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Workers Compensation and Neuropsychological Evaluations: What You Need to Know

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Neuropsychological Assessment

"An examination of the brain by studying its behavioral product."

- Lezak

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Learning Objectives

- List potential reasons for referral for a neuropsychological assessment
- Name potential benefits of a neuropsychological assessment
- Describe the cognitive domains typically assessed in a neuropsychological battery

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Neuropsychologist

- Licensed psychologist
  - Extensive training in brain-behavior relationships:
    - Doctoral coursework in neuroanatomy, cognition, mood, psychometrics, assessment, psychotherapy
- Two-year postdoctoral fellowship
- Board Certification (ABPP, ABN)

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Neuropsychological assessment

Comprehensive evaluation

- standardized assessment of cognition
- incorporates medical, developmental, educational, occupational, social, legal, personal history
- provides diagnosis (if applicable), treatment recommendations, vocational recommendations

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Neuropsychological Evaluation: It depends on the setting

Setting	Clinical/Medical	Legal/Forensic
Client	Patient Physician	Workers' compensation Disability insurance carriers Attorneys Courts
Referral question	Diagnosis Prognosis Treatment	Diagnosis Prognosis Treatment Allocation of benefits Effort
Role of neuropsychologist	Objective assessment Clinical provider Patient advocate	Independent and objective evaluator

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Neuropsychological Evaluation: It depends on the setting

Setting	Clinical/Medical	Legal/Forensic
Data source	Patient self-report Collateral report Medical records Behavioral observations Test performance	Medical, legal, educational, occupational records Examinee's self-report Behavioral observations Test performance
Parameters of report	Protected health information Distributed to doctor, client Confidentiality is paramount	Information collected for legal purposes Distributed to payee who determines use Confidentiality not assured

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Possible Referral Questions

- What is the examinee's current neuropsychological status, including strengths and weaknesses?
- What are the diagnoses? Prognosis? Etiology of symptoms?
- Is there evidence of symptom exaggeration?
- Does examinee's performance corroborate with injury/illness?
- Could examinee's neuropsychological status be normal variation?
- How to previous injuries affect current presentation?
- How do pre-existing conditions affect presentation?
- How do pre-existing conditions affect recovery?

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Possible Referral Questions

- Do weaknesses reach the level of impairing function/work performance? How? To what degree?
- Are accommodations/treatment needed to improve function?
  - Does work require modifications?
  - Is the examinee able to return to usual position?
  - Can the examinee return to “light duty”, modified hours?
  - Are ergonomic modifications necessary/beneficial?
  - Is a job coach necessary/beneficial?

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When to refer for neuropsychological evaluation

- Injury to the brain
  - Traumatic brain injury
  - Stroke
  - Loss of oxygen (heart attack, near drowning, near suffocation)
  - Drug overdose
  - Brain tumors
  - Severe allergic reaction resulting in loss of consciousness
  - Exposure to neurotoxins
- Pain syndromes that present with cognitive symptoms
- Illnesses that affect cognition
  - Multiple Sclerosis, Lyme Disease, HIV, Dementia, ADHD
- Psychiatric illnesses that affect cognition
  - Depression, Bipolar Disorder, OCD, Schizophrenia
- Unexplained medical symptoms/frequent work absenteeism due to somatic symptoms

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Benefits of Neuropsychological Assessment

Diagnosis of neurologic and functional disorders
- Information about prognosis and recovery
- Considers effects of non-medical factors
- Evaluates effects of effort

Delineation of strengths and weaknesses

Development of comprehensive treatment plan
- Saves time, cost effective
- Recommendations for return to work/accommodations

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Benefits of Neuropsychological Assessment

- The only evaluation that incorporates objective measures of cognition and mood with subjective experiences of functional impairment, pain, and psychological distress.
- Psychological factors predict chronic disability
  - emotional distress
  - poor coping strategies
  - poor social support

  (Gauthier et al., 2006; Sullivan et al., 2005; Turner et al., 2006)
- Depression is associated with poor return to work success (Corbiere, et al., 2007)

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Benefits of Neuropsychological Assessment

Failure to return to work can remove opportunities for positive life events; individuals who do not return to work have poorer outcomes.

(Chavez & Underhill, 2013)

Appropriate vocational rehabilitation services may be more important for return to work success than injury characteristics, medical factors or pre-injury demographics

(Johnstone, Mount & Schopp, 2003)

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Neuropsychological Assessment and Malingering

- The only evaluation that provides objective, standardized measures of effort to rule-out symptom exaggeration and malingering.
- Malingering "the intentional production of false or grossly exaggerated physical or psychological symptoms, motivated by external incentives..." (DSM-5).
  - Estimated prevalence of 30-50% of cases with external incentives (Larrabee, Millis, & Meyers, 2009)
  - Estimated cost $20.02 billion/year in SSDI & SSI claims (Chaftez, & Underhill, 2013)

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Neuropsychological Assessment and Malingering

Exaggeration of cognitive symptoms can occur with or without report of head injury

- Cognitive exaggeration has been documented among individuals with musculoskeletal injuries

  (Bianchini, Etherton, & Greve, 2004)

- Pain patients involved in litigation may exaggerate cognitive symptoms

  (Iverson & McCracken, 1997; Gervais et al., 2001; Meyers & Diep, 2000)

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Neuropsychological Assessment and Malingering

Pain can contribute to cognitive symptoms

- medication
- emotional distress/depression

<u>But</u>

- Deficits in multiple domains leads to broader functional disability and potentially greater compensation.

Neuropsychological testing provides reassurance that these complex factors are analyzed and considered when evaluating an examinee's cognitive and functional status.

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Neuropsychological Assessment: From Referral to Report

- Refer
- Record Review
- Schedule (1-2 sessions)
- Interpretation/report writing
- Report sent to referral source

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NA: From Referral to Report

- Administration time varies
  - comprehensive evaluations require 6-10 hours face to face testing
  - 10-20 hours record review, depending on materials provided
- Report completed in 2-3 weeks
  - longer for complex cases with extensive records
- Billable time includes records review, interviews, test administration, scoring, interpretation, report writing, deposition/court appearance (as required)

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Neuropsychological Report

1. Chief complaints: onset/course, treatment/response, current status
2. Review of records
3. Personal history
4. Current status: living situation, ADLs/IADLs, work, community participation, financial situation
5. Neuropsychological findings: cognition, mood, personality, motivation/effort, social factors, behavioral factors, differentiation of pre-existing findings vs work-related findings
6. Differential diagnoses
7. Discussion of strengths and weaknesses, ability to perform “essential functions” of position, likely course of recovery
8. Recommendations

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Recommendations

1. Individualized plan to address weaknesses and maximize strengths. May include:
    a. medical follow up, review of medications
    b. cognitive therapy
    c. psychotherapy, stress management, pain management
    d. occupational therapy
    e. speech therapy
    f. physical therapy
2. Vocational services/individualized back-to-work plan
3. Recommendations for coordination of services
4. Follow up neuropsychological evaluation (if needed)

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Learning Objectives

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Learning Objectives

Cognitive Domains	
Orientation	Auditory Memory
Attention/Concentration	Visual Memory
Working Memory	Sensory Motor Abilities
Intellectual Functioning	Executive Functioning
Academic Abilities	Emotional/Psychological
Language	Effort
Visual Spatial Functioning	Personality

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Case Examples

Examinee #1: Is the work injury related to changes in cognition and functioning?

55 year old man, engaged, work-related slip-and-fall event with LOC, confusion, headache, back injury

- Unable to return to work as train dispatcher
- Chronic pain
- Emotional distress/tearfulness
- Memory/attention problems

Medical history: TBI age 5, substance abuse, heart disease

Psychosocial history: conflict with fiance

Behavioral observation: good effort, cooperative, anxious

Domain	#1 Injury	#2 Anxiety	#3 Malingering
Intellectual	Low Average	Average	**Average**
Attention/ Processing Speed	**Low Average/ Borderline**	Low Average to Average	Borderline Deficient
Language	Average	Average	**"Aphasia"** Deficient Reading
Visual Spatial	Low Average	Average	Average
Verbal Memory	**Borderline to Extremely Low**	Above Average	Borderline Recall, Deficient Recog
Visual Memory	Borderline to Low Average	Average	High Average
Executive Function	**Impaired**	Low Average to Average	**Average**
Mood	**Extreme Distress**	**Anxious**	Average
Effort	Adequate	Excellent	**Poor**

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Recommendations	#1 Injury	#2 Anxiety	#3 Malingering
Therapies	X		
Vocational Rehabilitation	X		
Psychotherapy, Psychiatric Evaluation	X	X	X
Medication Review	X		X
Psychoeducation Services	X	X	
Family Counseling & Support	X	X	X
Support Group Services	X		

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Recommendations	#1 Injury	#2 Anxiety	#3 Malingering
Academic Leave of Absence			X
Case Management to Minimize/Streamline Medical Services			X
Education regarding Symptom Exaggeration and Legal Proceedings			X
Neuropsychological Re-evaluation	X		

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Case Examples

Examinee #2 Treatment of symptoms? Need for modified work schedule/responsibilities?

45 year old chemistry lab technician

- Observed errors at work, recommended evaluation
- Anxiety, concentration and “memory” problems

Medical history: non-contributory, substance abuse as teenager

Psychosocial history: strong work history, recently married, two children (recently adopted), caring for mother

Behavioral observation: highly conscientious, anxious

Domain	#1 Injury	#2 Anxiety	#3 Malingering
Intellectual	Low Average	Average	**Average**
Attention/ Processing Speed	**Low Average/ Borderline**	Low Average to Average	Borderline Deficient
Language	Average	Average	**"Aphasia"** Deficient Reading
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Recommendations	#1 Injury	#2 Anxiety	#3 Malingering
Therapies	X		
Vocational Rehabilitation	X		
Psychotherapy, Psychiatric Evaluation	X	X	X
Medication Review	X		X
Psychoeducation Services	X	X	
Family Counseling & Support	X	X	X
Support Group Services	X		

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Recommendations	#1 Injury	#2 Anxiety	#3 Malingering
Academic Leave of Absence			X
Case Management to Minimize/Streamline Medical Services			X
Education regarding Symptom Exaggeration and Legal Proceedings			X
Neuropsychological Re-evaluation	X		

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Case Examples

Example #3 Is decline related to injury? Should academic accommodations be increased?

23 year old undergraduate student injured in car crash

- No findings on brain scans, no LOC, neurologic exam confounded by inconsistent performance, word finding errors, speech impediment, reading impairment, memory loss

Medical history: frequent childhood illnesses, past diagnosis of reading disability and ADHD, multiple ED evaluations for pain and GI symptoms

Psychosocial history: low grades/school failure, financial stressors, family conflict, parental illnesses

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Case Examples

Example #3 cont.

Behavioral observations: hypophonic speech, word use errors and use of mime for communication (“door” for “store”; bouncing on seat making “neighing” sound and saying “horse seat” for “saddle”), inconsistently slow and effortful breathing, inconsistent tremors, poor performance on effort testing

Secondary gain: possible legal involvement, requesting academic accommodations

Domain	#1 Injury	#2 Anxiety	#3 Malingering
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Attention/ Processing Speed	**Low Average/ Borderline**	Low Average to Average	Borderline Deficient
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Recommendations	#1 Injury	#2 Anxiety	#3 Malingering
Therapies	X		
Vocational Rehabilitation	X		
Psychotherapy, Psychiatric Evaluation	X	X	X
Medication Review	X		X
Psychoeducation Services	X	X	
Family Counseling & Support	X	X	X
Support Group Services	X		

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Recommendations	#1 Injury	#2 Anxiety	#3 Malingering
Academic Leave of Absence			X
Case Management to Minimize/Streamline Medical Services			X
Education regarding Symptom Exaggeration and Legal Proceedings			X
Neuropsychological Re-evaluation	X		

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Important Neuropsychological Considerations

Case #1: Report considered pre-existing medical and substance use history
Case #2: Report considered significant psychosocial stressors
Case #3: Effort performance and knowledge of neuropsychological presentation identified high probability of symptom exaggeration

- informed case management
- provided educational information for examinee
- able to report on levels of intact functioning (e.g., ability to understand instructions and conversations; lack of frontal lobe injury, lack of postconcussive symptoms)

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Recommendations	#1 Injury	#2 Anxiety	#3 Malingering
Therapies	X		
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Psychotherapy, Psychiatric Evaluation	X	X	X
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Psychoeducation Services	X	X	
Family Counseling & Support	X	X	X
Support Group Services	X		

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Recommendations	#1 Injury	#2 Anxiety	#3 Malingering
Academic Leave of Absence			X
Case Management to Minimize/Streamline Medical Services			X
Education regarding Symptom Exaggeration and Legal Proceedings			X
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In conclusion:

In the context of worker's compensation evaluation, a neuropsychologist is an independent evaluator who provides objective information based on data and clinical analysis.

- comprehensive assessment that integrates medical, cognitive, personal, environmental, and psychological, factors
- identifies areas of strength/weakness and how these relate to injury
- evaluates level of effort
- differentiates between pre-existing findings and work-related findings
- determines possible treatment and remediation strategies
- provides back-to-work recommendations

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In conclusion:

Benefits of neuropsychological evaluation

- saves time and resources by providing individualized treatment recommendations
- provides objective data that can track recovery
- identifies contributing factors that affect recovery
  - mood, psychosocial stressors, secondary gain, medical factors (e.g., pain, medications), functional limitations

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In conclusion:

Neuropsychological assessments evaluate several cognitive domains, including:

- Effort
- Orientation/Attention/Concentration
- Working Memory
- Intellectual Functioning
- Academic Abilities
- Language
- Visual Spatial Functioning
- Memory
- Sensory Motor Abilities
- Executive Functioning
- Mood/Personality

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