

Circulation Checks

Your child has received a treatment that can affect blood flow (circulation) in the injured arm or leg. You will need to check the blood flow in your child's fingers or toes. This is to prevent injury to the nerves and other tissues caused by swelling.

Some pain is normal after an injury or broken bone. The pain should not be worsening, extremely severe or difficult to control. Pain should be manageable with over-the-counter pain relievers, such as ibuprofen or prescription pain medications. Pain that is worsening, severe and not controlled could be a sign of poor circulation. Please call your child's doctor or the bone doctor (orthopedist) if you are concerned.

Do circulation checks 3 or 4 times a day while your child is awake or if he wakes up with pain, **for as long as the cast or splint is in place or until your child's doctor tells you it's OK to stop doing the checks or if your child has new complaints in the injured area.** Do the checks before breakfast, lunch, dinner and at bedtime. Check the following signs and write down what you see in the fingers or toes. Compare the injured side to the uninjured side. Use the *Circulation Checks Record*, HH-II-161, to keep track. These are the signs of normal circulation:

- Color: **Pink**
- Swelling: **None**
- Sensation: **Yes**
- Temperature: **Warm**
- Numbness or Tingling: **No**
- Motion: **Yes**
- Capillary Refill: **Rapid (2 seconds or less)**

How to Use the Circulation Checks Record

Symptom	What to Look For	What to Write
Color	The fingernails or toenails should be Pink . A pale or bluish color is not normal.	Write down the color that you see – Pink, Pale or Blue .
Temperature	The fingers or toes should be Warm to touch. Cool or cold fingers or toes are not normal. Compare the temperature of both sides. If both sides are cool or cold, put a blanket on to cover the finger or toes and check again in one hour.	Write Warm, Cool or Cold .

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How to Use the Circulation Checks Record, continued

Symptom	What to Look For	What to Write
Capillary Refill	With your fingers squeeze the tip of the finger or toe on the injured side. Or push down on the nail. Where pressure is applied, the area will look white or lighter. Release the pressure and time how long it takes for the color to return to pink. You can time this with a watch or second hand of a clock. If it takes longer than 2 seconds (the time it takes to say capillary refill), the refill is Slow . Less than 2 seconds is Rapid .	Less than 2 seconds, write Rapid More than 2 seconds, write Slow
Swelling	Compare to the uninjured hand or foot. There may be some swelling of the injured side, especially in the first 2 days. Some swelling is all right if it is not associated with severe pain. If there is swelling, try to judge how much. A large amount of swelling is not normal.	Write None, Slight, Moderate or Large
Numbness or Tingling	Does your child say that his fingers or toes are “asleep” or tingling? Or does he describe an unusual feeling? No numbness or tingling is normal. If there is numbness or tingling and it is associated with swelling or severe pain, it is not normal.	Write Yes or No .
Sensation	Does your child feel you touching their fingers or toes? Yes is normal. Your child should be able to feel your touch. Not being able to feel light touch is <u>not</u> normal, especially if associated with swelling, blue color or extreme pain.	Write Yes or No .
Motion	Can your child move all the fingers or toes on the injured side? Your child should be able to move the fingers or toes of the injured arm or leg. Not being able to move them is <u>not</u> normal.	Write Yes or No . (If movement is less than before, you may write less movement .)
Pain	Some pain is normal. Is the pain mild, moderate or severe? Does it cause severe pain when you move your child’s fingers or toes? Is it too painful for your child to move his fingers or toes or is there severe pain when you move the fingers or toes? This is very abnormal.	Write mild, moderate or severe . If there is pain with movement, write pain with movement .

If your child has any results that are not normal, raise the injured arm or leg above the level of the heart. You can prop it up with blankets, firm pillows, cushions or folded blankets. Your child should lie down flat. Then place the injured arm or leg with the cast or splint on the pillows or blankets (toes should be higher than the level of the nose). **Check the circulation again in one hour.**

Depending upon your child's age, it may be hard to detect some symptoms, such as numbness and sensation. In these cases, rely upon results from the other areas you checked.

When to Call the Doctor

Call your child's doctor or the bone doctor (orthopedist) if:

- The circulation check is not normal **and does not improve after 1 to 2 hours with the arm or leg raised.**
- Your child's pain is getting worse, he is unable to move fingers or toes or has no feeling in the injured fingers or toes.
- Any other concerns that worry you.

Follow Up Appointment

Call your child's doctor or the doctor listed below to arrange your follow up appointment.

If you have any questions, please contact your child's doctor, the bone (orthopedic) doctor, Nationwide Children's Hospital Orthopedic Center at (614) 722-5175 or Nationwide Children's Sports Medicine at (614) 722-5577.