpan or Urinal**

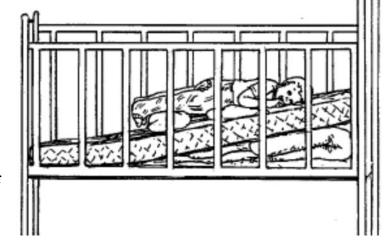
• Try to keep your child's head and chest higher than his feet. This helps urine and stool flow downward, away from the cast. You may need to put a pillow or blanket **under the** 

**crib mattress** to keep your child's head raised (Picture 5).

• For easier clean-up when a child has a bowel movement, place a coffee filter, napkin or paper towel in the bottom of the bedpan.

#### For Females

- For urination, place tissues or toilet paper in the bottom of the bedpan to keep urine from splashing up into the cast.
- Cut a paper cup in half lengthwise and hold it above the stream of urine.



Picture 5 Place pillows or blankets under the mattress.

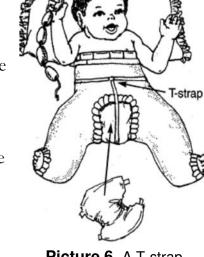
### For Males

- If you don't have a urinal, use a wide-mouthed jar.
- If the bar between the legs makes it difficult to get the urinal to the penis, or if you need more length at the top of the urinal, use a paper cup. Cut out the bottom of the paper cup and place it in the neck of the urinal.

# **Diapering**

Change your child's diaper as soon as it gets wet. Moisture makes the skin red and sore and leads to skin breakdown. To help reduce this, try these tips:

- Check the diaper every 1 to 2 hours and change if needed.
- Wash and dry the diaper area after every wet or soiled diaper.
- For females, use a super absorbent peri-pad or small diaper on the area near your child's genitals and tuck the diaper in around the cast edges (Picture 6).
- For males, a peri-pad may work. Another way is to cut a hole, in a disposable diaper, near the top. Place the plastic side against the skin, and gently pull the penis through the hole. Aim the penis down and cover the penis with the back of the diaper. Tuck another diaper inside the cast in back and hold the front of the diaper in place with the "T-strap."



**Picture 6** A T-strap holds the diaper in place.

- Turn your child on his or her side to tuck the diaper into the back of the cast.
- An elastic "T-strap" around the waist and between the legs will hold the diaper in place.

#### Diarrhea

- If your child gets diarrhea, stop giving fruit juices for a few days. If the buttocks look red or sore, turn your child on his stomach and expose the buttocks to air. If diarrhea continues, call your child's doctor.
- Wash your child's bottom often with mild soap and water.
- If the cast becomes soiled, mix baking soda (or a powdered cleanser like Comet<sup>®</sup>) with water and make a thick paste. Rub the paste into a **small** spot on the cast. Let it dry and then brush off. Do this only on small areas. **Do not let this powder get inside the cast or on the skin.**

#### Odor

Odor can be a problem. But a cast will not be replaced just because a cast is soiled or has a bad odor. These ideas can help if urine or stool gets on the cast:

- If the cast gets soiled by urine or stool, use a damp washcloth to wipe off the cast as best you can.
- Tape Odor Eaters® or fabric softener sheets to the outside of the cast. Be careful not to let anything get inside the cast.

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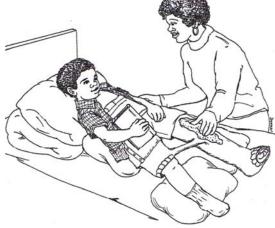
#### If the Cast Gets Wet

If the cast gets wet, use a blow dryer with a **cool setting** to dry it. This may take several hours. Position your child so that the wet area of the cast is exposed to the air for at least 24 hours. Use the blow dryer for 20 to 30 minutes at a time until the cast feels completely dry inside and out.

#### **Skin Care**

Check your child's skin every day. Keep the skin clean and dry.

- Check the skin around the edges of the cast 4 times a day. Look for any reddened areas. You may need to use a flashlight to see inside the cast.
- If there are reddened areas (other than the diaper area) and the skin is not broken, change your child's position more often. Red areas should go away within 30 to 60 minutes. If they do not go away, **do not massage the area.** Massaging could damage the skin.



**Picture 7** Use a damp washcloth to wipe off the cast.

massage the area. Massaging could damage the skin. Red areas that stay red or pink longer than 60 minutes should be reported to your doctor.

- Red areas are a sign to turn your child more often. Keep your child off the red areas.
- Do circulation checks several times a day. (Refer to the Helping Hand, Circulation Checks, HH-II-60.)
- Do not use lotions, oils or powders on the skin near the opening of the cast. These products can form balls that fall into the cast. This could cause a pressure sore. They also soften the skin. Soft skin is more likely to get sore.
- To remove crumbs that fall between the cast and skin, you may use a vacuum. Do not put the cleaner attachment down into the cast.

# Itching

Itching is a problem, especially in the summer. To help reduce itching:

- **Do not put objects inside the cast.** Sticks, hangers or **back scratchers** may break the skin and cause an infection.
- Knock on the cast over the area that itches.
- Rub the skin with alcohol.
- Use a hair dryer to blow air down into the cast. (Use the "cool" setting **only**.)
- Plan activities to take your child's mind off the itching.
- Keep your child out of direct sunlight. Sunlight makes your child perspire and causes more itching.
- Do not pull the padding out of the cast because it protects the skin when the cast is removed.

#### **Pain Medicines**

- A child may have discomfort when the cast is first put on and when it is removed.
- If your child has discomfort or muscle aches, give acetaminophen (such as Tylenol®) unless he has an allergy to acetaminophen. Follow the directions on the bottle for your child's age and weight unless otherwise directed by your doctor.
- Doctors often recommend Benadryl<sup>®</sup>, a nonprescription medicine, to relieve itching. Talk to your doctor to make sure your child may have Benadryl<sup>®</sup>.

#### **Nutrition**

Since your child is less active, his appetite may be decreased. Your child is healing, so he needs a balanced diet. The cast covers the abdomen, so there is not much room for the stomach to expand. It is better to have your child eat frequent, small meals rather than 3 large meals.

 Increase the amount of fruits, vegetables, whole grain breads, cereals and other foods high in fiber. This will help prevent constipation.



**Picture 8** Give your child foods high in fiber and vitamin C.

- Increase the amount of vitamin C. Vitamin C helps bones and wounds to heal and helps the body fight infections.
- Foods high in vitamin C include foods such as citrus fruits and juices, broccoli, strawberries, baked potatoes, tomatoes and green leafy vegetables.
- Serve dairy products such as milk, cheese and ice cream.
- Increase your child's liquid intake. He should drink at least six 8-ounce glasses of liquids daily. This is **very** important, especially in the summer. The cast is hot and your child will perspire a lot. Liquids also help prevent constipation.
- If your child is an infant, continue to give him the same formula or foods he was taking before the cast was put on. Burp an infant as usual.
- If your child is constipated, give him more to drink. Also have him eat more high fiber food (refer to the Helping Hand, *Diet: High Fiber, HH-IV-1*).
- Do not give foods that can easily cause choking such as peanuts, popcorn, hot dog chunks or grapes.

### **Nutrition**, continued

- If your child was old enough to feed himself before the cast was put on, let him continue to feed himself. Prop up your child's head or place him on his side or abdomen to eat (Picture 9). Place a pillow under the chest.
- During meals place a large T-shirt or towel over your child and the front of the cast to keep crumbs from falling into the cast.

 Place your child on his side after he eats to aid in digestion and to help make him more comfortable.

#### **Exercise**

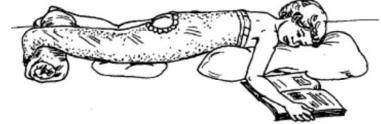
It is important for your child to be as active as possible. Exercise improves the circulation and helps the healing process. Two Helping Hands on exercises for upper and lower extremities will be given to you. Have your child do the upper

Picture 9 Encourage your child to feed himself.

extremity exercises twice a day. Ask your doctor before starting the lower extremity exercises. (Your child will not be able to do most of them until after the cast is off.)

The following should also be done every day:

- Have your child wiggle his toes and fingers, do pushups, roll himself over and help to slide out of bed. Provide rest periods when needed.
- Have your child lie on the stomach to play, read or watch television. This helps strengthen the neck, back and arm muscles (Picture 10).
- For an infant, give toys that encourage movement. Have the infant reach for the toy.
- Do not give your child any toys or other objects that could be pushed into the cast.



Picture 10 Have your child lie on his stomach to play

# **Development**

Being in a cast is upsetting for a child of any age. It requires many changes in a child's daily activities. It's important to continue to treat your child, in most ways, as you would if he did not have the cast. Hold and cuddle your child. Give lots of love and affection.

Discipline your child as you would if he was not in a cast.

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### **Development**, continued

- Include your child in activities and avoid keeping him apart from others. If your child is in a different room than you, give the child a bell or horn to use if he needs something.
- Keep items your child uses often, such as water, toys, bedpan and urinal nearby. Remember that your child is no longer independent and needs help doing most things.
- Continue to play with your child (Picture 11). Continue to rock, coo and hold your baby. When he is on the floor, get down on the floor at eye level.
- Take your child outside, but do not put him in direct sunlight.
  Sunlight causes sweating and itching.
- A tutor will need to be arranged if your child is school age since he cannot attend school.



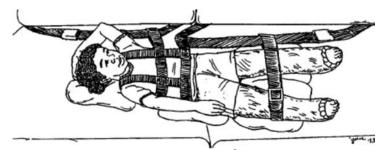
**Picture 11** Play with your child and include her in family activities.

# **Transportation**

- The State of Ohio law requires any child under 40 pounds or under 4 years of age must travel in a car safety seat. This can be difficult with a hip spica or body cast.
- Infants need a special car seat called a Spelcast<sup>®</sup>.
- Older children need a special adaptation for seat belts called an E-Z On Vest® (Picture 12).
- A prescription from the doctor will be needed for the Spelcast<sup>®</sup> or E-Z On Vest<sup>®</sup>. You can get either one of these from Nationwide Children's Hospital. **Do not leave the hospital without it!**
- If you have a small car, don't have a car or if other transportation cannot be arranged, you will need to arrange for an ambulance ride for larger children.

# Things to Do

- Cover up the cast with a T-shirt or towel when your child eats.
- Make sure your child's head is slightly higher than his feet.
- Check a baby's diaper every hour.



**Picture 12** The E-Z On Vest<sup>®</sup> is used with your child lying on his back on the seat of the car.

- Wash genitals and surrounding area after every wet or soiled diaper; then use Peri-wash and allow the skin to dry completely.
- Check the skin around the cast for reddened areas.
- Rub bony heels, elbows and the skin next to the cast with alcohol if the skin is not sore.

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# Things to Do, continued

- Do circulation checks (Refer to the Helping Hand, Circulation Checks, HH-II-60.)
- Talk and play with your child.
- Remember to keep your follow-up appointments with your doctor.

#### What Not to Do

- Do not pull the padding out of the cast.
- Do not let the cast get wet.
- Do not use paint or oil-based materials to write on the cast.
- Do not stick anything down the cast or let your child stick anything down into it.
- Do not use lotion, oils or powders on the skin near the cast.
- Do not remove the cast.
- Do not lift your child by the bar between the legs.
- Do not pick up your child by lifting only under the arms.

### When to Call the Doctor

Call your child's doctor if any of these things occur:

- Complaint of "burning" in a certain area covered by the cast or an increase in pain.
- Fever over 100°F by mouth, axillary (armpit) or rectally.
- New drainage or stain coming from the cast (yellow, brown, green, red).
- Foul odor coming from inside the cast (other than urine or stool odor).
- If your child is unusually irritable.
- Any breaks or cracks in the cast or if the cast appears loose.
- If pins poke out through the cast (most children will not have pins).
- If **anything** gets down into the cast (such as a penny, large crumbs or toys).
- Repeated vomiting.
- A constant feeling of being bloated.
- Any rapid increase or decrease in weight. (The cast will become too tight or too loose.)
- Any open, broken, reddened or sore skin.
- If your child has more than one sign of poor circulation (such as cool feet, capillary refill greater than 3 to 4 seconds, bluish or dark pink toes, large amount of swelling, complaints of numbness or no feeling, little or no movement). (Refer to the Helping Hand: *Circulation Checks*, HH-II-60.)

#### **Cast Removal**

- It's very important to keep your follow-up appointments. X-rays of the bones will be taken from time to time while your child is in the cast. Before the cast can be removed, new bone must form where the bone was broken. When the X-rays show enough new bone has formed to keep the bone stable, the cast will be removed.
- The cast will be removed at your Nationwide Children's Hospital Cast Clinic or your doctor's office.
- A cast remover is used (Picture 13). The blade vibrates back and forth. It does not spin around like other saws. It makes a loud noise and vibrates the cast as it cuts it. Sometimes the skin will feel hot from the vibration.



**Picture 13** A special cast saw is used to remove the cast.

- After the cast is removed, you will notice a flaky yellow crust on your child's skin. This is because the skin cannot shed its outer layer while the cast is on and a yellow crust builds up. Do not let your child pick this skin off. It will fall off by itself in a few days. This skin is very sensitive to the touch, so be gentle.
- Do not scrub your child's skin. Instead, lightly bathe your child and have him soak in a tub of warm water. Gently pat the skin dry and pat on lotion to reduce itching. If the skin itches and is scratched, it may get irritated and start to bleed. Have your child sit in a cool bath to ease itching. After the bath, dry the skin well and cover the area with clothing.
- Expect your child's muscles and joints to be stiff and sore. There will also be limited movement and strength for the first couple of weeks. Your child will gradually build up strength and return to normal activity.
- Continue with the exercises as shown in the Helping Hands.
- Your child's doctor will decide if crutches are needed after the cast is removed.

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