

SNNOOP10: Red Flags for Headache*

	Stands for	DDx	Tests to consider
S	Systemic symptoms or illness (fever, rash, fatigue, weight loss, neck stiffness, personality change)	Giant cell arteritis, cerebrovascular disease, encephalitis, inflammatory disease, meningitis	Blood tests (CBC, ESR/CRP), LP, neuroimaging, skin/temporal artery biopsy
S	Secondary risk factors (new headache in HIV, cancer, immunocompromised state, Lyme disease, post-trauma)	Metastases, opportunistic infections, CNS lymphoma, meningoencephalitis, subdural haematoma	Neuroimaging, LP
N	Neurologic signs or symptoms (altered mental status, focal deficit, personality change, seizure)	Stroke, intracerebral haemorrhage, mass lesion, CNS infection, AVM	Neuroimaging, LP, blood tests
N	Neoplasm history	Brain metastases, primary CNS tumour, leptomeningeal disease	Neuroimaging
O	Onset sudden/abrupt (thunderclap headache; maximal intensity within seconds-minutes)	Subarachnoid haemorrhage, reversible cerebral vasoconstriction syndrome (RCVS), cerebral venous sinus thrombosis, AVM rupture	LP, neuroimaging
O	Older age (>50 years) with new headache	Giant cell arteritis, mass lesion, malignancy	ESR/CRP, temporal artery biopsy, neuroimaging
P	Positional headache (worse upright or lying flat)	Spontaneous intracranial hypotension, posterior fossa pathology, Chiari malformation	Neuroimaging
P	Prior headache now changed (progressive, worsening, different quality or frequency)	Medication overuse headache, subdural haematoma, mass lesion	Neuroimaging
P	Papilledema / raised ICP (visual disturbance, vomiting)	Intracranial mass, meningitis, encephalitis, idiopathic intracranial hypertension	LP, neuroimaging
P	Pregnancy or puerperium	Cerebral venous sinus thrombosis, pre-eclampsia/eclampsia, RCVS, pituitary apoplexy	Neuroimaging
P	Painful eye with autonomic features	Acute angle-closure glaucoma, cavernous sinus pathology, carotid dissection	Ophthalmologic exam, neuroimaging
P	Post-traumatic headache	Subdural haematoma, intracerebral haemorrhage	Neuroimaging
P	Precipitated by exertion , valsalva, cough, or sexual activity	SAH, RCVS, Chiari malformation	Neuroimaging ± LP
P	Pharmacologic causes/anticoagulation	Intracranial haemorrhage, medication-overuse headache	Neuroimaging

Clinical Scenario	Neuroimaging	Contrast Use
Head trauma (acute)	CT Head	No contrast
Suspected intracranial haemorrhage (acute)	CT Head	No contrast
Stroke (suspected ischemic, <6 hours)	CT Head (initial)	No contrast (initial)+/- CT Angio/Perfusion (contrast)
Stroke (posterior circulation or small infarct)	MRI Brain	No contrast initially ± contrast if vasculitis or tumour suspected
Brain tumour (suspected)	MRI Brain	With contrast
Seizures (new-onset or refractory)	MRI Brain (DWI preferred)	With contrast if lesion is suspected
Chronic headaches/migraines (normal exam, no red flags)	No routine imaging	No contrast, unless red flags present
Chronic headaches/migraines (with red flags)	MRI Brain	No contrast initially ± contrast depending on suspicion
Infection (e.g., abscess, encephalitis)	MRI Brain (or CT if unstable)	With contrast
Hydrocephalus / raised ICP (acute)	CT Head	No contrast initially ± contrast if cause unclear
Multiple sclerosis (suspected demyelination)	MRI Brain ± Spine	With contrast (to assess active lesions)
Dementia (cognitive decline)	MRI Brain	No contrast initially ± contrast if atypical or focal features
Metastases (known or suspected cancer)	MRI Brain	With contrast
Bone involvement/fractures	CT Head	No contrast

*Always consult a neurologist if unsure