

**United Council for Neurologic Subspecialties  
Geriatric Neurology  
Written Examination  
Content Outline**

REV 3/24/09

The UCNS Geriatric Neurology examination was established to determine the level of competence for Geriatric Neurology specialists.

The following content outline is provided to examination candidates interested in the certification examination. The content outline consists of four primary categories followed by subcategories. A complete description of the core content required of Geriatric Neurology specialists can be found in the Geriatric Neurology Core Curriculum at:

<http://www.ucns.org/go/subspecialty/geriatric/certification>.

The written examination consists of 200 multiple choice questions.

<b>Content Area</b>	<b>Percentage of Questions</b>
<b>I. Scientific Basis of the Aging Nervous System</b>	<b>10%</b>
<b>II. Neurologic Assessment of Older Adult</b>	<b>20%</b>
<b>III. Geriatric Neurology Syndromes</b>	<b>35%</b>
<b>IV. Treatment and Management</b>	<b>35%</b>

**I. Scientific Basis of the Aging Nervous System**

A. Review of Neuroanatomy

1. Cerebral cortex
2. Basal ganglia/Thalamus
3. Brainstem
4. Cerebellum
5. Spinal Cord
6. Peripheral nervous system
7. Neurochemistry – neurotransmitters, neuropeptides, neurohormones
8. Cerebrovascular

B. Changes associated with the Aging Nervous System

1. Cognition
2. Cranial Nerves
3. Motor

4. Sensory
5. Cerebellar
6. Reflexes
7. Gait
8. Primitive reflexes
9. Basal ganglia

## **II. Neurologic Assessment of Older Adult**

### **A. Neurological Examination**

1. Elemental neurological function
2. Neurological “soft-signs”
3. Standardized rating scales

### **B. Mental Status Examination**

1. General assessment
2. Behavioral assessment
3. Cognitive examination
4. Informant assessments
5. Clinical interpretation

### **C. Neuropsychological Assessment**

1. Attention, Orientation and Concentration
2. Language and communication
3. Verbal and Episodic Memory
4. Executive Abilities
5. Visuospatial abilities

### **D. Specialized Assessments**

1. Extrapyramidal signs and the Unified Parkinson Disease Rating Scale (UPDRS)
2. Gait patterns
3. Autonomic assessments
4. “Cortical” Sensory function
5. Sleep studies
6. Electrophysiology

### **E. Neuroimaging**

1. Principles and applications of structural and functional imaging
  - a. CT
  - b. MRI / Volumetric MRI
  - c. PET/SPECT/DAT
  - d. Amyloid Imaging - PIB, AV45
2. Correlation between neuroimaging and clinical examination

### **F. Laboratory Studies**

1. Indications for serum and urine studies

2. Indications for and interpretation of results from CSF examinations

### **III. Geriatric Neurology Syndromes**

#### **A. Cognitive disorders**

1. Acute confusional states/Delirium
2. Mild cognitive impairment
3. Alzheimer's disease
4. Dementia with Lewy bodies
5. Vascular dementia
6. Frontotemporal dementia & progressive aphasia
7. Prion diseases
8. Normal Pressure hydrocephalus
9. Traumatic brain injury

#### **B. Neuropsychiatric Syndromes**

1. Agitation
2. Substance abuse and dependence
3. Disorders of mood/affect
4. Anxiety disorders
5. Psychotic disorders
6. Personality disorders and personality change due to neurological/medical conditions

#### **C. Cerebrovascular disease**

1. Vascular risk factors
2. Transient ischemic attacks
3. Stroke
4. Cerebral amyloid angiopathy/cerebral hemorrhages
5. Subdural hematomas

#### **D. Movement Disorders/Gait disorders**

1. Parkinson's disease/Parkinsonism
2. Essential Tremor
3. Progressive Supranuclear Palsy
4. Corticobasal Degeneration
5. Gait disorders/mobility

#### **E. Sleep disorders**

1. Sleep apnea
2. REM behavioral disorder
3. Insomnia
4. Restless legs syndromes
5. Nocturnal cramps

## 6. Medication-induced sleep disturbances

### F. Autonomic dysfunction

1. Orthostasis
2. Bladder disorders
3. Sexual dysfunction

### G. Paroxysmal Disorders

1. Epilepsy
2. Positional vertigo
3. Syncope

### H. Sensory disorders

1. Visual
2. Auditory
3. Somatosensory
4. Olfaction and taste

### I. Other disorders and syndromes that occur in geriatric populations

1. Demyelinating disorders
2. Primary and secondary brain tumors
3. Central nervous system infections
4. Neuroendocrine disorders
5. Headache
6. Falls
7. Dizziness
8. Acute and chronic pain
9. Frailty
10. Disorders of the spinal cord, nerves and muscle

## **IV. Treatment and Management**

### A. Pharmacological Approaches

1. Cognitive agents
2. Dopaminergic agents
3. Vascular approaches (statins, aspirin, etc)
4. Psychopharmacology
5. Bladder dysfunction
6. Orthostatic hypotension
7. Sexual dysfunction
8. Sleep aids
9. Drug-drug interactions

### B. Nonpharmacological Approaches

1. Behavioral therapy
2. Other therapy modalities (art, music, recreation)

### 3. Environmental interventions

#### C. Psychosocial Interventions

1. Supportive therapy
2. Caregiver burden/stress
3. Long term care referrals
4. Interdisciplinary approaches to case management including medication compliance

#### D. Ethical and Legal Issues