Lumbar puncture opening pressure

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Lumbar puncture opening pressure (LPOP) refers to the pressure of cerebrospinal fluid (CSF) measured when a lumbar puncture (also called a spinal tap) is performed. During the procedure, a needle is inserted into the lower back (lumbar region) into the spinal canal, and the pressure of the CSF is recorded at the moment the needle first enters the fluid space, before any fluid is drawn.

In patients with **idiopathic intracranial hypertension (IIH)**, the LPOP is often elevated, as IIH is characterized by increased intracranial pressure without an identifiable cause (such as a brain tumor or blockage). LPOP is an important diagnostic marker for IIH, and a value above **25 cmH_2O** in adults is usually considered abnormal.

During this procedure, a healthcare professional inserts a needle into the lower back to collect a sample of CSF for diagnostic purposes or to measure the CSF pressure.

The opening pressure measurement is typically recorded in millimeters of mercury (mmHg) and provides valuable information about the intracranial pressure. It can help diagnose conditions such as hydrocephalus, intracranial hypertension, and certain infections or inflammatory disorders affecting the central nervous system.

An abnormally high or low opening pressure can indicate various neurological conditions, and it is an essential part of the diagnostic evaluation in patients presenting with symptoms related to the central nervous system.

Obesity has been shown to increase lumbar cerebrospinal fluid pressure in healthy subjects. Bono et al., studied lumbar CSF opening pressure in 18 obese, 33 overweight, and 49 nonoverweight subjects with normal MRI and MR venography (MRV) of the brain. No subject had a CSF pressure above 200 mm H2O. Obesity does not cause abnormal CSF pressure in subjects with normal MRV. Individuals with a CSF pressure higher than 200 mm H2O should undergo MRV to exclude cerebral venous thrombosis [1].

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Bono F, Lupo MR, Serra P, Cantafio C, Lucisano A, Lavano A, Fera F, Pardatscher K, Quattrone A. Obesity does not induce abnormal CSF pressure in subjects with normal cerebral MR venography. Neurology. 2002 Nov 26;59(10):1641-3. PubMed PMID: 12451215.