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# Hip Spica Body Cast



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**T**aking care of a child in a hip spica cast can be a difficult experience for you and your child. This pamphlet has been prepared to help answer some of the questions you may have. If you have additional questions please write them down so you can ask your child's orthopedic surgeon or nurse.

## Hip Spica Body Cast

A hip spica is a special type of body cast that helps keep the hip joints and/or thigh bones in place. A hip spica cast is used to:

- Keep the ends of a broken bone (fracture) together so they can heal correctly.
- Prevent a bone from moving after surgery.
- Correct a hip that is misaligned (hip displacement).

Hip spica casts vary in size. The length of the cast depends on the type of injury but usually covers the area between the mid-chest to just below both knees.

There is a hole in the cast around the groin area so that your child can urinate (go pee) and/or for you to change your child's diaper.



*Hip spica casts have 2 layers:*

1. Soft liner: a non-waterproof cotton padded liner or a waterproof padded liner
2. Hard covering made of fiberglass

## Applying the Hip Spica Cast

A hip spica cast is put on in the operating room or cast room with the help of the Orthopaedic surgeon, Orthopaedic Technologist and a nurse. The liner is applied first, and then the fiberglass covering is applied. As the fiberglass dries, it produces heat and your child will feel the warmth of this. It will take around 20 minutes for the fiberglass cast to dry.

Immediately after the hip spica cast is applied, rest the cast on something soft, like a pillow or blanket, while it dries. This will help make sure the cast dries properly and smoothly.

After the cast has been applied your child will be taken to the Recovery Room or Surgical Daycare. Swelling may occur in the hip and groin area, you will notice this when you change your child's diaper. We want to avoid damage to the cast so we try to protect it with cast petalling.

## Cast "Petalling"

Your child has a:

- Non-waterproof cast
- Waterproof cast

### Non-waterproof cast

When the cast is dry, the edges are covered and overlapped with waterproof tape to keep the edges smooth. This is called "petalling". Petalling should be done as soon as possible before any swelling makes it difficult to petal around the groin area. Therefore, it is best to do the petalling as soon as possible. You can help when your nurse petals the cast for the first time so that you can do this at home. This is also an opportunity to ask any questions about petalling the cast.

*Here are some steps to help with petalling:*

1. Cut 4 inch strips of waterproof tape (e.g. Medical waterproof tape or Duct tape™). Note: Duct tape™ contains latex.
2. Place a strip of waterproof tape as far inside the cast as possible. Smooth out any wrinkles that you can see. Wrinkles in the tape may cause rough spots that can irritate your child's skin.
3. Overlap the next strip of waterproof tape over the first so that they look like petals of a flower. This helps keep the cast dry and protect it from urine.
4. Repeat until all edges are covered and overlapped with waterproof tape.

Try to avoid removing the tape once it has been applied as it will remove the padding inside the cast.



### **Waterproof cast**

For a waterproof cast, you do not want to petal the edges. This can damage the waterproof lining.

If the lining shifts and leaves a sharp edge on the cast, call the Orthopedic Clinic.

## Caring for Your Child

Here's how you can help keep the cast as clean as possible for the time your child is wearing it.

### Bathing your child

It is important to keep your child's skin as clean and dry as possible. Follow the instructions below for how to bathe your child.

#### *Non-waterproof cast*

If your child has a non-waterproof cast, you can give your child a sponge bath every day. **Be careful not to get the cast wet or immerse it in water.** Wash the area of skin that is uncovered and easy to clean. After the sponge bath, dry your child's skin completely.

To wash your child's hair, have your child position his or her head over a sink. Make sure they are comfortable. To help, you can use a jug filled with water or connect a spray attachment to the faucet to rinse your child's hair.

Use bath time to check your child's skin (e.g. the heels, buttock, and shoulders) for any redness, irritation, blistering, open areas, or pressure spots.

#### *Waterproof cast*

While your child is recovering in the hospital, ask your child's Orthopaedic surgeon if you can give your child a bath:

- Lay your child in the bathtub that is either empty or with shallow water so it is easier to move your child around and get them in and out of the tub.
- Rinse the cast thoroughly with clean water to remove all the soap.
- After the bath, dry your child's skin well.
- The cast takes a few hours to dry so it is best to bathe your child in the morning and less often than daily.

Water can accumulate any place the cast is in a bended position (e.g. heel, behind the knee), so carefully move your child in different positions to allow the water to drain out of the cast using gravity. Do not try to put a towel inside the cast. Let the water evaporate out of the cast. You may also use a hairdryer on a cool setting to help with the drying process.

If you are not able to bathe your child, you can give your child a sponge bath, as explained above.

### **Changing your child's diaper**

To help keep the hip spica cast clean and dry, it is important to:

1. *Position the diaper properly on your child:*
  - Tuck a smaller size disposable diaper (usually your child's regular size) into the cast. You may want to cut the Velcro tabs off the diaper for easier insertion.
  - Fill the gap between the diaper and the cast with a 'sausage roll' or sanitary or Poise pad. To make a sausage roll, roll up a blue cloth (e.g. J-cloths™). Then place saran wrap tightly around the blue cloth. This is known as a sausage roll.



- Put on the larger size disposable diaper over top of the cast.

\*Cloth diapers are not recommended as they keep the skin and cast wet which can irritate the skin and damage the cast.

2. *Check your child's diaper frequently (every 2 to 3 hours):* make sure your child's diaper is changed as soon as it becomes soiled. This helps prevent skin breakdown, irritation as well as a smelly cast.

## Helping your toilet trained child

- While sitting on the toilet, keep your child in a slightly upright position: this helps drain your child's urine (pee) and stool (poo) away from the cast.
- Cover the back of your child's hip spica cast with saran wrap and secure with tape: this helps prevent urine from backing up into the cast and soiling the padded liner and the fiberglass.
- Red Cross may be able to rent hip spica toilet seats to help with your child when they are using the potty.

## Managing your child's pain, muscle spasms, and itchiness

### ***Pain***

Your child may experience pain for up to one week depending on the type of surgery or fracture.

Your child's pain medication will be discussed with you and your child. If needed, the orthopaedic surgeon will give your child a prescription for pain medication upon discharge. After 2 to 3 days, your child will not need as much pain medication or any at all. Talk with your child about the pain



he or she is experiencing and adjust the amount of pain medication accordingly.

### ***Muscle Spasms***

Some children may have spasms in the muscle that surround the broken bone or surgery site. A spasm is when the muscles suddenly contracts (cramps), causing the leg and or body to “jump”. Spasms can occur during the first 24 to 72 hours after the injury and still occur with the hip spica cast on.

If the spasms are causing a significant amount of pain or trouble, your child’s orthopaedic surgeon may prescribe a medication to help reduce the amount of spasms.

### ***Itchiness***

Itchiness is a common problem when a cast is applied. You can help relieve the itchiness under the cast by:

- Blowing cool air from a hair dryer into the cast. Please make sure the temperature is cool enough before blowing it into the cast.
- Gently rubbing your child’s skin around the cast edges.
- Taking a “toonie” or “loonie” coin and rub it across the top of the cast. The vibration may help relieve the itch.
- Keeping your child cool in warm weather.
- If the itch becomes unbearable or a rash develops, please call the Orthopaedic Clinic nurse and/or visit your child’s family doctor as soon as possible.

**NEVER** put anything in the cast to try and scratch the itch.

**DO NOT** pull out the padded liner from inside the cast.

## Checking your child's skin and circulation

### ***Skin***

Check your child's skin and beneath the cast edges for any breakdown, redness, irritation, blistering, open areas, or pressure spots on a daily basis.

If your child's toes or heels are pressing against the bed or rubbing against the sheets, skin breakdown or blisters can form. To help prevent this, place a pillow or rolled towel beneath his or her ankles.

### ***Circulation (flow of blood)***

To check your child's circulation, touch your child's feet and toes. Make sure they can feel you touch them.

Ask your child to move his or her toes and feet 4 or 5 times a day. If they are too young to understand, tickle your child's feet and check that they are moving them.

## Repositioning your child

Change your child's position on a regular basis (e.g. every 2 to 3 hours) to prevent skin problems, reduce pressure, and to provide maximum comfort. You may turn your child from side to side or from stomach to back. To make the turn easier, ask your child to extend his or her arms above the head. This should be done during nighttime hours as well. You can turn your child more often if you notice any redness or skin breakdown.

Before you leave the hospital, you will learn how to help your child alternate between the following positions:

**Back:** place pillows under your child's head, neck, and under his or her legs. The heels should be free of pressure.

**Stomach:** place pillows under your child's stomach. Make sure his or her toes are not touching the mattress by placing a pillow or rolled towel beneath the ankle. \*If your child cannot roll over with their cast on, they should not be placed on their stomach to sleep.\*

**Side:** place a pillow underneath your child's head. Also place pillows behind your child's back to prevent rolling, as well as 1 between his or her legs to support the cast.

## Dressing your child

You may need to purchase clothes in a larger size so that they fit over your child's cast. You can try local thrift or consignment stores for clothes at a lesser cost.

Your child may wear sweatpants and/or shorts. You can add Velcro™ strips to the sides so that they are big enough to fit around your child's cast. If your child is a girl, dresses work really well.

## Helping your child cope

During this time, your child may experience a number of different emotions. Your child may become easily frustrated, aggressive, or angry. They may feel bored or sad. Children may have a hard time expressing their feelings verbally.

Try and help your child deal with their frustration by helping them play through it. Give them an opportunity to express their feelings with:

- Clay
- Foam Lego
- Finger painting
- Play doh™
- Drawing or coloring
- Knocking down blocks
- Throwing a ball
- Playing an instrument
- Playing doctor with a doll/stuffy with a cast on

Help your child overcome boredom and feeling sad by involving them in family activities (see ‘Staying Active’ section below), encouraging family and friends to visit, and taking your child on outings (see ‘Safety Measures During Transport’ section below).

Developing a routine for your child can also help your child cope.

Some children may also regress or turn to ‘old’ habits for comfort, such as bed wetting, trying to breastfeed, using a soother, etc. This is a normal response. Encourage your child by engaging them in age appropriate activities.

**REMEMBER TO:**

- Keep the cast clean and dry.
- Do not put anything inside the cast.
- Do not put lotions, powders, or oils inside the cast or near the cast.
- Do not pull out the cast liner.
- Do not add additional padding inside the cast.
- Do not break off or trim the cast's edges.
- Do not allow your child to engage in heavy vigorous activity involving the cast area.
- Do not allow your child to walk, kneel, or stand on the cast, UNLESS your child's orthopaedic surgeon says it is okay.

## Daily Activities

### Healthy eating

Your child may experience constipation if he or she is taking pain medication and is less active than usual due to the hip spica cast. To help prevent constipation, have your child drink plenty of fluids and eat a variety of fruits and vegetables. Offer foods that are high in fibre, such as whole wheat bread and pasta. Avoid introducing new fruit juices or foods that could cause loose bowel movements.

Sometimes the hip spica cast can make a child's stomach feel small or cramped. To help, offer your child small, frequent meals and try to get your child to eat in different positions (e.g. side lying, propped up, or even on his/her tummy will work). Watch your child closely while he or she eats.

What may happen	What to do
<b>Stomach Pain/ Cramps</b>	<ul style="list-style-type: none"> <li>• Avoid overeating</li> <li>• Encourage small frequent meals</li> </ul>
<b>Constipation</b>	<ul style="list-style-type: none"> <li>• Increase water intake</li> <li>• Have a well-balanced diet of fibre and vegetables</li> <li>• Encourage activity</li> <li>• Talk to your child's orthopaedic surgeon or pharmacist about stool softeners and laxatives</li> </ul>

### **Staying active**

Keeping your child active and stimulated is an important part of their development.

There are a number of things you can do to help your child stay engaged and stimulated, such as placing different toys within your child's reach, involving them in family activities and encouraging family and friends to visit. Other ideas include:

- Making a scrapbook
- Playing with puppets
- Reading books (or making a book)
- Putting together puzzles
- Planting a seed and watching it grow over the weeks
- Playing with remote control cars
- Taking your child on outings (e.g. going to the Vancouver Aquarium, Science World, the library, summer markets, movie theatre, the zoo)

## Going to school

Children in hip spica casts may be unable to attend school. Speak to your child's teacher, counselor, or school principal to discuss what is best for your child. Find out if the school has special education assistants or resource teachers available to help.

If your child is able to attend school, talk to school staff about safe lifting techniques to transfer your child from the wheelchair to toilet and wheelchair to chair.

## Keeping Your Child Safe

### At home

- Safety gates where it may be dangerous for your child, such as in front of stairs or fireplaces.
- Safety belts on car seats, strollers, highchairs, wheelchairs.
- Side rails for cribs and beds. You can also place a soft mat or mattress on the floor in case your child falls.
- An emergency plan ready in case of fire or if your child needs to be removed from the house quickly. Someone must be able to carry your child out of the home at all times.

### During transport

Your options for the safest type of car seat or car restraint system will depend on.

- Your child's age and weight
- The type of hip spica cast your child has
- The width of your child's cast (measured at the widest part)

- Depth of your child's bottom with the cast
- Manufacturer's guidelines for car seat and restraint systems
- **Availability** of car seat or restraint systems

It is best to wait until your child has received their cast before purchasing or loaning a car seat. When choosing a car seat or restraint system, take into consideration that your child may fit in the seat but the straps may not be long enough to accommodate the casted legs.

Once your child has the hip spica cast, bring the car seat you have chosen to your child's hospital room to trial the seat with the nurse or designate. If the seat does not work for your child, we will help you find a safe transportation solution for your child.

The Occupational Therapy Department at BC Children's Hospital has a Car Seat Loan Program for specialized transportation systems. Through this program, in-patients (patients who are admitted to the hospital) can loan specialized car seats for the length of time their child has the hip spica cast. There is a nominal fee for this program.

Talk to your child's nurse, occupational therapist, or rehabilitation assistant about the Car Seat Loan Program. Or make an appointment for a specialized car seat assessment by contacting the Occupational Department program at: 604-875-2123.

**Please note:** Specialized car seats are in limited supply. There will be instances where we will not be able to provide a transportation system due to lack of equipment.



If it is difficult to locate an appropriate and safe child restraint system, other options are recommended, including:

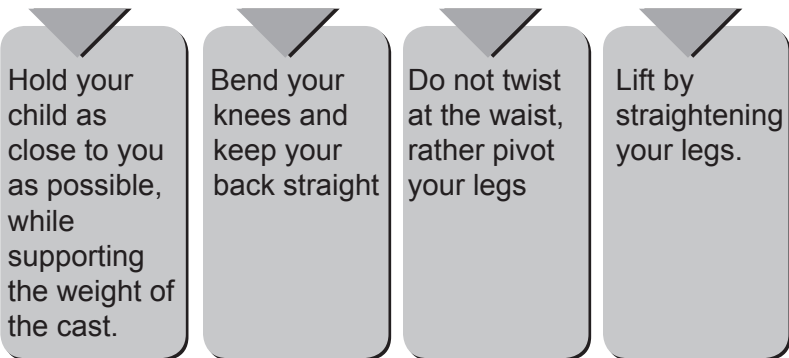
- SN Transport may be recommended by your nurse, or Occupational therapist. You or your child's nurse can book SN transport. Please ask about the cost.
- Non-emergency ambulance transfer: this can be arranged by yourself or your child's nurse. Please ask about the cost.

Children who used a wheelchair for transportation prior to the hip spica may continue to use the wheelchair. However, modifications may need to be made to accommodate the cast. Talk to the occupational therapist and/or your child's seating therapist about this.

## Caring for Yourself

Caring for a child with a hip spica cast can be tiring. It is important to care for yourself and take time to rest and relax. For example, you may want to ask family members and friends to help care for your child so you can take a break.

When repositioning or lifting your child, use proper body mechanics to avoid injuring yourself:



## Removing the Hip Spica Cast

Before your child's hip spica cast is removed, he or she will usually have an x-ray to check that the bone is healing properly.

Once your child's bones have healed, his or her hip spica cast will be removed. This is done at the Orthopedic Clinic. The orthopedic technologist will remove the hip spica cast with a special saw. The saw's blade is dull. It's the vibrations of the saw that will break the cast, not the blade. So it can't hurt or cut your child's skin.

Once the hip spica cast is off, your child's skin will be very tender and sensitive. You can also expect your child's skin to be brown, dry, and flaky from the extra dead skin that has collected inside the cast.

For 1 to 2 weeks after removing the hip spica cast:

- Do not rub or scratch the skin
- Wash your child's skin with warm soapy water
- Apply unscented lotion to help soften the skin

Your child's legs may also swell a little. If this happens, raise your child's legs up on pillows or a footstool. Get your child to wiggle his or her toes often.

At first, your child may be afraid to use his or her legs. They may feel stiff, weak, or a little painful. Your child's legs may also look smaller and thinner. With a little bit of exercise, they will return to its normal size. Encourage your child to move his or her legs. Young children will learn to walk by going back to crawling. They will eventually pull themselves up on the furniture and cruise until they walk. Older children will gain confidence and slowly return to walking.



## Emergency Contact

Contact your child's orthopaedic surgeon or nurse if:

- Your child has severe pain or swelling that won't go away with pain medication or raising his or her legs on a pillow or footstool.
- Your child has numbness and/or tingling (e.g. "pins and needles" sensation) that does not change when he or she has changed positions.
- Your child is unable to wiggle or move their toes.
- Your child's toes swell, feel very cold, or look blue or pale in color.
- Your child has severe skin irritation, rash around the cast edges, damaged broken skin, or blisters.
- Your child has a stomach ache that doesn't go away and/or is vomiting.
- Your child has trouble breathing due to a tight cast.
- The hip spica cast seems tight in **ANY** area.
- The hip spica cast breaks, cracks, loosens, or softens.
- There are sharp edges on the hip spica cast.
- The hip spica cast has a bad or strange smell.
- Something gets stuck inside the cast (e.g. Lego™, coins, etc.)



If you have any questions or concerns, please call:

- 604-875-2345 ext 7273

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