

Table 3

Classical CSF features of the different causes of meningitis (from the UK joint specialist societies guideline on the management of meningitis and meningococcal sepsis in immunocompetent adults) ³

	Normal	Bacterial	Viral	Tuberculous	Fungal
Opening pressure (cm CSF)	12-20	Raised	Normal/mildly raised	Raised	Raised
Appearance	Clear	Turbid, cloudy, purulent	Clear	Clear or cloudy	Clear or cloudy
CSF WCC (cells/μL)	< 5	Raised (typically >100)*	Raised (typically 5-1,000)*	Raised (typically 5-500)*	Raised (typically 5-500)*
Predominant cell type	n/a	Neutrophils**	Lymphocytes#	Lymphocytes†	Lymphocytes
CSF protein (g/L)	< 0.4	Raised	Mildly raised	Markedly raised	Raised
CSF glucose (mmol)	2.6-4.5	Very low	Normal/slightly low	Very low	Low
CSF:plasma glucose ratio	> 0.66	Very low	Normal/slightly low	Very low	Low

CSF = cerebrospinal fluid; WCC = white cell count
Local laboratory ranges for biochemical tests should be consulted and may vary from those quoted here

A traumatic lumbar puncture will affect the results by falsely elevating the white cells due to excessive red cells. A common correction factor used is 1:1000

* Occasionally the CSF WCC may be normal

** May be lymphocytic if antibiotics given before lumbar puncture (partially treated bacterial meningitis), or with certain bacteria e.g. *Listeria monocytogenes*

May be neutrophilic in enteroviral meningitis (especially early in disease)

† May be neutrophils early on in the course of disease