

External ventricular drainage cerebrospinal fluid collection

If clinically indicated, the [external ventricular drainage cerebrospinal fluid collection](#) system may be accessed by [physicians](#), and in some institutions, by [nurses](#), [withdrawing CSF](#) for the purposes of [cultures](#) and/or obtaining malignant cells, or to instill [medications](#) ^{1) 2) 3)}.

Spinal fluid samples are generally obtained through the proximal port (closest to the head) of the EVD collecting system and are performed using a strict [sterile technique](#) due to the risk of infection ⁴⁾.

Samples should not be collected from the [external ventricular drainage cerebrospinal fluid collection bag](#) due to the rapid [degradation](#) of cellular components. Though samples can be drawn from the distal port, white cell counts and cultures are often not accurate ⁵⁾.

When drawing the sample, aspiration should be very slow (no more than 1 ml/min) and if any resistance is met, the procedure should be aborted and a physician should be notified immediately. When medications are introduced into the EVD, such as tissue plasminogen activator for intraventricular hemorrhage ⁶⁾ or antibiotics for ventriculitis ⁷⁾ the EVD should be clamped for 1 h after administration.

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³⁾ , ⁵⁾

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