

<b>Laboratory Evaluation of Dementia</b>			
<b>Test</b>	<b>Intended diagnosis</b>	<b>Use</b>	<b>Comments</b>
Psychometric testing	All dementias, especially MCI, FTD	In appropriate clinical context	Virtually required for MCI, mild AD, and FTD; may be essential if medico-legal complications are possible
CBC, electrolyte panel, calcium, SUN, creatinine, glucose	Common metabolic disorders	Routinely	Not intended to be dementia-specific, but part of routine screening for any elderly person
Vitamin B12	Vitamin B12 deficiency	Routinely	Common disorder in elderly persons; may be associated with cognitive impairment
Thyrotropin	Hypothyroidism	Routinely	Common disorder in elderly persons; may be associated with cognitive impairment
MRI or CT (most clinicians prefer MRI when imaging is indicated)	Brain structural lesions; CJD	Routinely, in certain circumstances	Needed only at initial diagnosis or after a rapid clinical change; perfusion MRI for CJD
PET or SPECT	AD, FTD	For added diagnostic certainty in selected cases	Marginal additive value over clinical diagnosis for AD; perhaps more helpful in FTD
EEG	CJD	When CJD is suspected	Not useful routinely, but required as part of a diagnosis for CJD
APOE genotyping	AD	Rarely	Marginal additive value over clinical diagnosis; not recommended for risk prediction
Standard CSF analysis	Meningitis, meningeal cancer, encephalitis	In rapidly progressive dementias	None
CSF analysis for 14-3-3 protein or neuron-specific enolase	CJD	When CJD is suspected	Highly sensitive and specific, if acute infections, stroke, and neoplastic diseases are excluded by other means
CSF analysis for beta-amyloid and tau	AD	Rarely	Marginal additive value over clinical diagnosis

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AD = Alzheimer's disease; APOE = apolipoprotein E; CBC = complete blood count; CJD = Creutzfeldt-Jakob disease; CSF = cerebrospinal fluid; CT = computed tomography; EEG = electroencephalography; FTD = frontotemporal dementia; MCI = mild cognitive impairment; MRI = magnetic resonance imaging; PET = positron emission tomography; SPECT = single-photon emission CT; SUN = serum urea nitrogen.