

## **Traumatic Brain Injury (TBI) Examination** *Comprehensive Version*

Name: \_\_\_\_\_ SSN: \_\_\_\_\_  
Date of Exam: \_\_\_\_\_ C-number: \_\_\_\_\_  
Place of Exam: \_\_\_\_\_

**Narrative:** The potential residuals of traumatic brain injury necessitate a comprehensive examination to document all disabling effects. Specialist examinations, such as eye and audio examinations, mental disorder examinations, and others, may also be needed in some cases, as indicated below. If possible, conduct a thorough review of the service and post-service medical records prior to the examination.

### **Health care providers who may conduct TBI examinations:**

Generalist clinicians, who successfully complete the Compensation and Pension Service (C&P) TBI training module, are permitted to perform TBI residual disability examinations, subject to existing VBA/C&P guidance on examiner qualification, including M21-1MR, III.iv.3.D.18.b.

### **A. Review of Medical Records:**

### **B. Medical History (Subjective Complaints):**

1. Report date(s) and nature of injury.
2. State severity rating of traumatic brain injury (TBI) at time of injury.
3. State whether condition has stabilized. If not, provide estimate of when stability may be expected (typically within 18-24 months of initial injury).
4. Inquire specifically about each symptom or area of symptoms below, since individuals with TBI may have difficulty organizing and communicating their symptoms without prompting. It is important to document all problems, whether subtle or pronounced, so that the veteran can be appropriately evaluated for all disabilities due to TBI. Also document all negative responses.

**For each of the following symptoms that is present, answer specific questions asked.**

- a. headaches - frequency, severity, duration, and if they most resemble migraine, tension-type, or cluster headaches
- b. dizziness or vertigo - frequency

- c. weakness or paralysis - location
- d. sleep disturbance - type and frequency
- e. fatigue - severity
- f. malaise
- g. mobility - state symptoms
- h. balance - state any problems
- i. if ambulatory, what device, if any, is needed to assist walking?
- j. memory impairment - mild, moderate, severe
- k. other cognitive problems Y/N? If yes, which?:
  - i. Decreased attention
  - ii. Difficulty concentrating
  - iii. Difficulty with executive functions (speed of information processing, goal setting, planning, organizing, prioritizing, self-monitoring, problem solving, judgment, decision making, spontaneity, and flexibility in changing actions when they are not productive)
  - iv. Other - describe
- l. speech or swallowing difficulties - severity and specific type of problem - expressive aphasia?, difficulty with articulation because of injuries to mouth?, aspiration due to difficulty swallowing?, etc.
- m. pain - frequency, severity, duration, location, and likely cause
- n. bowel problems - extent and frequency of any fecal leakage and frequency of need for pads, if used; need for assistance in evacuating bowel (manual evaluation, suppositories, rectal stimulation, etc.) - report type and frequency of need for assistance.
- o. bladder problems - report the type of impairment (incontinence, urgency, urinary retention, etc.) and the measures needed: catheterization - constant or intermittent?, pads (must be changed how often per day?), other - describe).
- p. psychiatric symptoms - mood swings, anxiety, depression, other (describe)
- q. erectile dysfunction - If present, state most likely cause and whether vaginal penetration with ejaculation is possible. State type of treatment and if it is effective in allowing intercourse.
- r. sensory changes, such as numbness or paresthesias - location and type
- s. vision problems, such as blurred or double vision- describe
- t. hearing problems, tinnitus - describe
- u. decreased sense of taste or smell - if present, follow examination protocol for Sense of Smell and Taste
- v. seizures - type and frequency
- w. hypersensitivity to sound or light - describe
- x. neurobehavioral symptoms - irritability, restlessness, other (describe)
- y. symptoms of autonomic dysfunction, such as heat intolerance, excess or decreased sweating, etc.

- z. other symptoms, including symptoms of endocrine dysfunction or cranial nerve dysfunction – describe.
- 5. Report course of symptoms - are they improving, worsening in severity or frequency, or stable?
- 6. List current treatments, condition for which each treatment is being given, response to treatment, and side effects.
- 7. Describe any effects on routine daily activities or employment.

### C. Physical Examination (Objective Findings):

Address each of the following and fully describe current findings:

1. **Motor function.** Report the motor strength of the affected muscles of all areas of weakness or paralysis using the standard muscle grading scale, for example, weakness of flexion of left elbow (3/5 strength for flexors), complete paralysis of left lower extremity (0/5 for all muscle groups). To the extent possible, identify the peripheral nerves that innervate the weakened or paralyzed muscles, even when the weakness or paralysis is of central origin.

Standard muscle grading scale:

- 0 = Absent** No muscle movement felt.
- 1 = Trace** Muscle can be felt to tighten, but no movement produced.
- 2 = Poor** Muscle movement produced only with gravity eliminated.
- 3 = Fair** Muscle movement produced against gravity, but cannot overcome any resistance.
- 4 = Good** Muscle movement produced against some resistance, but not against "normal" resistance.
- 5 = Normal** Muscle movement can overcome "normal" resistance

2. **Muscle tone, reflexes.** Describe any muscle atrophy or loss of muscle tone. Examine and report deep tendon reflexes and any pathological reflexes.
3. **Sensory function.** Describe exact location of any area of abnormal sensory function. State which modalities of sensation were tested. Identify the peripheral nerve(s) that innervate the areas with abnormal sensation.
4. **Gait, spasticity, cerebellar signs.** Describe any gait abnormality, imbalance, tremor or fasciculations, incoordination, or spasticity. If there is spasticity or rigidity, assess any limitation of motion of joint (including joint contracture) by following the Joins examination protocol. (A tandem gait assessment (walking in a straight line with one foot directly in front of the other) is recommended.)

5. **Autonomic nervous system.** Describe any other impairment of the autonomic nervous system, such as orthostatic (postural) hypotension (if present, state if associated with dizziness or syncope on standing), hyperhidrosis, delayed gastric emptying, heat intolerance, etc.
6. **Cranial nerves.** Conduct a screening exam for cranial nerve impairment. If positive, follow Cranial Nerves examination protocol.
7. **Cognitive impairment.** Conduct a screening examination (such as the Montreal Cognitive Assessment (MOCA) or Mini-Mental State Examination (MMSE)) to assess cognitive impairment and report results and their significance. Does the screening show problems with memory, concentration, attention, executive functions, etc.? If yes, neuropsychological testing to confirm the presence and extent of cognitive impairment is needed, unless already conducted and of record. Include test results in the examination report.
8. **Psychiatric manifestations.** Conduct a screening examination for psychiatric manifestations, including neurobehavioral effects. If a mental disorder is suggested, request a mental disorder exam or PTSD exam, as appropriate, by a mental disease specialist.
9. **Vision and hearing** screening examinations (If abnormalities are found, or there are symptoms or a claim of eye or ear impairment, request an eye or audio exam by a specialist.)
10. **Skin.** Describe any areas of skin breakdown due to neurologic problems.
11. **Endocrine dysfunction.** If evidence of endocrine function is identified or suspected, select and follow the additional appropriate examination protocol for the type of endocrine disorder identified.
12. **Autonomic dysfunction.** Report any symptoms of autonomic dysfunction, such as heat intolerance, excess or decreased sweating, etc.
13. **Other** abnormal physical findings.
14. **Assessment of cognitive impairment and other residuals of TBI not otherwise classified:**

Instruction: Select the specific choice for each of the following items (after completion of neuropsychological testing, if done). State on the examination report which of the choices best describes each of the items. Do not report by using the number of the item or the letter of the description. Report the title of the item: "Memory, attention, concentration, executive functions," etc., and then state the correct description, e.g., " There is objective evidence on testing of mild impairment of memory (and/or attention, and/or concentration, and/or executive functions) resulting in mild functional impairment."

- I. Memory, attention, concentration, executive functions
  - a. No complaints of impairment of memory, attention, concentration, or executive functions.

- b. A complaint of mild memory loss (such as having difficulty following a conversation, recalling recent conversations, remembering names of new acquaintances, or finding words, or often misplacing items), attention, concentration, or executive functions, but without objective evidence on testing.
- c. Objective evidence on testing of mild impairment of memory, attention, concentration, or executive functions resulting in mild functional impairment.
- d. Objective evidence on testing of moderate impairment of memory, attention, concentration, or executive functions resulting in moderate functional impairment.
- e. Objective evidence on testing of severe impairment of memory, attention, concentration, or executive functions resulting in severe functional impairment.

## II. Judgment

- a. Normal.
- b. Mildly impaired judgment. For complex or unfamiliar decisions, occasionally unable to identify, understand, and weigh the alternatives, understand the consequences of choices, and make a reasonable decision.
- c. Moderately impaired judgment. For complex or unfamiliar decisions, usually unable to identify, understand, and weigh the alternatives, understand the consequences of choices, and make a reasonable decision, although has little difficulty with simple decisions.
- d. Moderately severely impaired judgment. For even routine and familiar decisions, occasionally unable to identify, understand, and weigh the alternatives, understand the consequences of choices, and make a reasonable decision.
- e. Severely impaired judgment. For even routine and familiar decisions, usually unable to identify, understand, and weigh the alternatives, understand the consequences of choices, and make a reasonable decision. For example, unable to determine appropriate clothing for current weather conditions or judge when to avoid dangerous situations or activities.

## III. Social interaction

- a. Social interaction is routinely appropriate.
- b. Social interaction is occasionally inappropriate.
- c. Social interaction is frequently inappropriate.
- d. Social interaction is inappropriate most or all of the time.

## IV. Orientation

- a. Always oriented to person, time, place, and situation.

- b. Occasionally disoriented to one of the four aspects (person, time, place, situation) of orientation.
- c. Occasionally disoriented to two of the four aspects (person, time, place, situation) of orientation or often disoriented to one aspect of orientation.
- d. Often disoriented to two or more of the four aspects (person, time, place, situation) of orientation.
- e. Consistently disoriented to two or more of the four aspects (person, time, place, situation) of orientation.

V. Motor activity (with intact motor and sensory system)

- a. Motor activity normal.
- b. Motor activity normal most of the time, but mildly slowed at times due to apraxia (inability to perform previously learned motor activities, despite normal motor function).
- c. Motor activity mildly decreased or with moderate slowing due to apraxia.
- d. Motor activity moderately decreased due to apraxia.
- e. Motor activity severely decreased due to apraxia.

VI. Visual spatial orientation

- a. Normal.
- b. Mildly impaired. Occasionally gets lost in unfamiliar surroundings, has difficulty reading maps or following directions. Is able to use assistive devices such as GPS (global positioning system).
- c. Moderately impaired. Usually gets lost in unfamiliar surroundings, has difficulty reading maps, following directions, and judging distance. Has difficulty using assistive devices such as GPS (global positioning system).
- d. Moderately severely impaired. Gets lost even in familiar surroundings, unable to use assistive devices such as GPS (global positioning system).
- e. Severely impaired. May be unable to touch or name own body parts when asked by the examiner, identify the relative position in space of two different objects, or find the way from one room to another in a familiar environment.

VII. Subjective symptoms

- a. Subjective symptoms that do not interfere with work; instrumental activities of daily living; or work, family, or other close relationships. Examples are: mild or occasional headaches, mild anxiety.
- b. Three or more subjective symptoms that mildly interfere with work; instrumental activities of daily living; or work, family, or other close relationships. Examples of findings that might be

seen at this level of impairment are: intermittent dizziness, daily mild to moderate headaches, tinnitus, frequent insomnia, hypersensitivity to sound, hypersensitivity to light.

- c. Three or more subjective symptoms that moderately interfere with work; instrumental activities of daily living; or work, family, or other close relationships. Examples of findings that might be seen at this level of impairment are: marked fatigability, blurred or double vision, headaches requiring rest periods during most days.

#### VIII Neurobehavioral effects

- a. One or more neurobehavioral effects that do not interfere with workplace interaction or social interaction. Examples of neurobehavioral effects are: irritability, impulsivity, unpredictability, lack of motivation, verbal aggression, physical aggression, belligerence, apathy, lack of empathy, moodiness, lack of cooperation, inflexibility, and impaired awareness of disability. Any of these effects may range from slight to severe, although verbal and physical aggression are likely to have a more serious impact on workplace interaction and social interaction than some of the other effects.
- b. One or more neurobehavioral effects that occasionally interfere with workplace interaction, social interaction, or both but do not preclude them.
- c. One or more neurobehavioral effects that frequently interfere with workplace interaction, social interaction, or both but do not preclude them.
- d. One or more neurobehavioral effects that interfere with or preclude workplace interaction, social interaction, or both on most days or that occasionally require supervision for safety of self or others.

#### IX. Communication

- a. Able to communicate by spoken and written language (expressive communication), and to comprehend spoken and written language.
- b. Comprehension or expression, or both, of either spoken language or written language is only occasionally impaired. Can communicate complex ideas.
- c. Inability to communicate either by spoken language, written language, or both, more than occasionally but less than half of the time, or to comprehend spoken language, written language, or both, more than occasionally but less than half of the time. Can generally communicate complex ideas.
- d. Inability to communicate either by spoken language, written language, or both, at least half of the time but not all of the

time, or to comprehend spoken language, written language, or both, at least half of the time but not all of the time. May rely on gestures or other alternative modes of communication. Able to communicate basic needs.

- e. Complete inability to communicate either by spoken language, written language, or both, or to comprehend spoken language, written language, or both. Unable to communicate basic needs.

X. Consciousness

- a. Normal
- b. Persistently altered state of consciousness, such as vegetative state, minimally responsive state, coma.

Other comments.

**NOTE:** To clarify Item VII above: "Instrumental activities of daily living" refers to activities other than self-care that are needed for independent living, such as meal preparation, doing housework and other chores, shopping, traveling, doing laundry, being responsible for one's own medications, and using a telephone. These activities are distinguished from "Activities of daily living," which refer to basic self-care and include bathing or showering, dressing, eating, getting in or out of bed or a chair, and using the toilet.

**D. Diagnostic and Clinical Tests:**

1. Skull X-rays to measure bony defect, if any, due to surgery or injury.
2. Include results of all diagnostic and clinical tests conducted in the examination report.

**E. Diagnosis:**

1. State whether or not the veteran had a TBI during service.
2. List each diagnosis and, for each, indicate if associated with a service-related TBI.
3. Capacity to manage financial affairs  
Mental competency, for VA benefits purposes, refers only to the ability of the veteran to manage VA benefit payments in his or her own best interest, and not to any other subject. Mental incompetency, for VA benefits purposes, means that the veteran, because of injury or disease, is not capable of managing benefit payments in his or her best interest. In order to assist raters in making a legal determination as to competency, please address the following:

- a. What is the impact of injury or disease on the veteran's ability to manage his or her financial affairs, including consideration of such things as knowing the amount of his or her VA benefit payment, knowing the amounts and types of bills owed monthly, and handling the payment prudently? Does the veteran handle the money and pay the bills himself or herself?
  - b. Based on your examination, do you believe that the veteran is capable of managing his or her financial affairs? Please provide examples to support your conclusion. If you believe a Social Work Service assessment is needed before you can give your opinion on the veteran's ability to manage his or her financial affairs, please explain why.
4. **Note:** When a mental disorder is present, state, or ask the mental disorders examiner to state, to the extent possible, which emotional/behavioral signs and symptoms are part of a co-morbid mental disorder and which represent residuals of TBI. If it is impossible to make such a determination without speculation, so state.

Signature:

Date:

## DEFINITION OF TRAUMATIC BRAIN INJURY

A traumatically induced structural injury and/or physiological disruption of brain function as a result of an external force that is indicated by new onset or worsening of at least one of the following clinical signs, immediately following the event:

- Any period of loss of or a decreased level of consciousness;
- Any loss of memory for events immediately before or after the injury;
- Any alteration in mental state at the time of the injury (confusion, disorientation, slowed thinking, etc.);
- Neurological deficits (weakness, loss of balance, change in vision, praxis, paresis/plegia, sensory loss, aphasia, etc.) that may or may not be transient;
- Intracranial lesion.

External forces may include any of the following events: the head being struck by an object, the head striking an object, the brain undergoing an acceleration/deceleration movement without direct external trauma to the head, a foreign body penetrating the brain, forces generated from events such as a blast or explosion, or other force yet to be defined.

The above criteria define the event of a traumatic brain injury (TBI). Sequelae of TBI may resolve quickly, within minutes to hours after the neurological event, or they may persist longer. Some sequelae of TBI may be permanent. Most signs and symptoms will manifest immediately following the event. However, other signs and symptoms may be delayed from days to months (e.g., subdural hematoma, seizures, hydrocephalus, spasticity, etc.). Signs and symptoms may occur alone or in varying combinations and may result in a functional impairment. These signs and symptoms are not better explained by pre-existing conditions or other medical, neurological, or psychological causes except in cases of an exacerbation of a pre-existing condition. These generally fall into one or more of the three following categories:

- Physical: Headache, nausea, vomiting, dizziness, blurred vision, sleep disturbance, weakness, paresis/plegia, sensory loss, spasticity, aphasia, dysphagia, dysarthria, apraxia, balance disorders, disorders of coordination, seizure disorder.

- Cognitive: Attention, concentration, memory, speed of processing, new learning, planning, reasoning, judgment, executive control, self-awareness, language, abstract thinking.
- Behavioral/emotional: Depression, anxiety, agitation, irritability, impulsivity, aggression.

Note: The signs and symptoms listed above are typical of each category but are not an exhaustive list of all possible signs and symptoms.

### SEVERITY OF BRAIN INJURY STRATIFICATION:

Not all individuals exposed to an external force will sustain a TBI. TBI varies in severity, traditionally described as mild, moderate and severe. These categories are based on measures of length of unconsciousness, post-traumatic amnesia.

The trauma may cause structural damage or may produce more subtle damage that manifests by altered brain function, without structural damage that can be detected by traditional imaging studies such as Magnetic Resonance Imaging or Computed Tomography scanning. In addition to traditional imaging studies, other imaging techniques such as functional magnetic resonance imaging, diffusion tensor imaging, positron emission tomography scanning, as well as electrophysiological testing such as electroencephalography may be used to detect damage to or physiological alteration of brain function. In addition, altered brain function may be manifest by altered performance on neuropsychological or other standardized testing of function.

Acute injury severity is determined at the time of the injury, but this severity level, while having some prognostic value, does not necessarily reflect the patient's ultimate level of functioning. It is recognized that serial assessments of the patient's cognitive, emotional, behavioral and social functioning are required.

- The patient is classified as mild/moderate/severe if he or she meets any of the criteria below within a particular severity level. If a patient meets criteria in more than one category of severity, the higher severity level is assigned.
- If it is not clinically possible to determine the brain injury level of severity because of medical complications (e.g., medically induced coma), other severity markers are required to make a determination of the severity of the brain injury.

Mild	Moderate	Severe
Normal structural imaging	Normal or abnormal structural imaging	Normal or abnormal structural imaging
LOC = 0–30 min*	LOC >30 min and < 24 hours	LOC > 24 hrs
AOC = a moment up to 24 hrs	AOC >24 hours. Severity based on other criteria	
PTA = 0–1 day	PTA >1 and <7 days	PTA > 7 days

AOC – Alteration of consciousness/mental state

LOC – Loss of consciousness

PTA – Post-traumatic amnesia

It is recognized that the cognitive symptoms associated with post-traumatic stress disorder (PTSD) may overlap with symptoms of mild TBI. Differential diagnosis of brain injury and PTSD is required for accurate diagnosis and treatment.