

**DEPARTMENT OF DIAGNOSTIC RADIOLOGY AND NUCLEAR MEDICINE  
SECTION OF NEURORADIOLOGY**

**PATIENT INFORMATION SHEET**

**Lumbar Spinal Puncture / Spinal Tap with X-ray Fluoroscopy**

**Indications for the Procedure:** Certain diseases require the withdrawal and analysis of spinal fluid for diagnosis, including infection (meningitis), multiple sclerosis, cancer, or bleeding in the brain. This procedure may also be used to measure the pressure in the spinal canal and to remove excess spinal fluid if the pressure is too high.

**Description of the Procedure:** The patient is placed on his/her stomach on the X-ray table and the skin of the lower back is cleaned with an antiseptic that contains iodine. With a small needle, A puncture (stick) is made with a small needle, and the skin and deeper tissues of the lower back are numbed with lidocaine, an anesthetic drug (numbing medication). With X-ray guidance, a thin spinal needle is placed into the lower back. If pressure measurements are required, a measurement device (manometer) is connected to the needle. After the pressure measurements are recorded, the device is disconnected and the spinal fluid is removed through the needle. A small amount of fluid is collected and sent to the laboratory for analysis, although a larger amount may be collected if requested by the patient's doctor. At the end of the procedure, the needle is withdrawn from the back and a tiny puncture mark on the back is covered with a Band-Aid. The patient is either observed in the X-ray department for 1-4 hours or returned to his/her hospital room for observation.

**Risks of the Procedure:** Serious complications from this procedure are very rare. There may be headache from removal of the fluid, injury to nerves, bleeding within or outside of the spine or into the back, local infection at the puncture site or in the spinal canal (meningitis) or tissues of the spine.

**Alternatives to the Procedure:** Alternatives to this procedure include lumbar puncture/spinal tap without X-ray guidance or surgery to remove spinal fluid.

**Probable Consequences of Refusing the Procedure:** Consequences may include not being able to adequately diagnose and treat the patient's sickness. This may lead to worsening of the patient's condition, further progression of symptoms and possible decline in body function.

**Person(s) Performing the Procedure:** The key portions of the procedure will be performed by an attending physician who is a member of the medical staff of Rush University Medical Center, or a fellow or resident in Neuroradiology who will be observed and supervised by a member of the medical staff. Residents and fellows are licensed physicians. Fellows have completed a residency in radiology and are in an approved post-residency training program. Residents are in training in an approved residency program. The parts of the procedures fellows or residents will perform will be based on their level of training and competence.