



CANADIAN STROKE BEST PRACTICE RECOMMENDATIONS

Secondary Prevention of Stroke Seventh Edition, Update 2020

TABLE 1A: Recommended Laboratory Investigations for Patients with Acute Stroke or Transient Ischemic Attack*

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Canadian Stroke Consortium*

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TABLE 1A: Recommended Laboratory Investigations for Patients with Acute Stroke or Transient Ischemic Attack*

Note: This list presents the recommended initial laboratory tests for patients with stroke and transient ischemic attack. Patient presentation, clinical judgment, and local stroke protocols should be considered in selecting appropriate laboratory investigations and the timing of completion.

Recommended Laboratory Investigations for Patients with Stroke and Transient Ischemic Attack		
Complete Blood Count (CBC)	International Normalized Ratio (INR)	Partial Thromboplastin Time (PTT)
Electrolytes	Creatinine and glomerular filtration rate (eGFR)	Liver enzymes (e.g., AST, ALT)
Random Glucose or Hemoglobin A1C	Either a fasting plasma glucose, or 2-hour plasma glucose, or glycated hemoglobin (A1C), or 75 g oral glucose tolerance test	Lipid profile (Fasting optional and decision should be based on individual patient factors)

Additional Laboratory Investigations for Consideration in Specific Circumstances

Note: All patients are individuals, and some may require additional investigations to fully understand their clinical situation. The investigations noted below may not be indicated in many stroke patients and should be considered in selected stroke patients based on clinical presentation and medical history.

Optional Laboratory Investigations			
Calcium, Magnesium, Phosphate	If female less than 50 years of age, consider pregnancy test	Blood cultures if infection suspected (per individual institutional protocol)	
ESR	CRP	Troponin, where indicated	
Blood and/or urine drug screen		HIV, syphilis serology, where indicated	
Thrombophilia Screen – For consideration in selected patients <i>only if clinically indicated.</i> <i>Recommend consultation with a specialist in thrombosis to evaluate for hypercoagulable state</i>			
Anticardiolipin antibodies, Beta-2-glycoprotein	Lupus anticoagulant	Sickle cell screen	Serum homocysteine and vitamin B12
Venous Thrombosis Testing - For consideration in selected patients <i>only if clinically indicated.</i> <i>Recommend consultation with a specialist in thrombosis to evaluate for hypercoagulable state</i>			
Protein S	Protein C	Factor V Leiden	
Prothrombin gene mutation		Antithrombin III	
Special considerations especially in young adults and children with stroke in absence of identified etiology (<i>Note there is not a strong evidence base for these investigations, and they should be considered only in selected stroke patients based on clinical presentation and medical history.</i>) Consultation with a hematologist or neurologist is recommended.			
Consider LP for CSF analysis (cell count and differential, protein, glucose, bacterial and viral studies; possibly cytology/flow cytometry if CNS lymphoma is a consideration)		Brain biopsy (if vasculitis of the central nervous system or angiocentric lymphoma is a consideration)	
Catheter cerebral angiography		Further genetic tests – CADASIL, Fabry’s, MELAS	