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Intrathecal Pump Implantation

What do Intrathecal Pumps Do?

These types of pumps deliver medication from a small device located under the skin into the spinal fluid of the spine via a catheter. The device can hold concentrated medication that is released at a certain rate, and can be adjusted by a handheld programmer. The pump usually holds either narcotic pain medication or baclofen, a medicine that decreases spasticity (tight muscle tone seen in some diseases). The medication needs to be refilled at least every six months by inserting a needle through the skin into the pump. The pump does have a battery, and usually needs to be replaced every seven to ten years.

Who Should Have the Surgery?

Pain patients who have relief of their pain with narcotic medications but have side effects from pills by mouth may benefit from the medication being delivered by a pump. Many patients with chronic pain do not get any relief from narcotic medications, no matter how high the dose. A pain pump is NOT the right option for these patients. Even in patients who do get relief from pain medication, the pump does not remove all pain, and is only part of an overall pain management program.

After an initial office visit, patients may need additional testing such as x-rays or MRI's.

If pump placement is being considered, patients will undergo neuropsychological testing to see if they are a good candidate. Then a test injection of a small amount of morphine will be done by a spinal tap. If there are no side effects and some relief, surgery to implant the pump may be performed. After the surgery, pain medications by mouth will be weaned off gradually until all of the narcotic medication is given by the pump.

Patients with spasticity will often be referred by a neurologist or another provider who have tried anti-spasticity medications by mouth or other treatments. Baclofen medication through the pump into the spinal fluid may be more effective in these patients than taking it by mouth. A test injection of baclofen via a spinal tap needs to be performed and have a positive result before placement of a baclofen pump can be considered.

Success of the Surgery

A successful result after the surgery depends on a positive attitude and efforts by the patient to aid recovery. If you have a pump for pain medication, it will initially be set to a low setting, and your pain medication taken by mouth will be weaned off in the office over a number of weeks. The pump is another tool to help manage your pain, and may not relieve all of your pain. If the pump is for spasticity, it may help some but not all of the symptoms. A PTM, or personal therapy device, can allow patients to deliver boluses (single doses) of medications to themselves.

What is Done During the Surgery?

An incision, or cut, will be made in the back and a catheter placed into the spine. The pump itself will be placed in the abdomen or buttock region and connected to the catheter going into the spine. In some cases, a larger procedure to remove bone in the back (a laminectomy) may be needed to place the catheter.

What Are the Risks of the Surgery?

The risks include anesthesia problems, infection, mechanical problems with the pump or the catheter, and a rare risk of bleeding in the spine, which could cause nerve or spinal cord damage. If there is an infection, usually the entire pump and catheter need to be removed, and antibiotics given. If the pump or catheter fail, or the medication runs out because of a missed refill, serious withdrawal symptoms may occur. In pain pumps, if too much medication is delivered, an overdose can occur which can stop breathing. A spinal headache, which is worse when sitting or standing and better when lying flat, may occur after the surgery, but can usually be treated with rest or possibly a small injection known as a blood patch.

Office Policy and Safety Information

It is required that all patients with an opioid (narcotic) pump have a Narcan (naloxone) kit at home. This is a medication that when administered in an overdose, can save a life by reversing the overdose affect. The medicine may be injected by needle or given by spraying it into the nose of someone who has overdosed. If you need a kit, call the office for a prescription. Many local pharmacies in Rhode Island will provide Narcan to anyone who asks, either a patient or a friend or family member of someone at risk.

Per Office Policy and the Patient-Provider agreement:

You are NOT to consume any alcoholic beverage if you have a narcotic pump, or obtain narcotic medications from any other providers without permission from the office. Many sleeping pills and medicines for anxiety, such as Xanax, can increase your risk of an overdose. Talk to the provider prescribing these medications to see if you can safely wean off of them.



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