Peripheral Nerve Continuous Infusion

What is a peripheral nerve infusion?
A peripheral nerve infusion is one way of giving pain relief right at the site of surgery or injury. After your child is asleep, a small catheter is placed under the skin into the space containing nerves that provide feeling (sensation) to the surgery area. Medicine is given through that catheter to reduce the pain messages from being carried to the brain along the nerves.

What medicine will my child receive?
Local anesthetics (numbing medicines) are given through the peripheral nerve catheter. Since these focus on one area, there are fewer side effects (nausea, constipation, drowsiness) compared to traditional opioid pain medicines (morphine, oxycodone). This helps children begin moving comfortably and feeling good, so they can get better faster. Your child may also be prescribed pain medicines by mouth to help with pain.

How does the infusion work?
Peripheral nerve catheters have local anesthetics going into them continuously at a very slow rate. The catheter is connected to tubing and a bag of local anesthetic inside a ‘balloon’ type pump.

The doctor has set the pump to deliver the amount of medicine needed for your child’s pain.

On-Q Pump by I-Flow Corporation
**Peripheral Nerve Block Infusion**

**How long will it last?**
There are several sizes of balloon pumps. Each pump is designed to deliver a pre-set amount of medicine over 3 days. Since the pump delivers the medicine very slowly over a few days, it may be hard to notice the balloon slowly getting smaller.

**Care at home**
- Keep the dressing clean and dry. No baths while catheter is in place.
- Some leaking under the clear bandage tape is expected. Add another clear bandage tape to keep it in place as needed.
- Check all connections of the catheter, tubing and pump to be sure they are tight and without kinks. If the system becomes disconnected, remove the catheter.
- Check that the white clamp is open (moves freely on the tubing).
- Protect the numb area from injury by changing position often, and applying heat and cold packs for short periods only as recommended.
- Keep the pump in a bag outside your child’s clothing and away from ice packs.
- Keep all labels on the pump and tubing to remind all caregivers of the medicine.
- **No MRIs** while catheter is in place.
- If the catheter is in your child’s arm or shoulder area, use a sling to support the arm. If the catheter is in your child’s leg, check for weakness before getting up and use crutches as taught by Physical Therapy.

**When do I call the doctor?**
- Unrelieved or increased pain
- Numb or tingling lips or mouth
- Metal taste in the mouth
- Ringing in the ears
- Sudden increase in anxiety
- Dizziness
- Sudden tiredness
- Difficulty breathing
- Redness, swelling or leaking at the catheter site
- Any other concerns or questions
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**How do I take the catheter out at home?**

When the pump has delivered all the medicine the ‘balloon’ will be empty and flat, and then can be safely taken out at home following the instructions below. Watch our video “How to Remove a Peripheral Nerve Catheter” at seattlechildrens.org/painresources (scroll to the treatment-specific resources section).

1. Tell your child that it is time to take off the tape and the catheter.
2. Clamp the tube to stop the flow of medicine.
3. Wash your hands.
4. Lay out all of the supplies that were provided to you.
5. Put on gloves.
6. Open the adhesive remover, gauze packet and Band-Aid.
7. Do not use scissors to remove the dressing. Use the adhesive remover to gently remove the tape over the catheter working toward the center.
8. After the edges have been loosened, hold the catheter in place with one finger where it goes into the skin. Continue to loosen the dressing.
9. When the dressing is completely loose, hold the catheter between your fingers close to the skin. With gentle steady pulling, slide the catheter out from underneath the skin. The catheter should slide out easily. If the catheter seems stuck, is too hard to pull, or your child has sharp shooting pain, stop pulling right away, place a clear dressing over the site and call the health care provider on-call.
10. Dab the site with gauze then place a Band-Aid over the spot where the catheter came out.
11. Place the catheter, tubing and pump in a plastic bag. Throw all parts away in your regular garbage.

**Questions?**

All members of the team are committed to help your child be comfortable. After your child goes home, we will call daily to make sure that the amount of pain medicine is just right to keep your child comfortable and the pump is working safely.

If you have questions, or would like to speak with a healthcare provider, please page the provider on call.