



FIGURE 107-2 A, Homuncular arrangement shows the correlations with the primary motor cortex lying anterior to the central sulcus and the somatosensory cortex posteriorly (B). (Modified from Kretschmann HJ, Weinrich W: Neurofunctional systems: 3D reconstructions with correlated neuroimaging: text and CD-ROM, New York, 1998, Thieme.)

TABLE 107-1 CORTICAL SYMPTOMS AND SIGNS

DOMINANT HEMISPHERE	NONDOMINANT HEMISPHERE	EITHER HEMISPHERE
FRONTAL LOBE		
Broca's aphasia Transcortical motor aphasia Pure agraphia	Motor dysprosody	Contralateral spastic weakness Forced eye deviation Executive dysfunction, poor sequencing Akinetic mutism, urinary incontinence (bilateral lesions) Disinhibition, emotional lability, abulia Frontal lobe release signs (pout, grasp, snout, rooting, palmomental) Alien hand
PARIETAL LOBE		
Wernicke aphasia Transcortical sensory aphasia Apraxia Gerstmann's syndrome (acalculia, finger agnosia, right-left disorientation, agraphia) Conduction aphasia	Contralateral sensory neglect Constructional apraxia Anosagnosia Dressing apraxia	Contralateral sensory loss
TEMPORAL LOBE		
Anomic or sensory aphasia Verbal amnesia Transcortical sensory aphasia Pure word deafness	Impaired recognition of facial emotional expressions Visuospatial amnesia Sensory dysprosody/amusia	Contralateral superior quadrantanopia Amnesia Klüver-Bucy syndrome (oral-exploratory behavior, passivity, hypersexuality) bilateral lesions Auditory hallucinations Complex visual hallucinations Olfactory hallucinations Visual/experiential delusions
OCCIPITAL LOBE		
Alexia without agraphia		Anton's syndrome (visual agnosia, denial of blindness) Contralateral homonymous hemianopia Visual hallucinations Optic apraxia, absent optokinetic nystagmus, palinopsia Balint's syndrome (simultanagnosia, optic ataxia, oculomotor apraxia); bilateral lesions, usually occipitoparietal