



# CBIS Examination Study Outline

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## Brain Injury Overview (Essential Brain Injury Guide (EBIG) chapter 1)

- Definitions of acquired and traumatic brain injuries (ABI and TBI)
- Characteristics of mild, moderate, and severe brain injuries
- Incidence and prevalence of injury and mortality
- Chronic conditions caused or accelerated by TBI
- Standards for rehabilitation facilities
- Ramifications of Olmstead decision
- The Model Systems of Care

## Neuroanatomy and Neuroplasticity (EBIG chapters 2 and 3)

- Anatomy of the brain and spinal cord
- Characteristics of and relationships between neurons and synapses
- Importance of the reticular activating system
- Types of imaging
- Blood-brain barrier
- Effects of neuroplasticity
- Principles of neuroprotection
- Experience-dependent learning

## Medical and Physical Consequences (EBIG chapters 4 and 5)

- Medical Issues
  - Autonomic storming
  - DVT/PE
  - Bladder issues
  - Aspiration
  - TBI and spinal cord overlap
  - Seizures, complications, and mortality
  - Cranial nerve damage
  - Pain after brain injury
  - Evaluation and treatment of headaches
- Physical issues
  - Spasticity, hyperreflexia, contractures, HO
  - Pressure sores
  - Perceptual deficits
  - Complications related to aging

## Cognitive, Neuropsychiatric, Psychosocial, and Neurobehavioral Consequences (EBIG chapters 6, 7, and 8)

- Types of injuries and correlating cognitive impairments
- Hierarchical approach to and elements of cognitive rehabilitation (attention, memory, metacognition, etc.)
- Restorative vs. compensatory approach to rehabilitation
- Neuropsychology
  - Focus, use, and setting of neuropsych assessments
  - Factors affecting duration of psychiatric symptoms
- Co-occurring brain injury and psychiatric illnesses and crisis events
  - Depression after brain injury
  - Anxiety after brain injury
  - Substance use disorders after brain injury
- Factors in post-injury development of a psychiatric disorder
- Behavioral issues
  - Coma and coma-emergent management
  - Factors influencing behavior and behavior deficits
  - Types of behavioral assessments
  - Principles of applied behavior analysis
  - Intermittent schedule of reinforcement
  - Positive and negative reinforcement and punishment
  - Stability triangle
  - Functionally equivalent alternatives
  - Operational definition of a behavior

## Rehabilitation Philosophy, Cultural Competency, and Participation (EBIG chapters 9, 10, and 11)

- Rehabilitation Philosophy
  - Models of disability
  - Components of therapeutic relationships
  - Components to person-centered care
- Cultural Competency & Humility
  - Definitions of culture, sociorace, universalism, and multiculturalism
  - Types of intelligence
  - Racial and ethnic considerations

## Neurorehabilitation Practices and Outcomes (EBIG Chapters 12 and 13)

- Neurorehabilitation Practices
  - Different types of rehabilitation teams
  - Tenets of person-centered approaches
  - Effects of improvement in self-awareness
  - Iatrogenesis
  - Extenders
  - Assistive Technology for cognition
  - Cognitive rehabilitation principles
  - Factors that interfere with cognitive rehabilitation
  - Internal and external strategies
  - Environmental stimuli management, task complexity management, and cognitive distance
- Outcome Measurement
  - Definitions of reliability, validity, and widely accepted
  - Measures early after injury
  - Measures used in acute rehab
  - Measures used in post-acute rehab
  - Measures for rating participation
  - Required aspects of outcomes tools
  - Common data elements

## Special Populations - mTBI, DoC, Pediatrics/Adolescents, Military, and Aging with a Brain injury (EBIG Chapters 14, 15, 16, 17, and 25)

- mTBI definition, incidence, and symptoms
  - Reducing disability from mTBI
  - PPCS incidence and treatment plans
  - CTE
- Disorders of Consciousness
  - Prevalence and types of DoC
  - Prognosis and medical management of DoC
  - Importance of autonomic nervous system
- Pediatrics and adolescents
  - Brain maturation periods
  - Special Ed, IDEA, 504 accommodations plan, IEP, and ITP
  - Shaken Baby Syndrome/Abusive Head Trauma

- Military populations
  - Primary/secondary/tertiary/quaternary injury
  - Prevalence of PTSD
  - Factor and process for return to duty
- Aging
  - Diagnosis of dementia
  - Predominant factors of disability

## Special Considerations – At Risk Substance Use, Fatigue & Sleep, Return to Work, and Sex/Gender & Sexuality (EBIG Chapters 18, 19, 20, and 21)

- Substance misuse
  - Description of substance use disorder
  - Prevalence of and screening tools for SUD
  - Deficits affecting treatment for SUD
  - TBI and SUD
- Sleep and fatigue disorders
  - Causes, measurement, persistence, and treatment of sleepiness and fatigue
  - Fatigue vs sleep disruptions
  - Physiological vs. Psychological fatigue
- Gender/Sexuality
  - Differences in injury and outcomes between males and females
  - Primary and secondary causes of sexual dysfunction
  - The concept of benign neglect
- Return to work
  - Barriers to RTW and outcome statistics
  - Outcomes for RTW – differences in gender
  - Rehab Act of 1973
  - State VR services and supported employment programs
  - Vocational case coordinator
  - Comprehensive integrated day treatment model

## Families, Legal & Ethical Considerations, and Care Management (EBIG Chapters 22, 23, and 24)

- Families
  - Family challenges post-injury
  - Stress for caregivers
  - Family Systems Theory
  - Techniques for working with families (including family centered services)

- Cognitive behavioral therapy
- Legal issues
  - Legal rights of persons with brain injury; Patient Bill of Rights
  - Power of Attorney and Guardianship
  - Exploitation, neglect, and abuse
  - Legal use of restraint
- Care management
  - Case management service process
  - Life care plans
  - Selecting a service provider