



VANCOUVER ISLAND
NEUROSURGICAL FOUNDATION

Shunt Surgery

This information is to help you and your family prior to and following surgery.

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Reviewed: April 2020

Pre-operative Ventriculoperitoneal and Lumbo-peritoneal Shunt procedures in the context of Normal Pressure Hydrocephalus or Benign Intracranial Hypertension:

The placement of a CSF diversion device in the context of NPH or BIH is an elective operation. There are differing clinical situations requiring CSF diversion and some of these may be emergent and this information may not apply. This surgical intervention involves an incision either behind your ear on the side of your head or in your lower back depending on the desired location of the ventricular or lumbar catheter for draining CSF from the nervous system. There is tunneling in a subcutaneous pathway with connectivity via a flow-regulating valve into a catheter which then enters the peritoneum for drainage. In less common circumstances this drainage catheter may pass into the venous system or into the pleural space around your lungs. The valve may subsequently be managed with an external magnet to manipulate the resistance and modify the flow to achieve desired effect.

Alternatives to such an intervention include symptomatic management and lifestyle maintenance with assistive devices or any other situation specific requirements. Pain can be managed by primary care physicians or a pain specialist, this would be notable in BIH which may also require the support of a Neuro-ophthalmologist. Once surgical management occurs if appropriate follow-up will occur with Neurosurgery, Neurology and Therapists to provide objective evaluations of the intervention. In some conditions of CSF disorder an alternative operation known as endoscopic ventriculoscopy might be more appropriate and the details of that procedure can be found in an alternative document.

The risks associated with CSF diversion surgery include but are not exclusive to those which are common and those that would be catastrophic. They include CSF leak, shunt infection, over drainage with acute/chronic subdural hematoma requiring surgical intervention, unsuccessful surgery and neurologic injuries. There are anesthetic and medical risks which are present when any surgical procedure is performed particularly with a general anesthetic in the prone position. These risks include cardiopulmonary pathology, systemic infections, gastrointestinal dysfunction and post-operative delirium among other less common comorbid issues. These risks are obviously greater in patients with pre-existing medical conditions and those of advanced age. In all situations there is a possibility of death although it remains highly unlikely.

If there are any questions, please do feel free to ask in advance of your procedure.

Discharge Instructions – CSF diversion/Shunt Surgery:

What can I eat and drink after my operation?

- After your surgery you might not be hungry and a large meal may not sit well in your stomach. Try eating small meals until your appetite improves and then eat what you normally would eat.
- If you feel sick to your stomach you can get anti-nausea medication from your pharmacy without a prescription (i.e. Gravol). Take it as directed and drink fluids until the nausea is gone. If the nausea continues, see your family doctor.

What activities can I do?

- Avoid lifting more than about 4.5 kg (10 lb).
- You can start being active by walking around your house. You may experience some mild incisional pain but this is normal and will gradually go away.
- During the day, avoid lying in bed or sitting for long periods of time by getting up every 30-60 minutes to walk.
- Stop playing sports, including walking on a treadmill or using a stationary bicycle for 2-4 weeks and if recurrent symptoms develop beyond this time point.

When can I drive?

- There are no restrictions and you may resume driving when it is safe and you are no longer taking prescribed narcotic medications.
- You will not be able to drive right after your surgery. Check with your nurse before you go home from the hospital for more advice. You should not drive if you are tired, on narcotics, or if you have problems with your vision.

How do I take care of my dressing (bandage) & wound?

- Keep the dressing and incision clean and dry for 1-2 days. Beyond 3 post-operative days if your wound appears clean it is safe to shower. Do not soak for prolonged periods in a bath or hot tub for 4-6 weeks.
- Do not be alarmed by the bruising or swelling around wound.
- Do not use lotions, powders or oils on the incision.

- The nurse should provide you with a staple remover before you leave the hospital. Call and make an appointment with your family doctor who should remove the staple 8-10 days after your operation.

How do I cope with my pain?

- A mild amount of pain is normal; you can take Tylenol Extra Strength 1 - 2 tablets every 4 hours as needed.
- If you are given a prescription, take it to a pharmacy to get it filled and follow the directions for taking the medication.
- Take a stool softener every day while you are taking narcotics. Maintain good hydration.
- You can ask your family doctor to prescribe a milder pain medication and to assist you in weaning off your pain medication.

What about other medications?

- If you were on blood thinners and stopped taking them for your surgery, you may resume them 5-7 days following surgery.
- Continue with any other medications you were on before surgery.

When can I start physiotherapy?

- Discussion around activities of daily life, increased physical activity and long-term outcome can be reviewed at the Adult Hydrocephalus Clinic.

When should I call my family doctor?

- Prior to your operation call your family doctor to make an appointment for your stitch or staple removal 8-10 days following surgery.
- Call your family doctor to renew or change your pain medication prescription or to talk about any other health issues.

What should I do if I develop a problem?

- Go to Victoria General Hospital's Emergency Department (preferred) or the nearest hospital emergency department, if you have:
 - Severe pain not helped by any medications
 - Weakness in your legs.
 - Fever (>38°C) or you notice any signs of infection in the incision.

- Increased redness, swelling, leaking of pus or pain from the incision.
- If you notice increased swelling with pain in your legs, or difficulty breathing.
- Any trouble controlling your bowels or bladder.

When is my follow-up appointment?

- Call your surgeon's office (Phone: 778 265-6677) below to make an appointment for 12 weeks after your surgery.

Location: Unit 100 – 1830 Oak Bay Ave, Victoria BC V8R 6R2

Phone: 778-265-6677

Fax: 778-440-6677

Date: _____

Time: _____

Surgeon:

- Dr. Evan Frangou
- Dr. Daniel Warren

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