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TITLE: “A Model for Predicting Cognitive and Emotional Health from Structural and Functional Neurocircuitry Following Traumatic Brain Injury”

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The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.
Mild traumatic brain injury (mTBI) is one of the major health problems facing military servicemembers returning from deployments. White matter axonal damage, as measured by neuroimaging techniques like Diffusion Weighted Imaging (DWI), is one of the hypothesized mechanisms contributing to the cognitive and affective sequelae of mTBI. Presently, many of the findings in the literature examining the association between DWI and neuropsychological outcome are contradictory, possibly due to differences in stage of recovery at the time of assessment. This study will address this problem by collecting measures of white matter integrity and concomitant neuropsychological status at five time points in the first year following an mTBI. During the first year, study preparations, including ethical approval, hiring and training of new staff, purchasing of equipment and materials, and validation of neuroimaging protocols, were completed ahead of schedule. During the past year, we have collected usable data from a total of 13 participants. These data have been cleaned and preliminary analyses suggest that we are able to identify meaningful trends in the data, although the sample is still far too small to make valid conclusions.
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1. INTRODUCTION

Mild traumatic brain injury (TBI) represents a major health concern and economic burden in the United States [1]. A significant proportion of individuals with mild TBI will experience a prolonged recovery with persistent post-concussive symptoms, and it is yet unclear why some individuals will show a good injury outcome, whereas other will not [2-5]. Structural damage to white matter axonal tracts has been suggested to underlie many of these persistent behavioral changes [6-10]. Yet due to differences in brain imaging methods, neuropsychological testing approaches, and sample characteristics, this has not been consistently demonstrated at different recovery stages. Furthermore, the relationship between structural connectivity, functional connectivity and neuropsychological performance remain unclear.

The proposed study will be the first to systematically assess structural connectivity, functional connectivity and neuropsychological functioning at five recovery stages (i.e., two weeks, one month, three months, six months and 12 months) following mild TBI relative to healthy controls. We hypothesize that structural white matter tract disintegrity will underlie abnormalities in functional connectivity, neurocognitive performance and post-concussion symptom severity, but that these metrics will vary with time since injury. The primary aim of the proposed study is therefore to investigate whether measures of white matter disintegrity following mild TBI would explain abnormalities in functional connectivity of the brain, cognition and emotional disturbance, and whether white matter integrity (or lack thereof) could serve as a reliable biomarker of mild TBI. This will allow conclusions on the utility of measures of white matter integrity in the diagnosis of mild TBI. As the study incorporates five time points of measurement to represent different recovery stages of mild TBI, this will allow conclusions on the natural recovery course of mild TBI and the utility of white matter integrity measures in the prediction of injury outcome.

2. KEY WORDS

TBI, traumatic brain injury, concussion, DWI, Diffusion Weighted Imaging, white matter, brain imaging, neuropsychological performance, neurocognitive performance, structural connectivity

3. OVERALL PROJECT SUMMARY

As described in detail in last year’s annual report, the PI (Dr. Killgore) changed primary institutions from McLean Hospital to the University of Arizona as of 1 July 2014. Consequently, research operations on this project were suspended between 24 MAR 2014 and 15 APR 2015, until the transfer of funds to the receiving intuition was complete. Upon receipt of funds at the University of Arizona on 15 APR 2015, research activities for this study were resumed. At that time, efforts were immediately focused on making all necessary purchases of materials,
We have now resumed recruitment and active data collection. With regard to pre-enrollment of participants, intensive recruitment efforts have led us to be nearly caught up on our timeline for progression of the study (detailed further below). Overall, in addition to the original 29 participants collected at McLean Hospital, we have now collected an additional 13 participants, bringing the total to 42 of the 180 required for analysis (i.e., data collection is now 23% complete). We have met our goals for this year according to the Statement of Work and are well on track to completing the study according to the new timeline.

Accomplishments According to Statement of Work (SOW)

Consistent with the Revised Statement of Work, the following tasks have been accomplished:

Major Task 1: Study Preparation, Staff Hiring, and Materials Acquisition—COMPLETED

Accomplishments:

- Consistent with the SOW, all study staff have been hired and have completed all requisite local and protocol-specific trainings. After first hiring 1 postdoctoral fellow, 1 lab manager, and 5 full time Research Assistants (shared effort across several other studies), two additional research technicians and two additional postdoctoral fellows were hired and subsequently trained on study protocols. New research assistant staff members performed reiterative practice of administering assessments and questionnaires to obtain high proficiency and reliability.

- New Research Assistants were trained by a licensed psychiatrist on the administration and scoring of the MINI. The Research Assistants also underwent intensive training on administration and scoring of all other assessments and computerized tasks used in the study.

- All personnel were also required to complete additional trainings in the second quarter. These trainings included comprehensive instruction in 1) handling and reporting adverse events, 2) triaging participants who are assessed as being at-risk for suicide, and 3) properly administering TBI interview and assessments pertaining to treatment arm of study. Trainings pertaining to adverse event reporting required attendance at a seminar hosted by our departmental IRB Regulatory Coordinator. Attendance at an informational session and hands-on practice session with the Co-PI were required for suicide triage training.

- MRI scanner sequences have been programmed, tested, and are yielding useable data. All study materials and equipment have been acquired and are fully functional.

Major Task 2: Human subjects approval.

Accomplishments:

- Consistent with the SOW, we have obtained local IRB approval at the University of Arizona. The University of Arizona IRB and HRPO have approved the study protocol
Major Task 3: Advertisement and subject recruitment.

Accomplishments:

• We have established relationships with several medical facilities across the city of Tucson including Banner University Medical Center, Tucson Medical Center, Southern Arizona VA Health Care System, Western Neurosurgery, Green Valley Physicians office, La Cholla Physicians Office, and sixteen (16) physical/sport therapy offices. We have further made contact with local traumatic brain injury support groups, visited local brain injury rehabilitation centers, made social media announcements, flyered across the University of Arizona Campus and downtown Tucson areas, and used the Banner University Medical Center television announcements. We have additionally established relationships with club sports teams at the University including ice hockey, soccer, rugby, and lacrosse that have a high incidence of TBI. Finally, we have begun the process of developing collaborative referral systems with the Tucson Police Department, along with Banner University Medical Center ER and Trauma centers.

• Over the course of our advertising, we have distributed recruitment materials to over 73 locations across Tucson and nearby cities. We have also started participant phone recruitment and have screened 211 participants (100 males and 111 females), 40 of whom are eligible, 13 of whom have completed their participation, 2 of whom were removed from the study due to inability to provide head injury documentation, and 13 of whom have been scheduled for future visits. One major challenge has been obtaining head injury documentation for eligible participants, which we require in order for them to become fully enrolled subjects. We have addressed this issue by recently incorporating a generic electronic template form that can be signed by injury witnesses (e.g. coaches, physical therapists/ athletic trainers, or medical professionals).

Major Task 4: Data collection.

Accomplishments:

• Since starting data collection at the University of Arizona, 13 new participants have now completed all aspects of the study (9 healthy controls, 2 at two weeks post-injury, 1 at one month post-injury, 1 at three months post-injury, 0 at six months post-injury, 0 at 12 months post-injury), yielding 13 complete data sets of neuroimaging and neuropsychological data. No negative outcomes have been reported.

• In light of difficulties with transferring an in-house developed multiband sequence (AKA “Kawin” sequence) from McLean Hospital’s Tim Trio scanner to the 3T Siemens Skyra and the University of Arizona, our lab has collaborated with local biomedical engineering faculty to develop an in-house set of multiband (2x and 3x) diffusion sequences to follow our standard 72-direction sequence. We intend to use the first 20-30 participants’ multiband diffusion data as pilot multiband data to determine the quality and optimal parameters for our in-house multiband sequence. For the remaining participants of the study, we are then considering the prospect of using one of the multiband sequences to incorporate higher diffusion directions that,
like the Kawin sequence, would provide significantly greater resolution of white matter fibers and any damage associated with mild TBI.

- Collaboration with biomedical engineering faculty at the University of Arizona has further allowed us to develop a novel preprocessing pipeline for all of our diffusion-weighted images (collected through the standard 72 direction sequence, as well as the two multiband sequences). This preprocessing pipeline, written using a combination of bash programming, FSL functions, and MATLAB tools, utilizing and LPCA “denoising” algorithm and FSL’s new EDDY correction tool for correcting eddy current-induced distortions and subject movements. We expect that this further development of our preprocessing procedure will provide an even greater degree of resolution of damaged white matter track in mild TBI, than was previously possible using more basic DWI preprocessing pipelines.

- Neuroimaging data were transferred to local lab computers and checked for data quality (i.e., visual inspection for acquisition errors). All behavioral data were entered into a RedCap database management project, and data was further exported into excel. Scoring and entry of data was performed by two different technicians and cross-validated for errors.

**Major Task 5: Quality Control Checks**

**Accomplishments:**

- Consistent with the SOW, all data are being uploaded into analysis computers, preprocessed, and checked for errors in acquisition as they are collected. The Lab Manager is overseeing compliance of IRB/HRPO regulations via periodic audit of data storage and test administration by study staff. Behavioral data are being entered and cross-validated for errors by Research Technicians, and all collected data are being backed-up routinely.

**Preliminary Findings**

At present, we have conducted preliminary analyses of the 29 datasets that were collected at McLean Hospital. Initial findings on this sample were presented in last year’s annual report. Thus below we present only new findings that have been observed since last year’s report:

**Voxel Based Morphometry (VBM) Findings**

Quality of life/ Resilience post-injury and gray matter volume. The twenty-six mTBI participants (11 males, 15 females; mean age = 23.4), whose high-resolution T1 structural neuroimaging data were collected at McLean hospital, were used in VBM preliminary analyses. Using behavioral data from completed Satisfaction with Life Scale (SWLS) and the Connor-Davidson Resilience Scale assessments, we performed several multiple regression VBM analyses. After covarying for age, gender, time since injury and intra-cranial volume, a voxel-based morphometric (VBM) multiple regression analysis was conducted within Statistical Parametric Mapping (SPM8) to explore the association between gray matter volume in the frontal lobe and SWLS and CD-RISC scores. Greater GM volume in the left hemisphere of the superior frontal gyrus was positively correlated with SWLS scores (7 voxels, p<0.05, FWE corrected). No association was found in the right PFC. Consistent with the theory of lateralized
affective processing, we found that greater volume of the left medial prefrontal cortex was associated with greater satisfaction with life among individuals with recent brain injuries. Utilizing a small volume correction (SVC) for the frontal lobe, CD-RISC scores were found to be positively correlated with greater GMV in the left precentral gyrus (13 voxels, \( p < .05 \), FWE corrected). Exploratory analysis further revealed that this association is significantly more prominent in the acute (less than 3 months), as opposed to the chronic stage (between 3 and 12 months) following an mTBI. These findings suggest that GMV in the left precentral gyrus may predict cognitive resilience following an mTBI. Although the precentral gyrus is primarily thought to be responsible for voluntary movement, studies have shown that the left precentral gyrus may be associated with subthreshold depression risk and negative self-attributional bias in response to adverse life events. Early identification of gray matter deficits in this region following mTBI may therefore alert clinicians to the need to devote greater attention towards cultivating cognitive resilient skills.

BMI and gray matter. mTBI participants were divided into groups of 12 healthy (BMI ≤ 25) and 12 overweight (BMI > 25). After controlling for age, gender, intra-cranial volume, and time since injury, gray matter volume was significantly greater (\( p < 0.005 \)) in the healthy group compared to the overweight group in a number of brain regions, including the bilateral caudate nucleus (head) regions, nucleus accumbens, bilateral parahippocampal gyrus, left inferior temporal gyrus, and left medial frontal gyrus. Significant differences in gray matter volumes were found between healthy and overweight individuals, particularly within regions involved in reward, executive functioning, memory, and emotion. Interestingly, the direction of findings for the ventral striatum is opposite of that often reported for non-brain injured individuals, raising the possibility that mTBI might alter these associations.
Gray matter in vMPFC and time since injury. Segmented images were used to create a custom DARTEL template, and then images were normalized and smoothed prior to analysis. VBM data were correlated with time since injury. The volume data from the resulting cluster were then extracted and correlated with metrics from the Delis-Kaplan Executive Function System (DKEFS). After controlling for age, gender and intracranial volume (ICV), GM volume in the right inferior temporal cortex and ventromedial prefrontal cortex (VMPFC) correlated positively with time since injury (cluster corrected, p<0.05 FDR, whole brain). VMPFC volume from this cluster were also found to be positively correlated with performance on several DKEFS tasks such as DKEFS-design fluency 1 ($R^2 = 0.177$), DKEFS-design fluency 2 ($R^2 = 0.164$) and DKEFS-sorting test ($R^2 = 0.230$). VMPFC volume was greater with longer time since injury post mTBI. While causal inference cannot be made, we speculate that the greater volume in VMPFC with longer time since injury might reflect a compensatory phenomenon of neural plasticity aiding in recovery of cognitive functions post mTBI (see figure below).

**Diffusion Tensor Imaging (TBSS) Findings**

In this preliminary analysis we have investigated brain white matter (WM) integrity in 26 participants with mild traumatic brain injury (mTBI) (age $M= 23.38$, $SD= 5.23$; 15 females). First, we were interested to see whether mTBI is associated with WM changes regardless of the injury chronicity. We performed whole brain analysis using Tract Based Spatial Statistics (TBSS) across the entire group of participants while controlling for age, sex and time since injury. Correlational analysis showed that alterations in WM of
participants with a recent history of mTBI were associated with performance metrics on a number of neuropsychological tests, as well as general health and wellbeing questionnaires. We used fractional anisotropy (FA) as a global measure to qualify changes within WM. There was a significant negative association ($p < .05$, corrected for multiple comparisons) between FA and the Aggression subscale of the Personality Assessment Inventory (PAI), indicating that reduced WM coherence was associated with increased physical aggression in this clinical population. WM fibers implicated in this association included the genu and splenium of the corpus callosum (CC), superior longitudinal fasciculus (SLF) and corona radiate (see figure at right).

Additionally, reduced FA in the external capsule and internal capsule in mTBI was significantly ($p < .05$, corrected for multiple comparisons) positively associated with performance on tests of vigilance, such as PVT Speed (i.e., $1/RT*1000$). This result suggests that greater integrity of WM is associated with greater psychomotor vigilance speed (see figure below).

![White matter FA in the external capsule and internal capsule was positively correlated with psychomotor vigilance speed.](image)

Moreover, FA had a near significant association with a range of other cognitive measures. FA showed a negative association with Pittsburgh Sleep Quality Index (PSQI) and Rivermead Post- Concussion Symptoms Questionnaire (RPCSQ), thus suggesting that compromised WM coherence is associated with poorer sleep and greater post-concussive symptoms, respectively. In line with the observed negative association between FA and PAI aggression subscale, we also observed an association between FA and Buss Perry total aggression score.

Interestingly, we found that these questionnaires also showed significant associations with time since injury. Overall, as shown in the figures below, participants with a longer time since injury tended to have lower severity across several metrics of concussion (RPCSQ), anxiety, and aggression.
Finally, we were interested to see whether the associations observed across the entire mTBI group would differ when examined in acute (< 3 months) vs. chronic (> 6 months) mTBI subgroups. Our findings indicate that in the acute subgroup, PSQI measure of quality of sleep was negatively associated with FA in the genu, body and splenium of the CC, SLF, corona radiate and thalamic radiation ($p < .05$). There was also a near significant negative correlation between FA and Buss Perry total score in the acute group in the body of CC and SLF ($p < .1$). A near significant negative correlation was also observed between performance on a vigilance test and FA in the corona radiate and internal capsule.

Longer time since injury is negatively correlated with several behavioral outcome measures, including the Rivermead Post-Concussion Symptom Checklist, several indices of anxiety, and several indices of aggression.
Challenges

Our major challenge has been the delay in collecting data resulting from the transfer from McLean Hospital to the University of Arizona. This slowed down our progress for the year we were awaiting transfer. However, we are now up and running well and have received an extension until 14 APR 2019 in order to complete data collection. A secondary challenge we have encountered is the increasing rate of cannabis use within the general population. We had routinely been excluding participants with even a modest history of cannabis use in order to reduce potential variability in the data. However, in the past couple of years we have found it increasingly difficult to recruit participants without some history of cannabis use. Thus, in order to ensure recruitment goals are met, we have had to modify our exclusionary criteria to permit a more liberal history of cannabis use. We are, however, collecting detailed data regarding this use so that it can be scientifically evaluated in the data analysis.

KEY RESEARCH ACCOMPLISHMENTS

- Human subject approval was obtained early in the course of the study.
- Study preparations are completed.
- Advertisement, study recruitment efforts and data collection have, since the study could resume, been highly successful are ongoing.
- Data quality checks are ongoing.
• 13 complete data sets have been collected, with 6 subjects scheduled to take part in the study in the near future. Subjects are assessed within 3 days of their respective post-injury date.

REPORTABLE OUTCOMES

As of the date of this report, the study sample is yet too small to conduct meaningful statistical analyses. This is particularly true for group comparisons. However, preliminary analyses suggest that our DTI data are being collected effectively. Thus, once we have a larger sample, we believe we will be able to report meaningful outcome data.

CONCLUSION

The study is now progressing as planned. Although the study was delayed for 13 months during which time funding was being transferred to the new receiving institution, the study is now back up and running and data is being collected. Preliminary findings suggest that the procedures are working and that valid data is being collected. Data will continue to be collected over the next two years in order to obtain a sufficient sample size to conduct meaningful results.

REFERENCES

# APPENDICES

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<td>William D. “Scott” Killgore, Ph.D. Curriculum Vitae</td>
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A Model for Predicting Cognitive and Emotional Health from Structural and Functional Neurocircuitry Following Traumatic Brain Injury

Study Tasks and Assessments

California Verbal Learning Test (CVLT)
Brief Visual Memory Test-Revised (BVMT-R)
Delis-Kaplan Executive Function System (D-KEFS)
Glasgow Outcome Scale – Extended (GOS-E)
Repeatable Battery for the Assessment of Neuropsychological Status (RBANS)
Automated Neuropsychological Assessment Metrics (ANAM)
Psychomotor Vigilance Test (PVT)
Go/No Go
Connor- Davidson Resilience Scale (CD-RISC)
Beck Depression Inventory (BDI-II)
Snaith Hamilton Pleasure Scale (SHAPS)
State Trait Anxiety Inventory (STAI)
Personality Assessment Inventory (PAI)
Craig Handicap Assessment and Reporting Technique Short Form (CHART-SF)
MINI International Psychiatric Interview (MINI)
Wechsler Abbreviated Scale of Intelligence (WASI II)
TBI Interview
Rivermead Post Concussion Symptoms Questionnaire (RPCSQ)
Satisfaction With Life Scale (SWLS)
Alcohol Use Disorder Identification Test (AUDIT)
Day of Scan Questionnaire
Epworth Sleepiness Scale (ESS)
Pittsburgh Sleep Quality Index (PSQI)
Buss Perry Aggression

Author(s): Dean C. Delis, Joel H. Kramer, Edith Kaplan, Beth A. Ober

Obtain a detailed and comprehensive assessment of verbal learning and memory

At a Glance:
- Administration: Standard and Alternate Forms: 30 minutes testing plus 30 minutes of delay. Short Form: 15 minutes testing plus 15 minutes of delay.
- Software Available: Yes
- Qualification level: C-Level
- Publication Date: 2000
- Ages / Grades: 16 to 89 years
- Norms: Nationally normed on a representative sample
- Forms: Short Form, Standard Form, Alternate Form

Product Summary

Overview

Obtain the most comprehensive and detailed assessment of verbal learning and memory available for older adolescents and adults.

A revision of the classic test of verbal learning and memory, the California Verbal Learning Test—Second Edition (CVLT–II) includes:

- More comprehensive information provided by new items
- Flexible administration with new Short and Alternate Forms
- Expanded age range for broader usage
- Correlation with the Wechsler Abbreviated Scale of Intelligence™ (WASI™) for valuable comparative data
- Technologically advanced scoring system

More Comprehensive Information

New items provide more comprehensive information than ever before. Examinees are read a list of words, selected after careful study of their frequency of use across multiple demographic variables, and asked to recall them across a series of trials. In addition to recall and recognition scores, CVLT–II measures encoding strategies, learning rates, error types, and other process data. CVLT–II includes forced-choice items useful for detecting malingering, thereby helping to reduce false results.

Flexible Administration

New options provide flexibility in test administration. You can use the Short Form when exam time is limited or when you need less detailed test information. The Short Form is also helpful when examinee fatigue is a concern, or severe memory or cognitive deficits make the Standard or Alternate Forms impractical. The Short Form features lists of nine words in three categories and takes only 15 minutes to administer (plus two delay periods totaling 15 minutes). The new Alternate Form prevents artificially inflated scores when re-testing is necessary. The Standard and Alternate Forms can be administered in 30 minutes, with an additional 30-minute delay.

Expanded Sample

Extensive clinical data are available. New norms are available on a national sample of adults selected to represent the U.S. population. Norms are provided for individuals from ages 16 to 89, increasing the use of the new edition.

Correlated with Wechsler Abbreviated™

CVLT–II is correlated with the Wechsler Abbreviated Scale of Intelligence™ (WASI™), providing valuable comparison information about the effect of cognitive ability on verbal learning and memory.

Technologically Advanced Scoring System

The CVLT–II Comprehensive Scoring System provides rich information not available through typical hand scoring. The most technologically advanced scoring software yet, it offers multiple scoring options, varying from brief to highly detailed information.

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Products


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Accessories

CVLT–II - Manual

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Approved McLean IRB

2012p001515 08/31/2012 through 08/30/2013
**CVLT–II - Record Forms**

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**Software**

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Validity studies were conducted with patients who had HIV-1 associated cognitive dysfunction, primary progressive dementia, and focal amnesia.

A measure of visuospatial memory, the BVMT-R can be used as part of a large neuropsychological battery, as a screening measure, and as a repeat measure to document changes over time.

**Designed for easy administration in clinical settings or at the bedside**

- Six equivalent, alternate stimulus forms consist of six geometric figures printed in a 2 x 3 array on separate pages.
- In three Learning Trials, the respondent views the stimulus page for 10 seconds and is asked to draw as many of the figures as possible in their correct location on a page in the response booklet. A Delayed Recall Trial is administered after a 25-minute delay.
- Last, a Recognition Trial, in which the respondent is asked to identify which of 12 figures were included among the original geometric figures, is administered.
- An optional Copy Trial may be administered to screen for severe visuoconstructive deficits and to help in scoring recall responses.
- Reliability coefficients range from .96 to .97 for the three Learning trials, .97 for Total Recall, and .97 for Delayed Recall. Test-retest reliability coefficients range from .60 for Trial 1 to .84 for Trial 3. The BVMT-R correlates most strongly with other tests of visual memory and less strongly with tests of verbal memory.

**Note:** Stopwatch is required for administration.
WW-3607-KT  **BVMT-R Introductory Kit**


$336.00

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**Forms and Booklets**

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**Related Products**

- Hopkins Verbal Learning Test–Revised™ (HVLT-R™)
- Continuous Visual Memory Test (CVMT)
- Hopkins Verbal Learning Test–Revised™/Brief Visuospatial Memory Test–Revised™ Software Portfolio (HVLT-R™/BVMT-R™ SP)

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## Glasgow Outcome Scale - Extended

### Patient's name: ____________________________ Date of interview: ____________

Date of Birth: ____________ Date of injury ____________ Gender: M / F

Age at injury: ____________ Interval post-injury: ____________

Respondent: Patient alone ______ Relative/ friend/ carer alone ______ Patient + relative/ friend/ carer ______

Interviewer: ____________________________

### CONSCIOUSNESS

1. Is the head injured person able to obey simple commands, or say any words?
   - 1 = No (VS)
   - 2 = Yes

Anyone who shows ability to obey even simple commands, or utter any word or communicate specifically in any other way is no longer considered to be in the vegetative state. Eye movements are not reliable evidence of meaningful responsiveness. Corroborate with nursing staff. Confirmation of VS requires full assessment as in the Royal College of Physician Guidelines.

### INDEPENDENCE IN THE HOME

2a. Is the assistance of another person at home essential every day for some activities of daily living?
   - 1 = No
   - 2 = Yes

For a 'No' answer they should be able to look after themselves at home for 24 hours if necessary, though they need not actually look after themselves. Independence includes the ability to plan for and carry out the following activities: getting washed, putting on clean clothes without prompting, preparing food for themselves, dealing with callers, and handling minor domestic crises. The person should be able to carry out activities without needing prompting or reminding, and should be capable of being left alone overnight.

2b. Do they need frequent help or someone to be around at home most of the time?
   - 1 = No (Upper SD)
   - 2 = Yes (Lower SD)

For a 'No' answer they should be able to look after themselves at home for up to 8 hours during the day if necessary, though they need not actually look after themselves.

2c. Was assistance at home essential before the injury?
   - 1 = No
   - 2 = Yes

### INDEPENDENCE OUTSIDE THE HOME

3a. Are they able to shop without assistance?
   - 1 = No (Upper SD)
   - 2 = Yes

This includes being able to plan what to buy, take care of money themselves, and behave appropriately in public. They need not normally shop, but must be able to do so.

4a. Are they able to travel locally without assistance?
   - 1 = No (Upper SD)
   - 2 = Yes

They may drive or use public transport to get around. Ability to use a taxi is sufficient, provided the person can phone for it themselves and instruct the driver.
WORK

5a Are they currently able to work to their previous capacity?  
1 = No  
2 = Yes

If they were working before, then their current capacity for work should be at the same level. If they were seeking work before, then the injury should not have adversely affected their chances of obtaining work or the level of work for which they are eligible. If the patient was a student before injury then their capacity for study should not have been adversely affected.

5b How restricted are they?  
1 = a (Upper MD)  
2 = b (Lower MD)

a) Reduced work capacity.  
b) Able to work only in a sheltered workshop or non-competitive job, or currently unable to work.

5c Were they either working or seeking employment before the injury (answer ‘yes’) or were they doing neither (answer ‘no’)?  
1 = No  
2 = Yes

SOCIAL & LEISURE ACTIVITIES

6a Are they able to resume regular social and leisure activities outside home?  
1 = No  
2 = Yes

They need not have resumed all their previous leisure activities, but should not be prevented by physical or mental impairment. If they have stopped the majority of activities because of loss of interest or motivation then this is also considered a disability.

6b What is the extent of restriction on their social and leisure activities?  
1 = a (Lower GR)  
2 = b (Upper MD)  
3 = c (Lower MD)

a) Participate a bit less: at least half as often as before injury.  
b) Participate much less: less than half as often.  
c) Unable to participate: rarely, if ever, take part.

6c Did they engage in regular social and leisure activities outside home before the injury?  
1 = No  
2 = Yes

FAMILY & FRIENDSHIPS

7a Have there been psychological problems which have resulted in ongoing family disruption or disruption to friendships?  
1 = No  
2 = Yes

Typical post-traumatic personality changes: quick temper, irritability, anxiety, insensitivity to others, mood swings, depression, and unreasonable or childish behaviour.

7b What has been the extent of disruption or strain?  
1 = a (Lower GR)  
2 = b (Upper MD)  
3 = c (Lower MD)

a) Occasional - less than weekly  
b) Frequent - once a week or more, but tolerable.  
c) Constant - daily and intolerable.

7c Were there problems with family or friends before the injury?  
1 = No  
2 = Yes

If there were some problems before injury, but these have become markedly worse since injury then answer ‘No’ to Q7c.

RETURN TO NORMAL LIFE

8a Are there any other current problems relating to the injury which affect daily life?  
1 = No (Upper GR)  
2 = Yes (Lower GR)

Other typical problems reported after head injury: headaches, dizziness, tiredness, sensitivity to noise or light, slowness, memory failures, and concentration problems.
**STRUCTURED INTERVIEWS FOR THE GOS AND GOSE**

Epilepsy:
Since the injury has the head injured person had any epileptic fits?  No / Yes
Have they been told that they are currently at risk of developing epilepsy?  No / Yes

What is the most important factor in outcome?
Effects of head injury ____  Effects of illness or injury to another part of the body ____  A mixture of these _____

Scoring: The patient’s overall rating is based on the lowest outcome category indicated on the scale. Refer to Guidelines for further information concerning administration and scoring

<table>
<thead>
<tr>
<th>Outcome Category</th>
<th>[ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Dead</td>
<td>[ ]</td>
</tr>
<tr>
<td>2 Vegetative State (VS)</td>
<td>[ ]</td>
</tr>
<tr>
<td>3 Lower Severe Disability (Lower SD)</td>
<td>[ ]</td>
</tr>
<tr>
<td>4 Upper Severe Disability (Upper SD)</td>
<td>[ ]</td>
</tr>
<tr>
<td>5 Lower Moderate Disability (Lower MD)</td>
<td>[ ]</td>
</tr>
<tr>
<td>6 Upper Moderate Disability (Upper MD)</td>
<td>[ ]</td>
</tr>
<tr>
<td>7 Lower Good Recovery (Lower GR)</td>
<td>[ ]</td>
</tr>
<tr>
<td>8 Upper Good Recovery (Upper GR)</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

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## Record Form A

**Repeatable Battery for the Assessment of Neuropsychological Status**

**Christopher Randolph**

### Name _________________________  Age ______  Sex ______  Education Level __________

**Examiner ______________________  Date of Testing ____________________  Ethnicity ______

**Observations:**

---

### Immediate Memory  Vissuospatial  Constructional  Language  Attention  Delayed Memory

<table>
<thead>
<tr>
<th>Index Score</th>
<th>Confidence Interval</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Total Scale

<table>
<thead>
<tr>
<th>Index Score</th>
<th>Percentile</th>
<th>Total Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Index Score

<table>
<thead>
<tr>
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<th>Percentile Rank</th>
</tr>
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<tbody>
<tr>
<td>160</td>
<td>&gt;99.9</td>
</tr>
<tr>
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<tr>
<td>150</td>
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<tr>
<td>145</td>
<td>99.9</td>
</tr>
<tr>
<td>140</td>
<td>99.6</td>
</tr>
<tr>
<td>135</td>
<td>99</td>
</tr>
<tr>
<td>130</td>
<td>98</td>
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<td>85</td>
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<td>9</td>
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<td>75</td>
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<td>70</td>
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</tr>
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<td>65</td>
<td>1</td>
</tr>
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<tr>
<td>45</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>40</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

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### List Learning

**Trial 1**
Say *I am going to read you a list of words. I want you to listen carefully and, when I finish, repeat back as many words as you can. You don’t have to say them in the same order that I do—just repeat back as many words as you can remember, in any order. Okay?*  

**Trials 2–4**
Say *I am going to read the list again. When I finish, repeat back as many words as you can, even if you have already said them before. Okay?*

Record responses in order.
Scoring: 1 point for each word correctly recalled on each trial.

<table>
<thead>
<tr>
<th>List</th>
<th>Trial 1</th>
<th>Trial 2</th>
<th>Trial 3</th>
<th>Trial 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Package</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elbow</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apple</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Story</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bubble</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saddle</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number Correct</th>
<th>+</th>
<th>+</th>
<th>+</th>
<th>+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Trial 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Trial 2</td>
<td></td>
<td></td>
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<tr>
<td>Total Trial 3</td>
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<tr>
<td>Total Trial 4</td>
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<td></td>
</tr>
<tr>
<td>Total Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Range = 0–40
# Story Memory

**Trial 1**

Say *I am going to read you a short story. I'd like you to listen carefully and, when I finish, repeat back as much of the story as you can remember. Try and use the same wording, if you can. Okay?*

Read the story below, then say *Now repeat back as much of that story as you can.*

**Trial 2**

Say *I am going to read that same story again. When I finish, I want you to again repeat back as much of the story as you can remember. Try to repeat it as exactly as you can.*

Read the story below, then say *Now repeat back as much of that story as you can.*

Scoring: 1 point for verbatim recall of bold, italic words or alternatives, shown below in color within parentheses. Record intrusions or variations in the Responses column.

<table>
<thead>
<tr>
<th>Story</th>
<th>Responses</th>
<th>Trial 1 Score (0 or 1)</th>
<th>Trial 2 Score (0 or 1)</th>
<th>Item Score (0–2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. On <strong>Tuesday,</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. <strong>May</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. <strong>Fourth,</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. in <strong>Cleveland,</strong> <strong>Ohio,</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. a <strong>3 alarm</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. <strong>fire</strong> broke out.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. <strong>Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. <strong>hotels</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. and a <strong>restaurant</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. were <strong>destroyed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. before the <strong>firefighters (firemen)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. were able to <strong>extinguish it (put it out)</strong>.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Score (Trial 1 + Trial 2)

Range=0–24
Figure Copy

Fold this page back and present the Figure Copy Drawing Page along with the stimulus. Ask the examinee to make an exact copy of the figure. Tell the examinee that he or she is being timed, but that the score is based only on the exactness of his or her copy.

Scoring: 1 point for correctness and completeness (drawing), and 1 point for proper placement. See Appendix 1 in Stimulus Booklet A for complete scoring criteria and scoring examples.

---

**Figure Copy Criteria**

(Fold back for use.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Drawing</th>
<th>Placement</th>
<th>Score</th>
<th>Scoring Criteria</th>
</tr>
</thead>
</table>
| 1. rectangle       |         |           |       | **Drawing**: lines are unbroken and straight; angles 90 degrees; top/bottom lines 25% longer than sides  
|                    |         |           |       | **Placement**: not rotated more than 15 degrees                                                                                                     |
| 2. diagonal cross  |         |           |       | **Drawing**: lines are unbroken and straight and should approximately bisect each other  
|                    |         |           |       | **Placement**: ends of lines should meet corners of the rectangle without significant overlap or measurable distance between the ends of the lines and the corners |
| 3. horizontal line |         |           |       | **Drawing**: line is unbroken and straight; should not exceed 1/2 the length of the rectangle  
|                    |         |           |       | **Placement**: should bisect left side of the rectangle at approximately a right angle and intersect the diagonal cross                             |
| 4. circle          |         |           |       | **Drawing**: round, unbroken and closed; diameter should be approximately 1/4-1/3 height of rectangle  
|                    |         |           |       | **Placement**: placed in appropriate segment; not touching any other part of figure                                                              |
| 5. 3 small circles |         |           |       | **Drawing**: round, unbroken and closed; equal size; triangular arrangement; not touching each other  
|                    |         |           |       | **Placement**: in appropriate segment; not touching figure; triangle formed not rotated more than 15 degrees                                      |
| 6. square          |         |           |       | **Drawing**: must be closed; 90 degree angles; lines straight and unbroken; height is 1/4-1/3 height of rectangle  
|                    |         |           |       | **Placement**: in appropriate segment; not touching any other part of figure; not rotated more than 15 degrees                                        |
| 7. curving line    |         |           |       | **Drawing**: 2 curved segments are approximately equal in length and symmetrical; correct direction of curves  
|                    |         |           |       | **Placement**: ends of line touch diagonal; do not touch corner of rectangle or intersection of diagonal lines                                         |
| 8. outside cross   |         |           |       | **Drawing**: vertical line of the outside cross is parallel to side of rectangle; >1/2 the height of rectangle;  
|                    |         |           |       | **Placement**: horizontal line crosses vertical at 90 degree angle and is between 20–50% of length of vertical line                                  |
| 9. triangle        |         |           |       | **Drawing**: angle formed by 2 sides of triangle is between 60–100 degrees; sides are straight, unbroken and meet in a point; distance on vertical side of rectangle subsumed by triangle is approximately 50% of the height of vertical side  
|                    |         |           |       | **Placement**: roughly centered on the left vertical side of the rectangle                                                                         |
| 10. arrow          |         |           |       | **Drawing**: straight and unbroken; lines forming arrow are approximately equal in length and not more than 1/3 length of staff  
|                    |         |           |       | **Placement**: must protrude from appropriate corner of rectangle such that staff appears to be continuation of diagonal cross                      |

Total Score

Range = 0–20
**Line Orientation**

Present the sample item, and say *These two lines down here (indicate) match two of the lines on top. Can you tell me the numbers, or point to the lines that they match?* Correct any errors and make sure the examinee understands the task. Continue with items 1–10.

**Scoring:** 1 point for each line correctly identified.

<table>
<thead>
<tr>
<th>Item</th>
<th>Responses</th>
<th>Correct Responses</th>
<th>Score (0; 1, or 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>1, 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>10, 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>4, 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>6, 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>8, 13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>2, 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Responses</th>
<th>Correct Responses</th>
<th>Score (0; 1, or 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>1, 6</td>
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<td></td>
</tr>
<tr>
<td>7.</td>
<td>3, 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>5, 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>1, 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>11, 13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Score**

Range = 0–20

---

**Picture Naming**

Ask the examinee to name each picture. Give the semantic cue only if the picture is obviously misperceived.

**Scoring:** 1 point for each item that is correctly named spontaneously or following semantic cue.

<table>
<thead>
<tr>
<th>Item</th>
<th>Semantic Cue</th>
<th>Correct Responses</th>
<th>Score (0 or 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. chair</td>
<td>a piece of furniture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. pencil</td>
<td>used for writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. well</td>
<td>you get water from it</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. giraffe</td>
<td>an animal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. sailboat</td>
<td>used on the water (if &quot;boat,&quot; query &quot;what kind&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. cannon</td>
<td>a weapon, used in war</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. pliers</td>
<td>a tool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. trumpet</td>
<td>a musical instrument (&quot;cornet&quot; okay)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. clothespin</td>
<td>used to hold laundry on a line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. kite</td>
<td>it's flown in the air</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Score**

Range = 0–10
Semantic Fluency

Say Now I'd like you to tell me the names of all of the different kinds of fruits and vegetables that you can think of. I'll give you one minute to come up with as many as you can. Ready?

Scoring: 1 point for each correct response.

1.
2. 
3. 
4. 
5. 
6. 
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34. 
35. 
36. 
37. 
38. 
39. 
40. 

Total Score
Range=0–40

Digit Span

Say I am going to say some numbers, and I want you to repeat them after me. Okay?

Read the numbers at the rate of 1 per second. Only read the second string in each set if the first string was failed. Discontinue after failure of both strings in any set.

Scoring: 2 points for the first string correct, 1 point for the second string correct, and 0 points for both strings failed.

<table>
<thead>
<tr>
<th>Item</th>
<th>First String</th>
<th>String Score (0 or 2)</th>
<th>Second String</th>
<th>String Score (0 or 1)</th>
<th>Item Score (0–2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>4-9</td>
<td>5-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>8-3-5</td>
<td>2-4-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>7-2-4-6</td>
<td>1-6-3-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>5-3-9-2-4</td>
<td>3-8-4-9-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>6-4-2-9-3-5</td>
<td>9-1-5-3-7-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>2-8-5-1-9-3-7</td>
<td>5-3-1-7-4-9-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>8-3-7-9-5-2-4</td>
<td>9-5-1-4-2-7-3-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>1-5-9-2-3-8-7-4-6</td>
<td>5-1-9-7-6-2-3-6-5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Score
Range=0–16
## Coding

**Say** Look at these boxes (indicate key). For each one of these marks there is a number that goes with it. Down here there are marks, but no numbers. I want you to fill in the number that goes with each mark.

Demonstrate the first three. Say Now I would like you to fill in the rest of these boxes up to the double lines (indicate) for practice. Correct any errors as they are made. Make sure that the examinee understands the task and has correctly completed the sample items before you begin timing.

Say Now I would like you to continue to fill in the numbers that match the marks. Go as quickly as you can without skipping any. When you reach the end of the line, go on to the next one. Ready? Go ahead.

Redirect the examinee to the task if he or she becomes distracted. If the examinee is unable to comprehend the task, the subtest score is 0.

**Scoring:** 1 point for each item correctly coded within 90 seconds (do not score the sample items).

**Note:** Familiarize yourself with these instructions before administering this subtest.

### Total Score

| Range=0–89 |
### 9 List Recall

Say **Do you remember the list of words that I read to you in the beginning? Tell me as many of those words as you can remember now.**

Scoring: 1 point for each word correctly recalled.

<table>
<thead>
<tr>
<th>List (Do not read)</th>
<th>Response</th>
<th>Score (0 or 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Package</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elbow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Story</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bubble</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saddle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powder</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Score
Range=0–10

### 10 List Recognition

Say **I'm going to read you some words. Some of these words were on that list, and some of them weren't. I want you to tell me which words were on the list. For each word, ask **Was ______ on the list?**

Scoring: 1 point for each word correctly identified. Circle the letter corresponding to examinee's response (y = yes, n = no); bold, capitalized (Y, N) letter indicates correct response.

<table>
<thead>
<tr>
<th>List</th>
<th>Circle One</th>
<th>List</th>
<th>Circle One</th>
<th>List</th>
<th>Circle One</th>
<th>List</th>
<th>Circle One</th>
<th>List</th>
<th>Circle One</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. honey</td>
<td>y N</td>
<td>7. velvet</td>
<td>y N</td>
<td>12. prairie</td>
<td>y N</td>
<td>17. Powder</td>
<td>Y n</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. fabric</td>
<td>y N</td>
<td>10. Elbow</td>
<td>Y n</td>
<td>15. student</td>
<td>y N</td>
<td>20. meadow</td>
<td>y N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Score
Range=0–20
### Story Recall

Say: *Do you remember that story about a fire that I read to you earlier? Tell me as many details from the story as you can remember now.*

Scoring: 1 point for each verbatim recall of bold, italic words or alternatives, shown below in color within parentheses. Record intrusions or variations in the Responses column.

<table>
<thead>
<tr>
<th>Story (Do not read.)</th>
<th>Responses</th>
<th>Item Score (0 or 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. On <em>Tuesday,</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. <em>May</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. <em>Fourth,</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. in <em>Cleveland, Ohio,</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. a <em>3 alarm</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. <em>fire</em> broke out.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. <em>Two</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. <em>hotels</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. and a <em>restaurant</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. were <em>destroyed</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. before the <em>firefighters (firemen)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. were able to <em>extinguish it (put it out).</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Score**

Range=0–12
12 Figure Recall

Say Do you remember that figure that I had you copy? I want you to draw as much of it as you can remember now. If you remember a part, but you're not sure where it goes, put it anywhere. Try to draw as much of it as you can.

Now, present the Figure Recall Drawing Page.

Scoring: 1 point for correctness and completeness (drawing), and 1 point for proper placement. See Appendix 1 in Stimulus Booklet A for complete scoring criteria and scoring examples.

Figure Recall Criteria
(Fold back for use.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Drawing (0 or 1)</th>
<th>Placement (0 or 1)</th>
<th>Score (0, 1, or 2)</th>
<th>Scoring Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. rectangle</td>
<td></td>
<td></td>
<td></td>
<td>Drawing: lines are unbroken and straight; angles 90 degrees; top/bottom lines 25% longer than sides</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Placement: not rotated more than 15 degrees</td>
</tr>
<tr>
<td>2. diagonal cross</td>
<td></td>
<td></td>
<td></td>
<td>Drawing: lines are unbroken and straight and should approximately bisect each other</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Placement: ends of lines should meet corners of the rectangle without significant overlap or measurable distance between the ends of the lines and the corners</td>
</tr>
<tr>
<td>3. horizontal line</td>
<td></td>
<td></td>
<td></td>
<td>Drawing: should bisect left side of the rectangle at approximately a right angle and intersect the diagonal cross</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Drawing: lines are unbroken and closed; diameter should be approximately 1/4-1/3 height of rectangle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Placement: placed in appropriate segment; not touching any other part of figure</td>
</tr>
<tr>
<td>4. circle</td>
<td></td>
<td></td>
<td></td>
<td>Drawing: round, unbroken and closed; equal size; triangular arrangement; not touching each other</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Placement: in appropriate segment; not touching figure; triangle formed not rotated more than 15 degrees</td>
</tr>
<tr>
<td>5. 3 small circles</td>
<td></td>
<td></td>
<td></td>
<td>Drawing: round, unbroken and closed; equal size; triangular arrangement; not touching each other</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Placement: in appropriate segment; not touching figure; triangle formed not rotated more than 15 degrees</td>
</tr>
<tr>
<td>6. square</td>
<td></td>
<td></td>
<td></td>
<td>Drawing: must be closed; 90 degree angles; lines straight and unbroken; height is 1/4-1/3 height of rectangle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Placement: in appropriate segment; not touching any other part of figure; not rotated more than 15 degrees</td>
</tr>
<tr>
<td>7. curving line</td>
<td></td>
<td></td>
<td></td>
<td>Drawing: 2 curved segments are approximately equal in length and symmetrical; correct direction of curves</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Placement: ends of line touch diagonal; do not touch corner of rectangle or intersection of diagonal lines</td>
</tr>
<tr>
<td>8. outside cross</td>
<td></td>
<td></td>
<td></td>
<td>Drawing: vertical line of the outside cross is parallel to side of rectangle; &gt;1/2 the height of rectangle;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>horizontal line crosses vertical at 90 degree angle and is between 20-50% of length of vertical line</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Placement: horizontal line of outside cross touches rectangle higher than 2/3 the height of rectangle, but below top; does not penetrate the rectangle</td>
</tr>
<tr>
<td>9. triangle</td>
<td></td>
<td></td>
<td></td>
<td>Drawing: angle formed by 2 sides of triangle is between 60-100 degrees; sides are straight, unbroken and meet in a point; distance on vertical side of rectangle subsumed by triangle is approximately 50% of the height of vertical side</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Placement: roughly centered on the left vertical side of the rectangle</td>
</tr>
<tr>
<td>10. arrow</td>
<td></td>
<td></td>
<td></td>
<td>Drawing: straight and unbroken; lines forming arrow are approximately equal in length and not more than 1/3 length of staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Placement: must protrude from appropriate corner of rectangle such that staff appears to be continuation of diagonal cross</td>
</tr>
</tbody>
</table>
ANAM4™

Automated Neuropsychological Assessment Metrics

Approved McLean IRB
2012p001515 08/31/2012 through 08/30/2013
Psychomotor Vigilance Test

Press the spacebar every time an “x” appears on the screen.
Go/No-Go Task

Go

Go

Go

No Go
CD-RISC

Think about how you have been feeling over the past month. Using the scale below, please rate each of the following statements for how well they describe you DURING THE PAST MONTH.

<table>
<thead>
<tr>
<th></th>
<th>0 not true at all</th>
<th>1 rarely true</th>
<th>2 sometimes true</th>
<th>3 often true</th>
<th>4 true nearly all the time</th>
</tr>
</thead>
</table>
1. Able to adapt to change
2. Close and secure relationships
3. Sometimes fate or God can help
4. Can deal with whatever comes
5. Past success gives confidence for new challenge
6. See the humorous side of things
7. Coping with stress strengthens
8. Tend to bounce back after illness or hardship
9. Things happen for a reason
10. Best effort no matter what
11. You can achieve your goals
12. When things look hopeless, I don't give up
13. Know where to turn for help
14. Under pressure, focus and think clearly
15. Prefer to take the lead in problem solving
16. Not easily discouraged by failure
17. Think of self as strong person
18. Make unpopular or difficult decisions
19. Can handle unpleasant feelings
20. Have to act on a hunch
21. Strong sense of purpose
22. In control of your life
23. I like challenges
24. You work to attain your goals
25. Pride in your achievements
Participant #:____________
Date:____________

BDI - II
This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the ONE STATEMENT in each group that best describes the way you have been feeling during the PAST TWO WEEKS, INCLUDING TODAY. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in sleeping pattern) or Item 18 (Changes in Appetite).
1. Sadness
   0  I do not feel sad.
   1  I feel sad much of the time.
   2  I am sad all the time
   3  I am so sad or unhappy that I can't stand it.

2. Pessimism
   0  I am not discouraged about my future.
   1  I feel more discouraged about my future than I used to be.
   2  I do not expect things to work out for me.
   3  I feel that my future is hopeless and will only get worse.

3. Past Failure
   0  I do not feel like a failure.
   1  I have failed more than I should have.
   2  As I look back, I see a lot of failures.
   3  I feel I am a total failure as a person.

4. Loss of Pleasure
   0  I get as much pleasure as I ever did from the things I enjoy.
   1  I don't enjoy things as much as I used to.
   2  I get very little pleasure from the things I used to enjoy.
   3  I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
   0  I don't feel particularly guilty.
   1  I feel guilty over many things I have done or should have done.
   2  I feel quite guilty most of the time.
   3  I feel guilty all of the time.
6. Punishment Feelings
0  I don't feel I am being punished.
1  I feel I may be punished.
2  I expect to be punished.
3  I feel I am being punished.

7. Self-Dislike
0  I feel the same about myself as ever.
1  I have lost confidence in myself.
2  I am disappointed in myself.
3  I dislike myself.

8. Self-Criticalness
0  I don't criticize or blame myself more than usual.
1  I am more critical of myself than I used to be.
2  I criticize myself for all of my faults.
3  I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes
0  I don't have any thoughts of killing myself.
1  I have thoughts of killing myself, but I would not carry them out.
2  I would like to kill myself.
3  I would kill myself if I had the chance.

10. Crying
0  I don't cry any more than I used to.
1  I cry more than I used to
2  I cry over every little thing.
3  I feel like crying, but I can't.
11. Agitation
0  I am no more restless or wound up than usual.
1  I feel more restless or wound up than usual.
2  I am so restless or agitated that it's hard to stay still.
3  I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest
0  I have not lost interest in other people or activities
1  I am less interested in other people or things than before.
2  I have lost most of my interest in other people or things
3  It's hard to get interested in anything.

13. Indecisiveness
0  I make decisions about as well as ever.
1  I find it more difficult to make decisions than usual.
2  I have much greater difficulty in making decisions than I used to.
3  I have trouble making any decisions.

14. Worthlessness
0  I don't feel I am worthless.
1  I do not consider myself as worthwhile and useful as I used to.
2  I feel more worthless as compared to other people.
3  I feel utterly worthless.

15. Loss of Energy
0  I have as much energy as ever.
1  I have less energy than I used to have.
2  I don't have enough energy to do very much.
3  I don't have enough energy to do anything.
16. Changes in Sleeping Pattern

0  I have not experienced any change in my sleeping pattern.
--------------------------------------
1a  I sleep somewhat more than usual.
1b  I sleep somewhat less than usual.
--------------------------------------
2a  I sleep a lot more than usual.
2b  I sleep a lot less than usual.
--------------------------------------
3a  I sleep most of the day.
3b  I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

0  I am no more irritable than usual.
1  I am more irritable than usual.
2  I am much more irritable than usual.
3  I am irritable all the time.

18. Changes in Appetite

0  I have not experienced any change in my appetite
--------------------------------------
1a  My appetite is somewhat less than usual.
1b  My appetite is somewhat greater than usual.
--------------------------------------
2a  My appetite is much less than before.
2b  My appetite is much greater than usual.
--------------------------------------
3a  I have no appetite at all.
3b  I crave food all the time.

19. Concentration Difficulty

0  I can concentrate as well as ever.
1  I can't concentrate as well as usual.
2  It's hard to keep my mind on anything for very long.
3  I find I can't concentrate on anything.
20. Tiredness or Fatigue

0  I am no more tired or fatigued than usual.
1  I get more tired or fatigued more easily than usual.
2  I am too tired or fatigued to do a lot of the things I used to do.
3  I am too tired or fatigued to do most of the things I used to do.

21. Loss of interest in Sex

0  I have not noticed any recent change in my interest in sex.
1  I am less interested in sex than I used to be.
2  I am much less interested in sex now.
3  I have lost interest in sex completely.
Snaith-Hamilton Pleasure Scale

This questionnaire is designed to measure your ability to experience pleasure in the last few days. It is important to read each statement very carefully. Circle the answer that corresponds to how much you agree or disagree with each statement.

1. I would enjoy my favorite television or radio program. ..........Strongly Disagree Disagree Agree Strongly Agree
2. I would enjoy being with my family or close friends. ..........Definitely Agree Agree Disagree Strongly Disagree
3. I would find pleasure in my hobbies and past-times. ..........Strongly Disagree Disagree Agree Strongly Agree
4. I would be able to enjoy my favorite meal. .................Definitely Agree Agree Disagree Strongly Disagree
5. I would enjoy a warm bath or refreshing shower. ..........Definitely Agree Agree Disagree Strongly Disagree
6. I would find pleasure in the scent of flowers or the smell of a fresh sea breeze or freshly baked bread. ..........Strongly Disagree Disagree Agree Strongly Agree
7. I would enjoy seeing other people’s smiling faces. ..........Definitely Agree Agree Disagree Strongly Disagree
8. I would enjoy looking smart when I have made an effort with my appearance. ..........Strongly Disagree Disagree Agree Strongly Agree
9. I would enjoy reading a book, magazine, or newspaper. ..........Definitely Agree Agree Disagree Strongly Disagree
10. I would enjoy a cup of tea or coffee or my favorite drink. ........Strongly Disagree Disagree Agree Strongly Agree
11. I would find pleasure in small things, e.g. bright sunny day, a telephone call from a friend. ..........Strongly Disagree Disagree Agree Strongly Agree
12. I would be able to enjoy a beautiful landscape or view. ..........Definitely Agree Agree Disagree Strongly Disagree
13. I would get pleasure from helping others. ..........Strongly Disagree Disagree Agree Strongly Agree
14. I would feel pleasure when I receive praise from other people. ..........Definitely Agree Agree Disagree Strongly Disagree
DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, THAT IS, at this moment.

There are no right or wrong answers.
Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

1. I feel calm. ........................................... 1 2 3 4
2. I feel secure. ........................................... 1 2 3 4
3. I am tense .............................................. 1 2 3 4
4. I feel regretful ........................................ 1 2 3 4
5. I feel at ease .......................................... 1 2 3 4
6. I feel upset ........................................... 1 2 3 4
7. I am presently worrying over possible misfortunes. 1 2 3 4
8. I feel rested. .......................................... 1 2 3 4
9. I feel anxious ......................................... 1 2 3 4
10. I feel comfortable ................................... 1 2 3 4
11. I feel self-confident. ................................ 1 2 3 4
12. I feel nervous ......................................... 1 2 3 4
13. I am jittery ........................................... 1 2 3 4
14. I feel "high strung" ................................... 1 2 3 4
15. I am relaxed ........................................... 1 2 3 4
16. I feel content ......................................... 1 2 3 4
17. I am worried .......................................... 1 2 3 4
18. I feel over-excited and "rattled" .................... 1 2 3 4
19. I feel joyful. ......................................... 1 2 3 4
20. I feel pleasant. ...................................... 1 2 3 4
STAI Form T

NAME  

DATE  

RECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you generally feel.

There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21.</td>
<td>I feel pleasant.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>22.</td>
<td>I tire quickly</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>23.</td>
<td>I feel like crying</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>24.</td>
<td>I wish I could be as happy as others seem to be</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>25.</td>
<td>I am losing out on things because I can't make up my mind soon enough</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>26.</td>
<td>I feel rested.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>27.</td>
<td>I am &quot;calm, cool, and collected&quot;</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>28.</td>
<td>I feel that difficulties are piling up so that I cannot overcome them</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>29.</td>
<td>I worry too much over something that really doesn't matter</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>30.</td>
<td>I am happy</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>31.</td>
<td>I am inclined to take things hard.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>32.</td>
<td>I lack self-confidence</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>33.</td>
<td>I feel secure.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>34.</td>
<td>I try to avoid facing a crises or difficulty</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>35.</td>
<td>I feel blue.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>36.</td>
<td>I am content</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>37.</td>
<td>Some unimportant thought runs through my mind and bothers me</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>38.</td>
<td>I take disappointments so keenly that I can't put them out of my mind.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>39.</td>
<td>I am a steady person</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>40.</td>
<td>I get in a state of tension or turmoil as I think over my recent concerns and interests.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Personality Assessment Inventory (PAI)

Personality Assessment Inventory™ (PAI®)
Leslie C. Morey, PhD

Purpose: 22 nonoverlapping full scales provide a comprehensive assessment of adult psychopathology in ages 18 years and older

Age Range: Adult
Elder Adult

Admin: Individual or group

Time: 50-60 minutes to administer; 15-20 minutes to score

Qualification: C

Sample Reports: N/A

Related Products: PAI® Professional Report Service
PAI® Software Portfolio
Personality Assessment Inventory™-Adolescent

Revised and updated materials help increase the accuracy of personality assessment.

With its newly revised Professional Manual, Profile Form Adults-Revised, and Critical Items Form-Revised, the PAI® continues to raise the standard for the assessment of adult psychopathology. This objective inventory of adult personality assesses psychopathological syndromes and provides information relevant for clinical diagnosis, treatment planning, and screening for psychopathology. Since its introduction, the PAI has been heralded as one of the most important innovations in the field of clinical assessment.

PAI® Scales and Subscales

The 344 PAI items constitute 22 nonoverlapping scales covering the constructs most relevant to a broad-based assessment of mental disorders: 4 validity scales, 11 clinical scales, 5 treatment scales, and 2 interpersonal scales. To facilitate interpretation and to cover the full range of complex clinical constructs, 10 scales contain conceptually derived subscales.

The PAI Clinical scales were developed to provide information about critical diagnostic features of 11 important clinical constructs. These 11 scales may be divided into three broad classes of disorders: those within the neurotic spectrum, those within the psychotic spectrum, and those associated with behavior disorder or impulse control problems.

The Treatment scales were developed to provide indicators of potential complications in treatment that would not necessarily be apparent from diagnostic information. These five scales include two indicators of potential for harm to self or others, two measures of the respondent's environmental circumstances, and one indicator of the respondent's motivation for treatment.

The Interpersonal scales were developed to provide an assessment of the respondent's interpersonal style along two dimensions: a warmly affiliative versus a cold rejecting style, and a dominating/controlling versus a meekly submissive style. These axes provide a useful way of conceptualizing many different mental disorders: persons at the extremes of these dimensions may present with a variety of disorders. A number of studies provide evidence that diagnostic groups differ on these dimensions.

The PAI includes a Borderline Features scale and an Antisocial Features scale. Both of these scales specifically assess character pathology. The Borderline Features scale is the only PAI scale that has four subscales, reflecting the factorial complexity of the construct. The Antisocial Features scale includes a total of three facets: one assessing antisocial behaviors, and the other two assessing antisocial traits.
Rating Form

**WHAT ASSISTANCE DO YOU NEED?**

People with disabilities often need assistance. We would like to differentiate between personal care for physical disabilities and supervision for cognitive problems. First, focus on physical "hands on" assistance. This includes help with eating, grooming, bathing, dressing, management of a ventilator or other equipment, transfers etc.

Keeping in mind these daily activities...

1. How many hours in a typical 24-hour day do you have someone with you to provide physical assistance for personal care activities such as eating, bathing, dressing, toileting and mobility?

   _______ hours paid assistance
   _______ hours unpaid (family, others)

Now, focus on supervision for cognitive problems instead of physical assistance. This includes remembering, decision making, judgment, etc..

2. How much time is someone with you in your home to assist you with activities that require remembering, decision making, or judgment?

   [1] _____ Someone else is always with me to observe or supervise.
   [2] _____ Someone else is always around, but they only check on me now and then.
   [3] _____ Sometimes I am left alone for an hour or two.
   [4] _____ Sometimes I am left alone for most of the day
   [5] _____ I have been left alone all day and all night, but someone checks in on me.
   [6] _____ I am left alone without anyone checking on me.

3. How much of the time is someone with you to help you with remembering, decision making, or judgment when you go away from your home?

   [1] _____ I am restricted from leaving, even with someone else.
   [2] _____ Someone is always with me to help with remembering, decision making or judgment when I go anywhere.
   [3] _____ I go to places on my own as long as they are familiar.

Now, I have a series of questions about your typical activities.

**ARE YOU UP AND ABOUT REGULARLY?**

4. On a typical day, how many hours are you out of bed? ________hours

5. In a typical week, how many days do you get out of your house and go somewhere? ________days

6. In the last year, how many nights have you spent away from your home (excluding hospitalizations?)

   [0]_______ none    [1]_______ 1-2    [3]_______3-4    [5]_______5 or more

**HOW DO YOU SPEND YOUR TIME?**

7. How many hours per week do you spend working in a job for which you get paid? hours ________

   (occupation: ___________________________)

8. How many hours per week do you spend in school working toward a degree or in an accredited technical training program (including hours in class and studying)? ________ Hours

9. How many hours per week do you spend in active homemaking including parenting, housekeeping, and food preparation? ________ Hours
10. How many hours per week do you spend in home maintenance activities such as gardening, house repairs or home improvement? ________ Hours

11. How many hours per week do you spend in recreational activities such as sports, exercise, playing cards, or going to movies? Please do not include time spent watching TV or listening to the radio. ________ Hours

WITH WHOM DO YOU SPEND TIME?

12. How many people do you live with? _____

13. Is one of them your spouse or significant other? [1] Yes [0] No [9] Not applicable (subject lives alone)

14. Of the people you live with how many are relatives? _____

15. How many business or organizational associates do you visit, phone, or write to at least once a month? ________ associates

16. How many friends (non-relatives contacted outside business or organizational settings) do you visit, phone, or write to at least once a month? ________ friends

17. With how many strangers have you initiated a conversation in the last month (for example, to ask information or place an order)?


WHAT FINANCIAL RESOURCES DO YOU HAVE?

18. Approximately what was the combined annual income, in the last year, of all family members in your household? (consider all sources including wages and earnings, disability benefits, pensions and retirement income, income from court settlements, investments and trust funds, child support and alimony, contributions from relatives, and any other source.)

   a. Less than 25,000 - If no ask e; if yes ask b
   b. Less than 20,000 - If no code 22500; if yes ask c
   c. Less than 15,000 - If no code 17500; if yes ask d
   d. Less than 10,000 - If no code 12500; if yes code 5000
   e. Less than 35,000 - If no ask f; if yes code 30000
   f. Less than 50,000 - If no ask g; if yes code 42500
   g. Less than 75,000 - If no code h; if yes code 62500
   h. 75,000 or more code 80000

19. Approximately how much did you pay last year for medical care expenses? (Consider any amounts paid by yourself or the family members in your household and not reimbursed by insurance or benefits.)

   "Would you say your unreimbursed medical expenses are...."

   a. Less than 1000 if "no" ask b if "yes" code 500.
   b. Less than 2500 if "no" ask c if "yes" code 1750.
   c. Less than 5000 if "no" ask d if "yes" code 3750.
   d. Less than 10000 if "no" ask e if "yes" code 7500.
   e. 10000 or more code 15000

Approved McLean IRB
2012p001515 08/31/2012 through 08/30/2013
MINI INTERNATIONAL NEUROPSYCHIATRIC INTERVIEW

English Version 6.0.0

DSM-IV

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DISCLAIMER

Our aim is to assist in the assessment and tracking of patients with greater efficiency and accuracy. Before action is taken on any data collected and processed by this program, it should be reviewed and interpreted by a licensed clinician.

This program is not designed or intended to be used in the place of a full medical and psychiatric evaluation by a qualified licensed physician – psychiatrist. It is intended only as a tool to facilitate accurate data collection and processing of symptoms elicited by trained personnel.

M.I.N.I. 6.0.0 (January 1, 2009)
<table>
<thead>
<tr>
<th>Patient Name:</th>
<th>Patient Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth:</td>
<td></td>
</tr>
<tr>
<td>Interviewer’s Name:</td>
<td></td>
</tr>
<tr>
<td>Date of Interview:</td>
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<table>
<thead>
<tr>
<th>MODULES</th>
<th>TIME FRAME</th>
<th>MEETS CRITERIA</th>
<th>DSM-IV-TR</th>
<th>ICD-10</th>
<th>PRIMARY DIAGNOSIS</th>
</tr>
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<tbody>
<tr>
<td>A MAJOR DEPRESSIVE EPISODE</td>
<td>Current (2 weeks)</td>
<td>☐ 296.20-296.26 Single</td>
<td>F32.x</td>
<td>☐</td>
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<tr>
<td></td>
<td>Past</td>
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<td>Recurrent</td>
<td>☐ 296.30-296.36 Recurrent</td>
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<td>B SUICIDALITY</td>
<td>Current (Past Month)</td>
<td>☐</td>
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<tr>
<td></td>
<td>Low □ Moderate □ High</td>
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<tr>
<td>C MANIC EPISODE</td>
<td>Current</td>
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<td>F30.x-F31.9</td>
<td>☐</td>
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<td>Past</td>
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<td>HYPOMANIC EPISODE</td>
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<td>F31.8-F31.9/F34.0</td>
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<td></td>
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<td>BIPOLAR I DISORDER</td>
<td>Current</td>
<td>☐ 296.0x-296.6x</td>
<td>F30.x-F31.9</td>
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<td></td>
<td>Past</td>
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<td>Past</td>
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<td>F31.8</td>
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<tr>
<td>BIPOLAR DISORDER NOS</td>
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<td>☐ 296.80</td>
<td>F31.9</td>
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<td>D PANIC DISORDER</td>
<td>Current (Past Month)</td>
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<td>F40.01-F41.0</td>
<td>☐</td>
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<tr>
<td></td>
<td>Lifetime</td>
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<td>E AGORAPHOBIA</td>
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<td>F40.00</td>
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<tr>
<td>F SOCIAL PHOBIA (Social Anxiety Disorder)</td>
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<td></td>
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<td>Non-Generalized</td>
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<td>G OBSESSIVE-COMPULSIVE DISORDER</td>
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<td>☐ 300.3</td>
<td>F42.8</td>
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<tr>
<td>J SUBSTANCE DEPENDENCE (Non-alcohol)</td>
<td>Past 12 Months</td>
<td>☐ 304.00-90/305.20-90</td>
<td>F11.1-F19.1</td>
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<td>SUBSTANCE ABUSE (Non-alcohol)</td>
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<td>F11.1-F19.1</td>
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<td>K PSYCHOTIC DISORDERS</td>
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<tr>
<td></td>
<td>Current</td>
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<tr>
<td>MOOD DISORDER WITH</td>
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<td>☐</td>
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</tr>
<tr>
<td>L ANOREXIA NERVOSA</td>
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<td>☐ 307.1</td>
<td>F50.0</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>M BULIMIA NERVOSA</td>
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<td>F50.2</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>ANOREXIA NERVOSA, BINGE EATING/PURGING TYPE</td>
<td>Current</td>
<td>☐ 307.1</td>
<td>F50.0</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>N GENERALIZED ANXIETY DISORDER</td>
<td>Current (Past 6 Months)</td>
<td>☐ 300.02</td>
<td>F41.1</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>O MEDICAL, ORGANIC, DRUG CAUSE RULED OUT</td>
<td>☐ No</td>
<td>☐ Yes</td>
<td>☐Uncertain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P ANTISOCIAL PERSONALITY DISORDER</td>
<td>Lifetime</td>
<td>☐ 301.7</td>
<td>F60.2</td>
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<td></td>
</tr>
</tbody>
</table>

IDENTIFY THE PRIMARY DIAGNOSIS BY CHECKING THE APPROPRIATE CHECK BOX.
(Which problem troubles you the most or dominates the others or came first in the natural history?)

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The translation from DSM-IV-TR to ICD-10 coding is not always exact. For more information on this topic see Schulte-Markwort: Crosswalks ICD-10/DSM-IV-TR. Hogrefe & Huber Publishers 2006.

**M.I.N.I. 6.0.0 (January 1, 2009)**

Approved McLean IRB
2012p001515 08/31/2012 through 08/30/2013
The M.I.N.I. was designed as a brief structured interview for the major Axis I psychiatric disorders in DSM-IV and ICD-10. Validation and reliability studies have been done comparing the M.I.N.I. to the SCID-P for DSM-III-R and the CIDI (a structured interview developed by the World Health Organization). The results of these studies show that the M.I.N.I. has similar reliability and validity properties, but can be administered in a much shorter period of time (mean 18.7 ± 11.6 minutes, median 15 minutes) than the above referenced instruments. It can be used by clinicians, after a brief training session. Lay interviewers require more extensive training.

**INTERVIEW:**

In order to keep the interview as brief as possible, inform the patient that you will conduct a clinical interview that is more structured than usual, with very precise questions about psychological problems which require a yes or no answer.

**GENERAL FORMAT:**

The M.I.N.I. is divided into modules identified by letters, each corresponding to a diagnostic category.

- At the beginning of each diagnostic module (except for psychotic disorders module), screening question(s) corresponding to the main criteria of the disorder are presented in a gray box.
- At the end of each module, diagnostic box(es) permit the clinician to indicate whether diagnostic criteria are met.

**CONVENTIONS:**

*Sentences written in « normal font » should be read exactly as written to the patient in order to standardize the assessment of diagnostic criteria.*

*Sentences written in « CAPITALS » should not be read to the patient. They are instructions for the interviewer to assist in the scoring of the diagnostic algorithms.*

*Sentences written in « bold » indicate the time frame being investigated. The interviewer should read them as often as necessary. Only symptoms occurring during the time frame indicated should be considered in scoring the responses.*

*Answers with an arrow above them (►) indicate that one of the criteria necessary for the diagnosis(es) is not met. In this case, the interviewer should go to the end of the module, circle « NO » in all the diagnostic boxes and move to the next module.*

When terms are separated by a slash (/) the interviewer should read only those symptoms known to be present in the patient (for example, question G6).

*Phrases in (parentheses) are clinical examples of the symptom. These may be read to the patient to clarify the question.*

**RATING INSTRUCTIONS:**

All questions must be rated. The rating is done at the right of each question by circling either Yes or No. Clinical judgment by the rater should be used in coding the responses. Interviewers need to be sensitive to the diversity of cultural beliefs in their administration of questions and rating of responses. The rater should ask for examples when necessary, to ensure accurate coding. The patient should be encouraged to ask for clarification on any question that is not absolutely clear. The clinician should be sure that each dimension of the question is taken into account by the patient (for example, time frame, frequency, severity, and/or alternatives).

Symptoms better accounted for by an organic cause or by the use of alcohol or drugs should not be coded positive in the M.I.N.I. The M.I.N.I. Plus has questions that investigate these issues.
### A. MAJOR DEPRESSIVE EPISODE

(⇔ MEANS: GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 a Were you ever depressed or down, most of the day, nearly every day, for two weeks?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>IF NO, CODE NO TO A1b: IF YES ASK:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b For the past two weeks, were you depressed or down, most of the day, nearly every day?</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

**A2**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2 a Were you ever much less interested in most things or much less able to enjoy the things you used to enjoy most of the time, for two weeks?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>IF NO, CODE NO TO A2b: IF YES ASK:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b In the past two weeks, were you much less interested in most things or much less able to enjoy the things you used to enjoy, most of the time?</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

**IS A1a OR A2a CODED YES?**

**A3**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF A1b OR A2b = YES: EXPLORE THE CURRENT AND THE MOST SYMPTOMATIC PAST EPISODE, OTHERWISE IF A1b AND A2b = NO: EXPLORE ONLY THE MOST SYMPTOMATIC PAST EPISODE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over that two week period, when you felt depressed or uninterested:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a Was your appetite decreased or increased nearly every day? Did your weight decrease or increase without trying intentionally (i.e., by ±5% of body weight or ±8 lbs. or ±3.5 kgs., for a 160 lb./70 kg. person in a month)?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>IF YES TO EITHER, CODE YES.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b Did you have trouble sleeping nearly every night</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>(difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)?</td>
<td></td>
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</tr>
<tr>
<td>c Did you talk or move more slowly than normal or were you fidgety, restless or having trouble sitting still almost every day?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>d Did you feel tired or without energy almost every day?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>e Did you feel worthless or guilty almost every day?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>IF YES, ASK FOR EXAMPLES. THE EXAMPLES ARE CONSISTENT WITH A DELUSIONAL IDEA. Current Episode ☐ No ☐ Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past Episode</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>f Did you have difficulty concentrating or making decisions almost every day?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>g Did you repeatedly consider hurting yourself, feel suicidal, or wish that you were dead? Did you attempt suicide or plan a suicide?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>IF YES TO EITHER, CODE YES.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A4 Did these symptoms cause significant problems at home, at work, socially, at school or in some other important way?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>A5 In between 2 episodes of depression, did you ever have an interval of at least 2 months, without any significant depression or any significant loss of interest?</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>
ARE 5 OR MORE ANSWERS (A1-A3) CODED YES AND IS A4 CODED YES FOR THAT TIME FRAME?

SPECIFY IF THE EPISODE IS CURRENT AND / OR PAST.

IF A5 IS CODED YES, CODE YES FOR RECURRENT.

A6 a How many episodes of depression did you have in your lifetime? _____

Between each episode there must be at least 2 months without any significant depression.
B. SUICIDALITY

In the past month did you:

B1  Suffer any accident?  NO  YES  0
    IF NO TO B1, SKIP TO B2; IF YES, ASK B1a:

B1a  Plan or intend to hurt yourself in that accident either actively or passively (e.g. not avoiding a risk)?  NO  YES  0
     IF NO TO B1a, SKIP TO B2: IF YES, ASK B1b:

B1b  Intend to die as a result of this accident?  NO  YES  0

B2  Feel hopeless?  NO  YES  1

B3  Think that you would be better off dead or wish you were dead?  NO  YES  1

B4  Want to harm yourself or to hurt or to injure yourself or have mental images of harming yourself?  NO  YES  2

B5  Think about suicide?  NO  YES  6
    IF NO TO B5, SKIP TO B7. OTHERWISE ASK:

Frequency  Intensity

<table>
<thead>
<tr>
<th>Occasionally</th>
<th>Mild</th>
</tr>
</thead>
<tbody>
<tr>
<td>Often</td>
<td>Moderate</td>
</tr>
<tr>
<td>Very often</td>
<td>Severe</td>
</tr>
</tbody>
</table>

Can you state that you will not act on these impulses during this treatment program?  NO  YES

B6  Feel unable to control these impulses?  NO  YES  8

B7  Have a suicide plan?  NO  YES  8

B8  Take any active steps to prepare to injure yourself or to prepare for a suicide attempt in which you expected or intended to die?  NO  YES  9

B9  Deliberately injure yourself without intending to kill yourself?  NO  YES  4

B10  Attempt suicide?  NO  YES  9
    IF NO SKIP TO B11:
    Hope to be rescued / survive  ☐
    Expected / intended to die  ☐

In your lifetime:

B11  Did you ever make a suicide attempt?  NO  YES  4
IS AT LEAST 1 OF THE ABOVE (EXCEPT B1) CODED YES?

IF YES, ADD THE TOTAL POINTS FOR THE ANSWERS (B1-B11) CHECKED ‘YES’ AND SPECIFY THE SUICIDALITY SCORE AS INDICATED IN THE DIAGNOSTIC BOX:

MAKE ANY ADDITIONAL COMMENTS ABOUT YOUR ASSESSMENT OF THIS PATIENT’S CURRENT AND NEAR FUTURE SUICIDALITY IN THE SPACE BELOW:

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUICIDALITY CURRENT**

- 1-8 points  Low  
- 9-16 points  Moderate  
- ≥ 17 points  High  

Approved McLean IRB 2012p001515 08/31/2012 through 08/30/2013
### C. MANIC AND HYPOMANIC EPISODES

(✔️ MEANS: GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN MANIC AND HYPOMANIC DIAGNOSTIC BOXES, AND MOVE TO NEXT MODULE)

Do you have any family history of manic depressive illness or bipolar disorder, or any family member who had mood swings treated with a medication like lithium, sodium valproate (Depakote) or lamotrigine (Lamictal)?  
**THIS QUESTION IS NOT A CRITERION FOR BIPOLAR DISORDER, BUT IS ASKED TO INCREASE THE CLINICIAN’S VIGILANCE ABOUT THE RISK FOR BIPOLAR DISORDER.**  
IF YES, PLEASE SPECIFY WHO: ____________________________

<table>
<thead>
<tr>
<th>C1</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a</strong></td>
<td>Have you ever had a period of time when you were feeling 'up' or 'high' or 'hyper' or so full of energy or full of yourself that you got into trouble, - or that other people thought you were not your usual self? (Do not consider times when you were intoxicated on drugs or alcohol.)</td>
<td></td>
</tr>
<tr>
<td><strong>b</strong></td>
<td>Are you currently feeling ‘up’ or ‘high’ or ‘hyper’ or full of energy?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C2</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a</strong></td>
<td>Have you ever been persistently irritable, for several days, so that you had arguments or verbal or physical fights, or shouted at people outside your family? Have you or others noticed that you have been more irritable or over reacted, compared to other people, even in situations that you felt were justified?</td>
<td></td>
</tr>
<tr>
<td><strong>b</strong></td>
<td>Are you currently feeling persistently irritable?</td>
<td></td>
</tr>
</tbody>
</table>

| **IS C1a OR C2a CODED YES?** |
| NO | YES |

| C3 | IF C1b OR C2b = YES: EXPLORE THE CURRENT AND THE MOST SYMPTOMATIC PAST EPISODE, OTHERWISE IF C1b AND C2b = NO: EXPLORE ONLY THE MOST SYMPTOMATIC PAST EPISODE |

During the times when you felt high, full of energy, or irritable did you:

<table>
<thead>
<tr>
<th>Current Episode</th>
<th>Past Episode</th>
</tr>
</thead>
</table>
| a | Feel that you could do things others couldn’t do, or that you were an especially important person?  
   *IF YES, ASK FOR EXAMPLES.*  
   *THE EXAMPLES ARE CONSISTENT WITH A DELUSIONAL IDEA.*  
   NO | YES | NO | YES |
| b | Need less sleep (for example, feel rested after only a few hours sleep)? |
| c | Talk too much without stopping, or so fast that people had difficulty understanding? |
| d | Have racing thoughts? |

**M.I.N.I. 6.0.0 (January 1, 2009)**

Approved McLean IRB  
2012p001515 08/31/2012 through 08/30/2013
<table>
<thead>
<tr>
<th></th>
<th>Current Episode</th>
<th>Past Episode</th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>Become easily distracted so that any little interruption could distract you?</td>
<td>NO  YES</td>
</tr>
<tr>
<td>f</td>
<td>Have a significant increase in your activity or drive, at work, at school, socially or sexually or did you become physically or mentally restless?</td>
<td>NO  YES</td>
</tr>
<tr>
<td>g</td>
<td>Want so much to engage in pleasurable activities that you ignored the risks or consequences (for example, spending sprees, reckless driving, or sexual indiscretions)?</td>
<td>NO  YES</td>
</tr>
</tbody>
</table>

**C3 SUMMARY:**

When rating current episode:

- if C1b is NO, are 4 or more C3 answers coded YES?
- if C1b is YES, are 3 or more C3 answers coded YES?

When rating past episode:

- if C1a is NO, are 4 or more C3 answers coded YES?
- if C1a is YES, are 3 or more C3 answers coded YES?

Code YES only if the above 3 or 4 symptoms occurred during the same time period.

**RULE:** Elation/expansiveness requires only three C3 symptoms, while irritable mood alone requires 4 of the C3 symptoms.

<p>| | | | |</p>
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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>C4</td>
<td>What is the longest time these symptoms lasted?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>3 days or less</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>4 to 6 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c)</td>
<td>7 days or more</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | |</p>
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<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C5</td>
<td>Were you hospitalized for these problems?</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

If YES, stop here and circle YES in manic episode for that time frame.

<p>| | | | |</p>
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</thead>
<tbody>
<tr>
<td>C6</td>
<td>Did these symptoms cause significant problems at home, at work, socially in your relationships with others, at school or in some other important way?</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

**ARE C3 SUMMARY AND C5 AND C6 CODED YES AND EITHER C4a or b or c CODED YES?**

Or

**ARE C3 SUMMARY AND C4c AND C6 CODED YES AND IS C5 CODED NO?**

Specify if the episode is current and / or past.

**ARE C3 SUMMARY AND C5 AND C6 CODED NO AND EITHER C4b OR C4c CODED YES?**

Or

**ARE C3 SUMMARY AND C4b AND C6 CODED YES AND IS C5 CODED NO?**

Specify if the episode is current and / or past.
ARE C3 SUMMARY AND C4a CODED YES AND IS C5 CODED NO?

NO YES

SPECIFY IF THE EPISODE IS CURRENT AND / OR PAST.

C7

a) IF MANIC EPISODE IS POSITIVE FOR EITHER CURRENT OR PAST ASK:
   Did you have 2 or more manic episodes (C4c) in your lifetime (including the current episode if present)?  NO YES

b) IF HYPOMANIC EPISODE IS POSITIVE FOR EITHER CURRENT OR PAST ASK:
   Did you have 2 or more hypomanic EPISODES (C4b) in your lifetime (including the current episode)?  NO YES

c) IF PAST “HYPOMANIC SYMPTOMS” IS CODED POSITIVE ASK:
   Did you have 2 or more episodes of hypomanic SYMPTOMS (C4a) in your lifetime (including the current episode if present)?  NO YES
D. PANIC DISORDER
(MEANS: CIRCLE NO IN D5, D6 AND D7 AND SKIP TO E1)

| D1 | a. Have you, on more than one occasion, had spells or attacks when you suddenly felt anxious, frightened, uncomfortable or uneasy, even in situations where most people would not feel that way? | NO | YES |
|    | b. Did the spells surge to a peak within 10 minutes of starting? | NO | YES |
| D2 | At any time in the past, did any of those spells or attacks come on unexpectedly or occur in an unpredictable or unprovoked manner? | NO | YES |
| D3 | Have you ever had one such attack followed by a month or more of persistent concern about having another attack, or worries about the consequences of the attack - or did you make a significant change in your behavior because of the attacks (e.g., shopping only with a companion, not wanting to leave your house, visiting the emergency room repeatedly, or seeing your doctor more frequently because of the symptoms)? | NO | YES |

D4 During the worst attack that you can remember:

| a | Did you have skipping, racing or pounding of your heart? | NO | YES |
| b | Did you have sweating or clammy hands? | NO | YES |
| c | Were you trembling or shaking? | NO | YES |
| d | Did you have shortness of breath or difficulty breathing? | NO | YES |
| e | Did you have a choking sensation or a lump in your throat? | NO | YES |
| f | Did you have chest pain, pressure or discomfort? | NO | YES |
| g | Did you have nausea, stomach problems or sudden diarrhea? | NO | YES |
| h | Did you feel dizzy, unsteady, lightheaded or faint? | NO | YES |
| i | Did things around you feel strange, unreal, detached or unfamiliar, or did you feel outside of or detached from part or all of your body? | NO | YES |
| j | Did you fear that you were losing control or going crazy? | NO | YES |
| k | Did you fear that you were dying? | NO | YES |
| l | Did you have tingling or numbness in parts of your body? | NO | YES |
| m | Did you have hot flushes or chills? | NO | YES |

D5 ARE BOTH D3, AND 4 OR MORE D4 ANSWERS, CODED YES? IF YES TO D5, SKIP TO D7.

D6 IF D5 = NO, ARE ANY D4 ANSWERS CODED YES? THEN SKIP TO E1.

M.I.N.I. 6.0.0 (January 1, 2009)
In the past month, did you have such attacks repeatedly (2 or more), and did you have persistent concern about having another attack, or worry about the consequences of the attacks, or did you change your behavior in any way because of the attacks?  

**NO** | YES  
---|---

**E. AGORAPHOBIA**

**E1**  
Do you feel anxious or uneasy in places or situations where help might not be available or escape might be difficult, like being in a crowd, standing in a line (queue), when you are alone away from home or alone at home, or when crossing a bridge, or traveling in a bus, train or car or where you might have a panic attack or the panic-like symptoms we just spoke about?  

**NO** | YES  
---|---

If **E1** = **NO**, circle **NO** in **E2**.

**E2**  
Do you fear these situations so much that you avoid them, or suffer through them, or need a companion to face them?  

**NO** | YES  
---|---

**IS E2 (CURRENT AGORAPHOBIA) CODED YES**  

and  

**IS D7 (CURRENT PANIC DISORDER) CODED YES?**

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
</table>

**PANIC DISORDER with Agoraphobia CURRENT**

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
</table>

**IS E2 (CURRENT AGORAPHOBIA) CODED NO**  

and  

**IS D7 (CURRENT PANIC DISORDER) CODED YES?**

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
</table>

**PANIC DISORDER without Agoraphobia CURRENT**

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
</table>

**IS E2 (CURRENT AGORAPHOBIA) CODED YES**  

and  

**IS D5 (PANIC DISORDER LIFETIME) CODED NO?**

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
</table>

**AGORAPHOBIA, CURRENT without history of Panic Disorder**
F. SOCIAL PHOBIA (Social Anxiety Disorder)

(⇒ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE)

<table>
<thead>
<tr>
<th>Question</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 In the past month, did you have persistent fear and significant anxiety at being watched, being the focus of attention, or of being humiliated or embarrassed? This includes things like speaking in public, eating in public or with others, writing while someone watches, or being in social situations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2 Is this social fear excessive or unreasonable and does it almost always make you anxious?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3 Do you fear these social situations so much that you avoid them or suffer through them most of the time?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F4 Do these social fears disrupt your normal work, school or social functioning or cause you significant distress?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SUBTYPES

Do you fear and avoid 4 or more social situations?

- If YES Generalized social phobia (social anxiety disorder)
- If NO Non-generalized social phobia (social anxiety disorder)

EXAMPLES OF SUCH SOCIAL SITUATIONS TYPICALLY INCLUDE

- INITIATING OR MAINTAINING A CONVERSATION,
- PARTICIPATING IN SMALL GROUPS,
- DATING,
- SPEAKING TO AUTHORITY FIGURES,
- ATTENDING PARTIES,
- PUBLIC SPEAKING,
- EATING IN FRONT OF OTHERS,
- URINATING IN A PUBLIC WASHROOM, ETC.

NOTE TO INTERVIEWER: PLEASE ASSESS WHETHER THE SUBJECT’S FEARS ARE RESTRICTED TO NON-GENERALIZED (“ONLY 1 OR SEVERAL”) SOCIAL SITUATIONS OR EXTEND TO GENERALIZED (“MOST”) SOCIAL SITUATIONS. “MOST” SOCIAL SITUATIONS IS USUALLY OPERATIONALIZED TO MEAN 4 OR MORE SOCIAL SITUATIONS, ALTHOUGH THE DSM-IV DOES NOT EXPLICITLY STATE THIS.
### G. OBSESSIVE-COMPULSIVE DISORDER

(✈ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO AND MOVE TO THE NEXT MODULE)

<table>
<thead>
<tr>
<th>G1</th>
<th>In the past month, have you been bothered by recurrent thoughts, impulses, or images that were unwanted, distasteful, inappropriate, intrusive, or distressing? - (For example, the idea that you were dirty, contaminated or had germs, or fear of contaminating others, or fear of harming someone even though it disturbs or distresses you, or fear you would act on some impulse, or fear or superstitions that you would be responsible for things going wrong, or obsessions with sexual thoughts, images or impulses, or hoarding, collecting, or religious obsessions.) (DO NOT INCLUDE SIMPLY EXCESSIVE WORRIES ABOUT REAL LIFE PROBLEMS. DO NOT INCLUDE OBSESSIONS DIRECTLY RELATED TO EATING DISORDERS, SEXUAL DEVIATIONS, PATHOLOGICAL GAMBLING, OR ALCOHOL OR DRUG ABUSE BECAUSE THE PATIENT MAY DERIVE PLEASURE FROM THE ACTIVITY AND MAY WANT TO RESIST IT ONLY BECAUSE OF ITS NEGATIVE CONSEQUENCES.) NO ▼ YES</th>
<th>SKIPTO G4</th>
</tr>
</thead>
<tbody>
<tr>
<td>G2</td>
<td>Did they keep coming back into your mind even when you tried to ignore or get rid of them? NO ▼ YES</td>
<td>SKIPTO G4</td>
</tr>
<tr>
<td>G3</td>
<td>Do you think that these obsessions are the product of your own mind and that they are not imposed from the outside? NO ▼ YES</td>
<td>obsessions</td>
</tr>
<tr>
<td>G4</td>
<td>In the past month, did you do something repeatedly without being able to resist doing it, like washing or cleaning excessively, counting or checking things over and over, or repeating, collecting, arranging things, or other superstitious rituals? NO ▼ YES</td>
<td>compulsions</td>
</tr>
</tbody>
</table>

IS G3 OR G4 CODED YES?

| G5 | At any point, did you recognize that either these obsessive thoughts or these compulsive behaviors were excessive or unreasonable? NO ▼ YES |

| G6 | In the past month, did these obsessive thoughts and/or compulsive behaviors significantly interfere with your normal routine, your work or school, your usual social activities, or relationships, or did they take more than one hour a day? NO ▼ YES | O.C.D. CURRENT |
### H. POSTTRAUMATIC STRESS DISORDER

**(⇒ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Option 1</th>
<th>Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Have you ever experienced or witnessed or had to deal with an extremely traumatic event that included actual or threatened death or serious injury to you or someone else?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td><strong>EXAMPLES OF TRAUMATIC EVENTS INCLUDE: SERIOUS ACCIDENTS, SEXUAL OR PHYSICAL ASSAULT, A TERRORIST ATTACK, BEING HELD HOSTAGE, KIDNAPPING, FIRE, DISCOVERING A BODY, WAR, OR NATURAL DISASTER, WITNESSING THE VIOLENT OR SUDDEN DEATH OF SOMEONE CLOSE TO YOU, OR A LIFE THREATENING ILLNESS.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2 Did you respond with intense fear, helplessness or horror?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>H3 During the past month, have you re-experienced the event in a distressing way (such as in dreams, intense recollections, flashbacks or physical reactions) or did you have intense distress when you were reminded about the event or exposed to a similar event?</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

#### H4 In the past month:

<table>
<thead>
<tr>
<th>Sub-question</th>
<th>Option 1</th>
<th>Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Have you avoided thinking about or talking about the event?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>b Have you avoided activities, places or people that remind you of the event?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>c Have you had trouble recalling some important part of what happened?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>d Have you become much less interested in hobbies or social activities?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>e Have you felt detached or estranged from others?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>f Have you noticed that your feelings are numbed?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>g Have you felt that your life will be shortened or that you will die sooner than other people?</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

**ARE 3 OR MORE H4 ANSWERS CODED YES?**

<table>
<thead>
<tr>
<th>Option 1</th>
<th>Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

#### H5 In the past month:

<table>
<thead>
<tr>
<th>Sub-question</th>
<th>Option 1</th>
<th>Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Have you had difficulty sleeping?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>b Were you especially irritable or did you have outbursts of anger?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>c Have you had difficulty concentrating?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>d Were you nervous or constantly on your guard?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>e Were you easily startled?</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

**ARE 2 OR MORE H5 ANSWERS CODED YES?**

<table>
<thead>
<tr>
<th>Option 1</th>
<th>Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

#### H6 During the past month, have these problems significantly interfered with your work, school or social activities, or caused significant distress?

**NO**

**YES**
# I. ALCOHOL DEPENDENCE / ABUSE

(⇒ MEANS: GO TO DIAGNOSTIC BOXES, CIRCLE NO IN BOTH AND MOVE TO THE NEXT MODULE)

<p>| | | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>I1</td>
<td><strong>In the past 12 months</strong>, have you had 3 or more alcoholic drinks, - within a 3 hour period, - on 3 or more occasions?</td>
<td>NO   YES</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I2</td>
<td><strong>In the past 12 months:</strong></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Did you need to drink a lot more in order to get the same effect that you got when you first started drinking or did you get much less effect with continued use of the same amount?</td>
<td>NO YES</td>
</tr>
<tr>
<td>b</td>
<td>When you cut down on drinking did your hands shake, did you sweat or feel agitated? Did you drink to avoid these symptoms (for example, &quot;the shakes&quot;, sweating or agitation) or to avoid being hungover? IF YES TO ANY, CODE YES.</td>
<td>NO YES</td>
</tr>
<tr>
<td>c</td>
<td>During the times when you drank alcohol, did you end up drinking more than you planned when you started?</td>
<td>NO YES</td>
</tr>
<tr>
<td>d</td>
<td>Have you tried to reduce or stop drinking alcohol but failed?</td>
<td>NO YES</td>
</tr>
<tr>
<td>e</td>
<td>On the days that you drank, did you spend substantial time in obtaining alcohol, drinking, or in recovering from the effects of alcohol?</td>
<td>NO YES</td>
</tr>
<tr>
<td>f</td>
<td>Did you spend less time working, enjoying hobbies, or being with others because of your drinking?</td>
<td>NO YES</td>
</tr>
<tr>
<td>g</td>
<td>If your drinking caused you health or mental problems, did you still keep on drinking?</td>
<td>NO YES</td>
</tr>
</tbody>
</table>

ARE 3 OR MORE I2 ANSWERS CODED YES?  

* IF YES, SKIP I3 QUESTIONS AND GO TO NEXT MODULE. “DEPENDENCE PREEMPTS ABUSE” IN DSM IV TR.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I3</td>
<td><strong>In the past 12 months:</strong></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Have you been intoxicated, high, or hungover more than once when you had other responsibilities at school, at work, or at home? Did this cause any problems? (CODE YES ONLY IF THIS CAUSED PROBLEMS.)</td>
<td>NO YES</td>
</tr>
<tr>
<td>b</td>
<td>Were you intoxicated more than once in any situation where you were physically at risk, for example, driving a car, riding a motorbike, using machinery, boating, etc.?</td>
<td>NO YES</td>
</tr>
<tr>
<td>c</td>
<td>Did you have legal problems more than once because of your drinking, for example, an arrest or disorderly conduct?</td>
<td>NO YES</td>
</tr>
<tr>
<td>d</td>
<td>If your drinking caused problems with your family or other people, did you still keep on drinking?</td>
<td>NO YES</td>
</tr>
</tbody>
</table>
ARE 1 OR MORE 13 ANSWERS CODED YES?

ALCOHOL ABUSE CURRENT
J. SUBSTANCE DEPENDENCE / ABUSE (NON-ALCOHOL)

(► MEANS: GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

Now I am going to show you / read to you a list of street drugs or medicines.

J1  a  In the past 12 months, did you take any of these drugs more than once, to get high, to feel elated, to get "a buzz" or to change your mood?  ►  NO  YES

CIRCLE EACH DRUG TAKEN:


Cocaine: snorting, IV, freebase, crack, "speedball".

Narcotics: heroin, morphine, Dilaudid, opium, Demerol, methadone, Darvon, codeine, Percodan, Vicoden, OxyContin.

Hallucinogens: LSD ("acid"), mescaline, peyote, psilocybin, STP, "mushrooms", "ecstasy", MDA, MDMA.

Phencyclidine: PCP ("Angel Dust", "PeaCe Pill", "Tranq", "Hog"), or ketamine ("special K").

Inhalants: "glue", ethyl chloride, "rush", nitrous oxide ("laughing gas"), amyl or butyl nitrate ("poppers").

Cannabis: marijuana, hashish ("hash"), THC, "pot", "grass", "weed", "reefer".

Tranquilizers: Quaalude, Seconal ("reds"), Valium, Xanax, Librium, Ativan, Dalmane, Halcion, barbiturates, Miltown, GHB, Roofinol, "Roofies".

Miscellaneous: steroids, nonprescription sleep or diet pills. Cough Medicine? Any others?

SPECIFY THE MOST USED DRUG(S):

WHICH DRUG(S) CAUSE THE BIGGEST PROBLEMS?:

FIRST EXPLORE THE DRUG CAUSING THE BIGGEST PROBLEMS AND MOST LIKELY TO MEET DEPENDENCE / ABUSE CRITERIA.

IF MEETS CRITERIA FOR ABUSE OR DEPENDENCE, SKIP TO THE NEXT MODULE. OTHERWISE, EXPLORE THE NEXT MOST PROBLEMATIC DRUG.

J2  Considering your use of (NAME THE DRUG / DRUG CLASS SELECTED), in the past 12 months:

a  Have you found that you needed to use much more (NAME OF DRUG / DRUG CLASS SELECTED) to get the same effect that you did when you first started taking it?  NO  YES

b  When you reduced or stopped using (NAME OF DRUG / DRUG CLASS SELECTED), did you have withdrawal symptoms (aches, shaking, fever, weakness, diarrhea, nausea, sweating, heart pounding, difficulty sleeping, or feeling agitated, anxious, irritable, or depressed)? Did you use any drug(s) to keep yourself from getting sick (withdrawal symptoms) or so that you would feel better?

IF YES TO EITHER, CODE YES.

c  Have you often found that when you used (NAME OF DRUG / DRUG CLASS SELECTED), you ended up taking more than you thought you would?  NO  YES

d  Have you tried to reduce or stop taking (NAME OF DRUG / DRUG CLASS SELECTED) but failed?  NO  YES

e  On the days that you used (NAME OF DRUG / DRUG CLASS SELECTED), did you spend substantial time (>2 HOURS), obtaining, using or in recovering from the drug, or thinking about the drug?  NO  YES

f  Did you spend less time working, enjoying hobbies, or being with family or friends because of your drug use?  NO  YES

g  If (NAME OF DRUG / DRUG CLASS SELECTED) caused you health or mental problems, did you still keep on using it?  NO  YES
**ARE 3 OR MORE J2 ANSWERS CODED YES?**

**SPECIFY DRUG(S): ____________________________________________**

* IF YES, SKIP J3 QUESTIONS, MOVE TO NEXT DISORDER.  
“DEPENDENCE PREEMPTS ABUSE” IN DSM IV TR.

**CONSIDERING YOUR USE OF (NAME THE DRUG CLASS SELECTED), IN THE PAST 12 MONTHS:**

<table>
<thead>
<tr>
<th>J3</th>
<th>Question</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Have you been intoxicated, high, or hungover from (NAME OF DRUG / DRUG CLASS SELECTED) more than once, when you had other responsibilities at school, at work, or at home? Did this cause any problem?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(CODE YES ONLY IF THIS CAUSED PROBLEMS.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Have you been high or intoxicated from (NAME OF DRUG / DRUG CLASS SELECTED) more than once in any situation where you were physically at risk (for example, driving a car, riding a motorbike, using machinery, boating, etc.)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Did you have legal problems more than once because of your drug use, for example, an arrest or disorderly conduct?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>If (NAME OF DRUG / DRUG CLASS SELECTED) caused problems with your family or other people, did you still keep on using it?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ARE 1 OR MORE J3 ANSWERS CODED YES?**

**SPECIFY DRUG(S): ____________________________________________**

**SUBSTANCE ABUSE CURRENT**

**NO** | **YES**
K. PSYCHOTIC DISORDERS AND MOOD DISORDER WITH PSYCHOTIC FEATURES

ASK FOR AN EXAMPLE OF EACH QUESTION ANSWERED POSITIVELY. CODE YES ONLY IF THE EXAMPLES CLEARLY SHOW A DISTORTION OF THOUGHT OR OF PERCEPTION OR IF THEY ARE NOT CULTURALLY APPROPRIATE. BEFORE CODING, INVESTIGATE WHETHER DELUSIONS QUALIFY AS "BIZARRE".

DELUSIONS ARE "BIZARRE" IF: CLEARLY IMPLAUSIBLE, ABSURD, NOT UNDERSTANDABLE, AND CANNOT DERIVE FROM ORDINARY LIFE EXPERIENCE.

HALUCINATIONS ARE SCORED "BIZARRE" IF: A VOICE COMMENTS ON THE PERSON'S THOUGHTS OR BEHAVIOR, OR WHEN TWO OR MORE VOICES ARE CONVERSING WITH EACH OTHER.

THE PURPOSE OF THIS MODULE IS TO EXCLUDE PATIENTS WITH PSYCHOTIC DISORDERS. THIS MODULE NEEDS EXPERIENCE.

Now I am going to ask you about unusual experiences that some people have.

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
<th>BIZARRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1  a Have you ever believed that people were spying on you, or that someone was plotting against you, or trying to hurt you?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b IF YES OR YES BIZARRE: do you currently believe these things?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K2  a Have you ever believed that someone was reading your mind or could hear your thoughts, or that you could actually read someone's mind or hear what another person was thinking?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b IF YES OR YES BIZARRE: do you currently believe these things?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K3  a Have you ever believed that someone or some force outside of yourself put thoughts in your mind that were not your own, or made you act in a way that was not your usual self? Have you ever felt that you were possessed?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b IF YES OR YES BIZARRE: do you currently believe these things?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K4  a Have you ever believed that you were being sent special messages through the TV, radio, newspapers, books or magazines or that a person you did not personally know was particularly interested in you?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b IF YES OR YES BIZARRE: do you currently believe these things?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K5  a Have your relatives or friends ever considered any of your beliefs odd or unusual?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b IF YES OR YES BIZARRE: do they currently consider your beliefs strange?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K6  a Have you ever heard things other people couldn’t hear, such as voices?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b IF YES OR YES BIZARRE TO K6a: have you heard sounds / voices in the past month?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b IF YES TO VOICE HALLUCINATION: Was the voice commenting on your thoughts or behavior or did you hear two or more voices talking to each other?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

M.I.N.I. 6.0.0 (January 1, 2009)

Approved McLean IRB
2012p001515 08/31/2012 through 08/30/2013
K7  a  Have you ever had visions when you were awake or have you ever seen things other people couldn’t see?  
   CLINICIAN: CHECK TO SEE IF THESE ARE CULTURALLY INAPPROPRIATE.  
   NO  YES  

b  IF YES:  have you seen these things in the past month?  NO  YES  

   CLINICIAN’S JUDGMENT  

K8  b  IS THE PATIENT CURRENTLY EXHIBITING INCOHERENCE, DISORGANIZED SPEECH, OR MARKED LOOSENING OF ASSOCIATIONS?  
   NO  YES  

K9  b  IS THE PATIENT CURRENTLY EXHIBITING DISORGANIZED OR CATATONIC BEHAVIOR?  
   NO  YES  

K10  b  ARE NEGATIVE SYMPTOMS OF SCHIZOPHRENIA, E.G. SIGNIFICANT AFFECTIVE FLATTENING, POVERTY OF SPEECH (ALOGIA) OR AN INABILITY TO INITIATE OR PERSIST IN GOAL-DIRECTED ACTIVITIES (AVOLITION), PROMINENT DURING THE INTERVIEW?  
   NO  YES  

K11  a  ARE 1 OR MORE « a » QUESTIONS FROM K1a TO K7a CODED YES OR YES BIZARRE 
   AND IS EITHER:  
   MAJOR DEPRESSIVE EPISODE, (CURRENT, RECURRENT OR PAST)  
   OR  
   MANIC OR HYPOMANIC EPISODE, (CURRENT OR PAST) CODED YES?  
   NO  YES  
   IF NO TO K11 a, CIRCLE NO IN BOTH ‘MOOD DISORDER WITH PSYCHOTIC FEATURES’ DIAGNOSTIC BOXES AND MOVE TO K13. 

b  You told me earlier that you had period(s) when you felt (depressed/high/persistently irritable).  
   Were the beliefs and experiences you just described (SYMPTOMS CODED YES FROM K1a TO K7a) restricted exclusively to times when you were feeling depressed/high/irritable?  
   IF THE PATIENT EVER HAD A PERIOD OF AT LEAST 2 WEEKS OF HAVING THESE BELIEFS OR EXPERIENCES (PSYCHOTIC SYMPTOMS) WHEN THEY WERE NOT DEPRESSED/HIGH/IRRITABLE, CODE NO TO THIS DISORDER.  
   IF THE ANSWER IS NO TO THIS DISORDER, ALSO CIRCLE NO TO K12 AND MOVE TO K13. 

K12  a  ARE 1 OR MORE « b » QUESTIONS FROM K1b TO K7b CODED YES OR YES BIZARRE AND IS EITHER:  
   MAJOR DEPRESSIVE EPISODE, (CURRENT)  
   OR  
   MANIC OR HYPOMANIC EPISODE, (CURRENT) CODED YES?  
   IF THE ANSWER IS YES TO THIS DISORDER (LIFETIME OR CURRENT), CIRCLE NO TO K13 AND K14 AND MOVE TO THE NEXT MODULE.
K13  ARE 1 OR MORE « b » QUESTIONS FROM K1b TO K6b, CODED YES BIZARRE?

OR

ARE 2 OR MORE « b » QUESTIONS FROM K1b TO K10b, CODED YES (RATHER THAN YES BIZARRE)?

AND DID AT LEAST TWO OF THE PSYCHOTIC SYMPTOMS OCCUR DURING THE SAME 1 MONTH PERIOD?

K14  IS K13 CODED YES

OR

ARE 1 OR MORE « a » QUESTIONS FROM K1a TO K6a, CODED YES BIZARRE?

OR

ARE 2 OR MORE « a » QUESTIONS FROM K1a TO K7a, CODED YES (RATHER THAN YES BIZARRE)

AND DID AT LEAST TWO OF THE PSYCHOTIC SYMPTOMS OCCUR DURING THE SAME 1 MONTH PERIOD?
L. ANOREXIA NERVOSA

(⇒ MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

<table>
<thead>
<tr>
<th></th>
<th>HOW TALL ARE YOU?</th>
<th>4'9</th>
<th>4'10</th>
<th>4'11</th>
<th>5'0</th>
<th>5'1</th>
<th>5'2</th>
<th>5'3</th>
<th>5'4</th>
<th>5'5</th>
<th>5'6</th>
<th>5'7</th>
<th>5'8</th>
<th>5'9</th>
<th>5'10</th>
</tr>
</thead>
<tbody>
<tr>
<td>ft</td>
<td></td>
<td>81</td>
<td>84</td>
<td>87</td>
<td>89</td>
<td>92</td>
<td>96</td>
<td>99</td>
<td>102</td>
<td>105</td>
<td>108</td>
<td>112</td>
<td>115</td>
<td>118</td>
<td>122</td>
</tr>
<tr>
<td>in</td>
<td></td>
<td>145</td>
<td>147</td>
<td>150</td>
<td>152</td>
<td>155</td>
<td>158</td>
<td>160</td>
<td>163</td>
<td>165</td>
<td>168</td>
<td>170</td>
<td>173</td>
<td>175</td>
<td>178</td>
</tr>
<tr>
<td>cm</td>
<td></td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>41</td>
<td>42</td>
<td>43</td>
<td>45</td>
<td>46</td>
<td>48</td>
<td>49</td>
<td>51</td>
<td>52</td>
<td>54</td>
<td>55</td>
</tr>
<tr>
<td>kgs</td>
<td></td>
<td>81</td>
<td>84</td>
<td>87</td>
<td>89</td>
<td>92</td>
<td>96</td>
<td>99</td>
<td>102</td>
<td>105</td>
<td>108</td>
<td>112</td>
<td>115</td>
<td>118</td>
<td>122</td>
</tr>
</tbody>
</table>

In the past 3 months:

L2 In spite of this low weight, have you tried not to gain weight?

L3 Have you intensely feared gaining weight or becoming fat, even though you were underweight?

L4 a Have you considered yourself too big / fat or that part of your body was too big / fat?

b Has your body weight or shape greatly influenced how you felt about yourself?

c Have you thought that your current low body weight was normal or excessive?

L5 ARE 1 OR MORE ITEMS FROM L4 CODED YES?

L6 FOR WOMEN ONLY: During the last 3 months, did you miss all your menstrual periods when they were expected to occur (when you were not pregnant)?

FOR WOMEN: ARE L5 AND L6 CODED YES?

FOR MEN: IS L5 CODED YES?

HEIGH / WEIGHT TABLE CORRESPONDING TO A BMI THRESHOLD OF 17.5 KG/M²

<table>
<thead>
<tr>
<th>Height/Weight</th>
<th>4'9</th>
<th>4'10</th>
<th>4'11</th>
<th>5'0</th>
<th>5'1</th>
<th>5'2</th>
<th>5'3</th>
<th>5'4</th>
<th>5'5</th>
<th>5'6</th>
<th>5'7</th>
<th>5'8</th>
<th>5'9</th>
<th>5'10</th>
</tr>
</thead>
<tbody>
<tr>
<td>ft/in</td>
<td>81</td>
<td>84</td>
<td>87</td>
<td>89</td>
<td>92</td>
<td>96</td>
<td>99</td>
<td>102</td>
<td>105</td>
<td>108</td>
<td>112</td>
<td>115</td>
<td>118</td>
<td>122</td>
</tr>
<tr>
<td>lbs</td>
<td>145</td>
<td>147</td>
<td>150</td>
<td>152</td>
<td>155</td>
<td>158</td>
<td>160</td>
<td>163</td>
<td>165</td>
<td>168</td>
<td>170</td>
<td>173</td>
<td>175</td>
<td>178</td>
</tr>
<tr>
<td>cm</td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>41</td>
<td>42</td>
<td>43</td>
<td>45</td>
<td>46</td>
<td>48</td>
<td>49</td>
<td>51</td>
<td>52</td>
<td>54</td>
<td>55</td>
</tr>
<tr>
<td>kgs</td>
<td>81</td>
<td>84</td>
<td>87</td>
<td>89</td>
<td>92</td>
<td>96</td>
<td>99</td>
<td>102</td>
<td>105</td>
<td>108</td>
<td>112</td>
<td>115</td>
<td>118</td>
<td>122</td>
</tr>
</tbody>
</table>

The weight thresholds above are calculated using a body mass index (BMI) equal to or below 17.5 kg/m² for the patient’s height. This is the threshold guideline below which a person is deemed underweight by the DSM-IV and the ICD-10 Diagnostic Criteria for Research for Anorexia Nervosa.
### M. BULIMIA NERVOSA

(⇒ MEANS: GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

| M1 | In the past three months, did you have eating binges or times when you ate a very large amount of food within a 2-hour period? | NO | YES |
| M2 | In the last 3 months, did you have eating binges as often as twice a week? | NO | YES |
| M3 | During these binges, did you feel that your eating was out of control? | NO | YES |
| M4 | Did you do anything to compensate for, or to prevent a weight gain from these binges, like vomiting, fasting, exercising or taking laxatives, enemas, diuretics (fluid pills), or other medications? | NO | YES |
| M5 | Does your body weight or shape greatly influence how you feel about yourself? | NO | YES |
| M6 | DO THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOREXIA NERVOSA? | NO | YES |
| M7 | Do these binges occur only when you are under (___ lbs./kgs.)? INTERVIEWER: WRITE IN THE ABOVE PARENTHESIS THE THRESHOLD WEIGHT FOR THIS PATIENT'S HEIGHT FROM THE HEIGHT / WEIGHT TABLE IN THE ANOREXIA NERVOSA MODULE. | NO | YES |

#### M8

IS M5 CODED YES AND IS EITHER M6 OR M7 CODED NO?

IS M7 CODED YES?

---

**BULIMIA NERVOSA CURRENT**

**ANOREXIA NERVOSA**

*Binge Eating/Purging Type CURRENT*
## N. GENERALIZED ANXIETY DISORDER

**(MEANS: GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)**

<table>
<thead>
<tr>
<th>N1</th>
<th>Were you excessively anxious or worried about several routine things, over the past 6 months?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES</td>
</tr>
</tbody>
</table>

**IN ENGLISH, IF THE PATIENT IS UNCLEAR ABOUT WHAT YOU MEAN, PROBE BY ASKING (Do others think that you are a “worry wart”) AND GET EXAMPLES.**

<table>
<thead>
<tr>
<th>N1 b</th>
<th>Are these anxieties and worries present most days?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES</td>
</tr>
</tbody>
</table>

**ARE THE PATIENT’S ANXIETY AND WORRIES RESTRICTED EXCLUSIVELY TO, OR BETTER EXPLAINED BY, ANY DISORDER PRIOR TO THIS POINT?**

<table>
<thead>
<tr>
<th>N2</th>
<th>Do you find it difficult to control the worries?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N3</th>
<th>FOR THE FOLLOWING, CODE NO IF THE SYMPTOMS ARE CONFINED TO FEATURES OF ANY DISORDER EXPLORED PRIOR TO THIS POINT.</th>
</tr>
</thead>
</table>

**When you were anxious over the past 6 months, did you, most of the time:**

<table>
<thead>
<tr>
<th>N3 a</th>
<th>Feel restless, keyed up or on edge?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N3 b</th>
<th>Have muscle tension?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N3 c</th>
<th>Feel tired, weak or exhausted easily?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N3 d</th>
<th>Have difficulty concentrating or find your mind going blank?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N3 e</th>
<th>Feel irritable?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N3 f</th>
<th>Have difficulty sleeping (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES</td>
</tr>
</tbody>
</table>

**ARE 3 OR MORE N3 ANSWERS CODED YES?**

<table>
<thead>
<tr>
<th>N4</th>
<th>Do these anxieties and worries disrupt your normal work, school or social functioning or cause you significant distress?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO YES</td>
</tr>
</tbody>
</table>

### O. RULE OUT MEDICAL, ORGANIC OR DRUG CAUSES FOR ALL DISORDERS

**IF THE PATIENT CODES POSITIVE FOR ANY CURRENT DISORDER ASK:**

### Just before these symptoms began:

**O1a** Were you taking any drugs or medicines?  
  **O1b** Did you have any medical illness?

**IN THE CLINICIAN’S JUDGMENT: ARE EITHER OF THESE LIKELY TO BE DIRECT CAUSES OF THE PATIENT’S DISORDER?**

**IF NECESSARY ASK ADDITIONAL OPEN-ENDED QUESTIONS.**

**O2** SUMMARY: HAS AN ORGANIC CAUSE BEEN RULED OUT?

---

Approved McLean IRB  
2012p001515 08/31/2012 through 08/30/2013
P. ANTISOCIAL PERSONALITY DISORDER

(● MEANS: GO TO THE DIAGNOSTIC BOX AND CIRCLE NO)

P1  Before you were 15 years old, did you:

a  repeatedly skip school or run away from home overnight?  NO  YES

b  repeatedly lie, cheat, "con" others, or steal?  NO  YES

c  start fights or bully, threaten, or intimidate others?  NO  YES

d  deliberately destroy things or start fires?  NO  YES

e  deliberately hurt animals or people?  NO  YES

f  force someone to have sex with you?  NO  YES

ARE 2 OR MORE P1 ANSWERS CODED YES?  NO  YES

DO NOT CODE YES TO THE BEHAVIORS BELOW IF THEY ARE EXCLUSIVELY POLITICALLY OR RELIGIOUSLY MOTIVATED.

P2  Since you were 15 years old, have you:

a  repeatedly behaved in a way that others would consider irresponsible, like failing to pay for things you owed, deliberately being impulsive or deliberately not working to support yourself?  NO  YES

b  done things that are illegal even if you didn't get caught (for example, destroying property, shoplifting, stealing, selling drugs, or committing a felony)?  NO  YES

c  been in physical fights repeatedly (including physical fights with your spouse or children)?  NO  YES

d  often lied or "conned" other people to get money or pleasure, or lied just for fun?  NO  YES

e  exposed others to danger without caring?  NO  YES

f  felt no guilt after hurting, mistreating, lying to, or stealing from others, or after damaging property?  NO  YES

ARE 3 OR MORE P2 QUESTIONS CODED YES?  NO  YES

ANTISOCIAL PERSONALITY DISORDER
LIFETIME

THIS CONCLUDES THE INTERVIEW
### REFERENCES


**Scientific committee for the MINI 6.0.0:**
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**M.I.N.I. 4.6/5.0, M.I.N.I. Plus 4.6/5.0 and M.I.N.I. Screen 5.0:**
O. Osman, E. Al-Radi
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D. Sheehan, R. Baker, J. Janavs, K. Harnett-Sheehan, M. Sheehan
J. Shlik, A. Aluoja, E. Khil
K. Khooshabi, A. Zomorodi
M. Heikkinen, M. Lijeström, O. Tuominen
Y. Lecrubier, E. Weiller, P. Amorim, T. Hergueta
G. Stotz, R. Dietz-Bauer, M. Ackenheim
T. Calligas, S. Beratis, GN Papadimitriou, T Matsoukas
CR Soldatos
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R. Barda, I. Levinson, A. Aviv
C. Mittal, K. Batra, S. Gambhir, Organon
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**M.I.N.I. 6.0.0 (January 1, 2009)**

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2012p001515 08/31/2012 through 08/30/2013
A validation study of this instrument was made possible, in part, by grants from SmithKline Beecham and the European Commission. The authors are grateful to Dr. Pauline Powers for her advice on the modules on Anorexia Nervosa and Bulimia.
MOOD DISORDERS: DIAGNOSTIC ALGORITHM

Consult Modules:
A  Major Depressive Episode
C  (Hypo) manic Episode
K  Psychotic Disorders

MODULE K:

1a  IS K11b CODED YES?  NO  YES
1b  IS K12a CODED YES?  NO  YES

MODULES A and C:

2a  CIRCLE YES IF A DELUSIONAL IDEA IS IDENTIFIED IN A3e?  YES  YES
2b  CIRCLE YES IF A DELUSIONAL IDEA IS IDENTIFIED IN C3a?  YES  YES

c  Is a Major Depressive Episode coded YES (current or past)?  
and
is Manic Episode coded NO (current and past)?  
and
is Hypomanic Episode coded NO (current and past)?  
and
is “Hypomanic Symptoms” coded NO (current and past)?

Specify:
- If the depressive episode is current or past or both
- **With Psychotic Features** Current: If 1b or 2a (current) = YES  
  With Psychotic Features Past: If 1a or 2a (past) = YES

d  Is a Manic Episode coded YES (current or past)?

Specify:
- If the Bipolar I Disorder is current or past or both
- With **Single Manic Episode**: If Manic episode (current or past) = YES  
  and MDE (current and past) = NO
- **With Psychotic Features** Current: If 1b or 2a (current) or 2b (current) = YES  
  With Psychotic Features Past: If 1a or 2a (past) or 2b (past) = YES
- If the most recent episode is manic, depressed,  
  mixed or hypomanic or unspecified (all mutually exclusive)
- **Unspecified** if the Past Manic Episode is coded YES AND  
  Current (C3 Summary AND C4a AND C6 AND O2) are coded YES

MAJOR DEPRESSIVE DISORDER

- **current**  past
  - MDD
  - **With Psychotic Features**  Current  Past

BIPOLAR I DISORDER

- **current**  past
  - Bipolar I Disorder  
    - Single Manic Episode  
      - **With Psychotic Features**  Current  Past
  - Most Recent Episode
    - Manic  
    - Depressed  
    - Mixed  
    - Hypomanic  
    - Unspecified

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e. Is Major Depressive Episode coded YES (current or past)?
   and
   Is Hypomanic Episode coded YES (current or past)?
   and
   Is Manic Episode coded NO (current and past)?

Specify:

- If the Bipolar Disorder is current or past or both
- If the most recent mood episode is hypomanic or depressed (mutually exclusive)

f. Is MDE coded NO (current and past)
   and
   Is Manic Episode coded NO (current and past)?
   and is either:

   1) C7b coded YES for the appropriate time frame?

   or

   2) C3 Summary coded YES for the appropriate time frame?
      and
      C4a coded YES for the appropriate time frame?
      and
      C7c coded YES for the appropriate time frame?

Specify if the Bipolar Disorder NOS is current or past or both
The shaded modules below are additional modules available in the MINI PLUS beyond what is available in the standard MINI. The un-shaded modules below are in the standard MINI.

These MINI PLUS modules can be inserted into or used in place of the standard MINI modules, as dictated by the specific needs of any study.

<table>
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<th>MODULES</th>
<th>TIME FRAME</th>
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<tbody>
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<td>A MAJOR DEPRESSIVE EPISODE</td>
<td>Current (2 weeks)</td>
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<tr>
<td></td>
<td>Past</td>
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<tr>
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<td>Recurrent</td>
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<tr>
<td>MOOD DISORDER DUE TO A GENERAL MEDICAL CONDITION</td>
<td>Current</td>
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<td>SUBSTANCE INDUCED MOOD DISORDER</td>
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<td>MDE WITH MELANCHOLIC FEATURES</td>
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<td>MDE WITH ATYPICAL FEATURES</td>
<td>Current (2 weeks)</td>
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<td>C SUICIDALITY</td>
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Name ________________________________
ID ___________________
Address/School ___________________
Grade/School ___________________
Highest Education ________
Examiner ______________________________________

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2012p001515 08/31/2012 through 08/30/2013
## 1. Vocabulary

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<td>2. Shovel</td>
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<td>3. Map</td>
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<td>4. Shell</td>
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<tr>
<td>5. Shirt</td>
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<td>(0, 1, 2)</td>
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<td>6. Shoe</td>
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<td>7. Flashlight</td>
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<td>8. Car</td>
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<td>9. Bird</td>
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<td>10. Calendar</td>
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<td>11. Number</td>
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<td>12. Bell</td>
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<td>13. Lunch</td>
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<td>15. Vacation</td>
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<td>16. Pet</td>
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<td>17. Balloon</td>
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<td>18. Transform</td>
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<td>19. Alligator</td>
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</table>

**Reverse Rule**

**Start Point**
- Ages 6-8: Item 5
- Ages 9-89: Item 9

**Reverse Items**
- All Ages: Administer Items 1-4 in forward sequence if score of 0 or 1 on Item 5 or 6.
- Ages 9-89: Administer Items 5-8 in reverse sequence if score of 0 or 1 on Item 9 or 10.

**Discontinue Rule**
- Ages 6-8: After 5 consecutive scores of 0
- Ages 9-11: After Item 34
- Ages 12-16: After Item 38
- Ages 17-89: No stop point

**Stop Point**
- Ages 6-8: After Item 30
- Ages 9-11: After Item 34
- Ages 12-16: After Item 38
- Ages 17-89: No stop point

**Scoring Rule**
- Items 1-4: 0 or 1
- Items 5-52: 0, 1, or 2
## 1. Vocabulary (Continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>Response</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. Cart</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Blame</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Dance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Purpose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Entertain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Famous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Reveal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Decade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Tradition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Rejoice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Enthusiastic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Improvise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Impulse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. Haste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. Trend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. Intermittent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. Devout</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. Impertinent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. Niche</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. Presumptuous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40. Formidable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41. Ruminate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42. Panacea</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Maximum Raw Score

| Ages 6-8:  | 56 |
| Ages 9-11: | 64 |
| Ages 12-16:| 72 |
| Ages 17-89:| 80 |
### 2. Block Design

#### Start Point
- Ages 6-8: Design 1
- Ages 9-89: Design 3

#### Reverse Rule
- Ages 9-89: Administer Items 1-2 in reverse sequence if score of 0 or 1 on Item 3 or 4.

#### Discontinue Rule
- After 3 consecutive scores of 0

#### Scoring Rule
- Items 1-4: 2 for a correct design on Trial 1, 1 for a correct design on Trial 2, 0 for incorrect designs on Trials 1 & 2
- Items 5-13: 0-7

### Examinee

<table>
<thead>
<tr>
<th>Design</th>
<th>Time Limit</th>
<th>Incorrect Design</th>
<th>Completion Time in Seconds</th>
<th>Correct Design</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>30&quot;</td>
<td>Trial 1 Trial 2</td>
<td></td>
<td>Y N</td>
<td>0 1 2</td>
</tr>
<tr>
<td>2.</td>
<td>60&quot;</td>
<td>Trial 1 Trial 2</td>
<td></td>
<td>Y N</td>
<td>0 1 2</td>
</tr>
<tr>
<td>3.</td>
<td>60&quot;</td>
<td>Trial 1 Trial 2</td>
<td></td>
<td>Y N</td>
<td>0 1 2</td>
</tr>
<tr>
<td>4.</td>
<td>60&quot;</td>
<td>Trial 1 Trial 2</td>
<td></td>
<td>Y N</td>
<td>0 1 2</td>
</tr>
<tr>
<td>5.</td>
<td>60&quot;</td>
<td></td>
<td></td>
<td>Y N</td>
<td>21'-60&quot; 16'-20&quot; 11'-15&quot; 1'-10&quot;</td>
</tr>
<tr>
<td>6.</td>
<td>60&quot;</td>
<td></td>
<td></td>
<td>Y N</td>
<td>21'-60&quot; 16'-20&quot; 11'-15&quot; 1'-10&quot;</td>
</tr>
<tr>
<td>7.</td>
<td>60&quot;</td>
<td></td>
<td></td>
<td>Y N</td>
<td>21'-60&quot; 16'-20&quot; 11'-15&quot; 1'-10&quot;</td>
</tr>
<tr>
<td>8.</td>
<td>60&quot;</td>
<td></td>
<td></td>
<td>Y N</td>
<td>21'-60&quot; 16'-20&quot; 11'-15&quot; 1'-10&quot;</td>
</tr>
<tr>
<td>9.</td>
<td>60&quot;</td>
<td></td>
<td></td>
<td>Y N</td>
<td>21'-60&quot; 16'-20&quot; 11'-15&quot; 1'-10&quot;</td>
</tr>
<tr>
<td>10.</td>
<td>120&quot;</td>
<td></td>
<td></td>
<td>Y N</td>
<td>66'-120&quot; 46'-65&quot; 31'-45&quot; 1'-30&quot;</td>
</tr>
<tr>
<td>11.</td>
<td>120&quot;</td>
<td></td>
<td></td>
<td>Y N</td>
<td>76'-120&quot; 56'-75&quot; 41'-55&quot; 1'-40&quot;</td>
</tr>
<tr>
<td>12.</td>
<td>120&quot;</td>
<td></td>
<td></td>
<td>Y N</td>
<td>76'-120&quot; 56'-75&quot; 41'-55&quot; 1'-40&quot;</td>
</tr>
<tr>
<td>13.</td>
<td>120&quot;</td>
<td></td>
<td></td>
<td>Y N</td>
<td>76'-120&quot; 56'-75&quot; 41'-55&quot; 1'-40&quot;</td>
</tr>
</tbody>
</table>

### Examiner

<table>
<thead>
<tr>
<th>Maximum Raw Score</th>
<th>Total Raw Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Ages:</td>
<td>71</td>
</tr>
</tbody>
</table>

---
### 3. Similarities

<table>
<thead>
<tr>
<th>Item</th>
<th>Response</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Four-Wheeled</td>
<td>Ship</td>
<td>BUS</td>
</tr>
<tr>
<td>2. Dining Items</td>
<td>SPOON</td>
<td>Pan</td>
</tr>
<tr>
<td>3. Clothing</td>
<td>Jump Rope</td>
<td>Ball</td>
</tr>
<tr>
<td>4. Fruits</td>
<td>BANANA</td>
<td>Bean</td>
</tr>
<tr>
<td>5. Red–Blue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Circle–Square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Grapes–Strawberries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Cow–Bear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Plane–Bus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Shirt–Jacket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Pen–Pencil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Bowl–Plate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Love–Hate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. TV–Newspaper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Smooth–Rough</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Shoulder–Ankle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Sit–Run</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Child–Adult</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Steam–Cloud</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Bird–Flower</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. More–Less</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Photograph–Song</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Start Point Reverse Rule**
- Ages 6–8: Item 1
- Ages 9–11: Item 5
- Ages 12–18: Item 7

**Discontinue Rule**
- Ages 9–11: Administer Items 1–4 in forward sequence if score of 0 or 1 on Item 5 or 6.
- Ages 12–18: Administer Items 5 & 6 in reverse sequence if score of 0 or 1 on Item 7 or 8.

**Stop Point**
- Ages 6–8: After Item 20
- Ages 9–11: After Item 24
- Ages 12–18: No stop point

**Scoring Rule**
- Items 1–4: 0 or 1
- Items 5–26: 0, 1, or 2
### 3. Similarities (Continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>Response</th>
<th>Score (0, 1, 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. Peace–War</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Capitalism–Socialism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Tradition–Habit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Freedom–Law</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Maximum Raw Score**
- Ages 6–8: 36
- Ages 9–11: 44
- Ages 12–89: 48

### 4. Matrix Reasoning

#### Start Point
- Administer Sample Items A and B first.
- Ages 6–8: Item 1
- Ages 9–11: Item 5
- Ages 12–44: Item 7
- Ages 45–79: Item 5
- Ages 80–89: Item 1

#### Reverse Rule
- Ages 9–11 and Ages 45–79: Administer Items 1–4 in reverse sequence if score of 0 on Item 5 or 6.
- Ages 12–44: Administer Items 1–6 in reverse sequence if score of 0 on Item 7 or 8.

#### STOP
- After 4 consecutive scores of 0 or after 4 scores of 0 on 5 consecutive items

#### Scoring Rule
- Items 1–35: 0 or 1

<table>
<thead>
<tr>
<th>Item</th>
<th>Response Options (Circle One)</th>
<th>Score (0 or 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>33.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td>1 2 3 4 5 DK</td>
<td></td>
</tr>
</tbody>
</table>

**Maximum Raw Score**
- Ages 6–8: 28
- Ages 9–11: 32
- Ages 12–44: 35
- Ages 45–79: 32
Ohio State University TBI Identification Method Short Form*

I would like to ask you about injuries to your head or neck that you may have had at anytime in your life.

*Interviewer instruction: Record cause and any details provided spontaneously in the box at the bottom of the page. DO NOT query further about LOC or other details at this stage.

1. Have you ever been hospitalized or treated in an emergency room following an injury to your head or neck? Think about any childhood injuries you remember or were told about.
   - Yes—Record cause(s) in table below
   - No

2. Have you ever injured your head or neck in a car accident or from some other moving vehicle accident (e.g. motorcycle, ATV)?
   - Yes—Record cause(s) in table below
   - No

3. Have you ever injured your head or neck in a fall or from being hit by something (e.g. falling from a bike, horse, or rollerblades, falling on ice, being hit by a rock)? Have you ever injured your head or neck playing sports or on the playground?
   - Yes—Record cause(s) in table below
   - No

4. Have you ever injured your head or neck in a fight, from being hit by someone, or from being shaken violently? Have you ever been shot in the head?
   - Yes—Record cause(s) in table below
   - No

5. Have you ever been nearby when an explosion or a blast occurred? If you served in the military, think about any combat- or training-related incidents.
   - Yes—Record cause(s) in table below
   - No

6. If all above are “no” then proceed to question 7. If answered “yes” to any of the questions above, ask the following for each injury: Were you knocked or did you lose consciousness (LOC)? If yes, how long? If no, were you dazed or did you have a gap in your memory from the injury? How old were you? (age is only needed if there was LOC)

<table>
<thead>
<tr>
<th>Cause</th>
<th>Loss of consciousness (LOC)/knocked out</th>
<th>Dazed/Memory Gap</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No LOC</td>
<td>&lt; 30 min</td>
<td>30 min-24 hrs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If more injuries with LOC: How many more? __ Longest knocked out? ___ How many ≥ 30 mins.? ___ Youngest age? ___

7. Have you ever lost consciousness from a drug overdose or being choked? ___# overdose ___# choked


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SCORING

- # TBI-LOC (number of TBI’s with loss of consciousness from #6a)
- # TBI-LOC ≥ 30 (number of TBI’s with loss of consciousness ≥ 30 minutes from #6a)
- age at first TBI-LOC (youngest age from #6a)
- TBI-LOC before age 15 (if youngest age from #7B < 15 then =1, if ≥ 15 then = 0)
- Worst Injury (1-5):
  - If responses to #1-5 are “no” classify as 1 “improbable TBI”.
  - If in response to #6a and 6b reports never having LOC, being dazed or having memory lapses classify as 1 “improbable TBI”.
  - If in response to #6b reports being dazed or having a memory lapse classify as 2 “possible TBI”.
  - If in response to #6a loss of consciousness (LOC) does not exceed 30 minutes for any injury classify as 3 “mild TBI”.
  - If in response to #6a LOC for any one injury is between 30 minutes and 24 hours classify as 4 “moderate TBI”.
  - If in response to #6a LOC for any one injury exceeds 24 hours classify as 5 “severe TBI”.
- # anoxic injuries (sum of incidents reported in #7)
After a head injury or accident some people experience symptoms that can cause worry or nuisance. We would like to know if you now suffer any of the symptoms given below. Because many of these symptoms occur normally, we would like you to compare yourself now with before the accident. For each symptom listed below please circle the number that most closely represents your answer.

<table>
<thead>
<tr>
<th>Compared with before the accident, do you now (i.e., over the last 24 hours) suffer from:</th>
<th>not experienced</th>
<th>no more of a problem</th>
<th>mild problem</th>
<th>moderate problem</th>
<th>severe problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headaches</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Feelings of dizziness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Nausea and/or vomiting</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Noise sensitivity (easily upset by loud noise)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Sleep disturbance</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Fatigue, tiring more easily</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Being irritable, easily angered</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Feeling depressed or tearful</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Feeling frustrated or impatient</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Forgetfulness, poor memory</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Poor concentration</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Taking longer to think</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Blurred vision</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Light sensitivity (easily upset by bright light)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Double vision</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Restlessness</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Are you experiencing any other difficulties? Please specify, and rate as above.
1. 0 1 2 3 4
2. 0 1 2 3 4

Administration only:

<table>
<thead>
<tr>
<th>RPQ-3 (total for first three items)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPQ-13 (total for next 13 items)</td>
</tr>
</tbody>
</table>

Administration only

Individual item scores reflect the presence and severity of post concussive symptoms. Post concussive symptoms, as measured by the RPQ, may arise for different reasons subsequent to (although not necessarily directly because of) a traumatic brain injury. The symptoms overlap with broader conditions, such as pain, fatigue and mental health conditions such as depression. The questionnaire can be repeated to monitor a patient’s progress over time. There may be changes in the severity of symptoms, or the range of symptoms. Typical recovery is reflected in a reduction of symptoms and their severity within three months.

Scoring

The scoring system has been modified from Eyres, 2005. The items are scored in two groups. The first group (RPQ-3) consists of the first three items (headaches, feelings of dizziness and nausea) and the second group (RPQ-13) comprises the next 13 items. The total score for RPQ-3 items is potentially 0–12 and is associated with early symptom clusters of post concussive symptoms. If there is a higher score on the RPQ-3, earlier reassessment and closer monitoring is recommended. The RPQ-13 score is potentially 0–52, where higher scores reflect greater severity of post concussive symptoms. The RPQ-13 items are associated with a later cluster of symptoms, although the RPQ-3 symptoms of headaches, dizziness and nausea may also be present. The later cluster of symptoms is associated with having a greater impact on participation, psychosocial functioning and lifestyle. Symptoms are likely to resolve within three months. A gradual resumption of usual activities is recommended during this period, appropriate to symptoms. If the symptoms do not resolve within three months, consideration of referral for specialist assessment or treatment services is recommended.

References:


Satisfaction with Life Scale

Below are five statements with which you may agree or disagree. Indicate your agreement with each item by placing the appropriate number on the line preceding that item.

Please be open and honest in your responding.

The 7-point scale is as follows:

1 = strongly disagree
2 = disagree
3 = slightly disagree
4 = neither agree nor disagree
5 = slightly agree
6 = agree
7 = strongly agree

__ 1. In most ways my life is close to my ideal.
__ 2. The conditions of my life are excellent.
__ 3. I am satisfied with my life.
__ 4. So far I have gotten the important things I want in life.
__ 5. If I could live my life over, I would change almost nothing.
The Alcohol Use Disorders Identification Test: Self-Report Version

PATIENT: Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain so please be honest. Place an X in one box that best describes your answer to each question.

<table>
<thead>
<tr>
<th>Questions</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do you have a drink containing alcohol?</td>
<td>Never</td>
<td>Monthly or less</td>
<td>2-4 times a month</td>
<td>2-3 times a week</td>
<td>4 or more times a week</td>
</tr>
<tr>
<td>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</td>
<td>1 or 2</td>
<td>3 or 4</td>
<td>5 or 6</td>
<td>7 to 9</td>
<td>10 or more</td>
</tr>
<tr>
<td>3. How often do you have six or more drinks on one occasion?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>4. How often during the last year have you found that you were not able to stop drinking once you had started?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>5. How often during the last year have you failed to do what was normally expected of you because of drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>7. How often during the last year have you had a feeling of guilt or remorse after drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>8. How often during the last year have you been unable to remember what happened the night before because of your drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
</tr>
<tr>
<td>9. Have you or someone else been injured because of your drinking?</td>
<td>No</td>
<td>Yes, but not in the last year</td>
<td>Yes, during the last year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?</td>
<td>No</td>
<td>Yes, but not in the last year</td>
<td>Yes, during the last year</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DAY OF SCAN INFORMATION QUESTIONNAIRE

SUBJECT #:______     DATE: ____/____/_____

DATE OF BIRTH    ________/________/________
day        month         year

AGE     ___________ years

HEIGHT     ___________ ft/inches

WEIGHT     ___________ lbs

SEX

□ MALE    □ FEMALE

For females only:
When was the start of your last menstrual period?
Be as precise as possible.
Date of period:_____________________________
or about _________days ago.

RIGHT or LEFT-HANDED?

□ RIGHT
□ LEFT
□ BOTH/NEITHER

Do you have any problems with reading?    □ NO    □ YES
EDUCATION: What is the highest grade or level of school you have completed or the highest degree you have obtained? Please choose one:

- 9th Grade
- 10th Grade
- 11th Grade
- 12th Grade, no diploma
- High school graduate
- GED or equivalent
- Some college, no degree
- Associate degree: occupational, technical, or vocational program
- Associate degree: academic program
- Bachelor’s degree (e.g., BA, AB, BS, BBA)
- Master’s degree (e.g., MA, MS, MEng, MEd, MBA)
- Professional school degree (e.g., MD, DDS, DVM, JD)
- Doctoral degree (e.g., PhD, EdD)
- Unknown

Are you currently doing shift work (e.g., working early morning, evening, or night shifts)?
- NO
- YES

Do you engage in regular exercise?
- NO
- YES

Which sport? ____________________________________________________________

How many days per week? ________________________________________________

How many minutes per exercise session (on average)? ________________________
CAFFEINE USE

Did you have any caffeine containing products today?

☐ NO ☐ YES  How much? ________________________________________________________

On average, how many cups (=8oz) of caffeinated coffee do you drink per day? ______________
On average, how many cups (=8oz) of caffeinated tea do you drink per day? _______________
On average, how many cans of caffeinated soda do you drink per day? _________________
On average, how many caffeinated sports drinks do you drink per day? _________________ (brand)

Do you use any other caffeinated products (e.g. Vivarin)?

☐ NO ☐ YES  Brand? __________________________________________________________
                                                         How much? ________________________________________________________________
                                                         How often? ________________________________________________________________
NICOTINE AND OTHER SUBSTANCE USE

Do you currently smoke cigarettes?

☐ NO  ☐ YES

How many? ____________________ daily / weekly / monthly / yearly (circle one)

For how long? ________________ years ________________ months

Have you tried to quit?  ☐ NO  ☐ YES

How many times? ________________

Have you ever smoked cigarettes in the past?

☐ NO  ☐ YES

How many? ____________________ daily / weekly / monthly / yearly (circle one)

For how long? ________________ years ________________ months

When did you quit? ____________________ (approximate date)

Do you currently smoke large cigars?

☐ NO  ☐ YES

How many? ____________________ daily / weekly / monthly / yearly (circle one)

For how long? ________________ years ________________ months

Have you tried to quit?  ☐ NO  ☐ YES

How many times? ________________

Have you ever smoked large cigars in the past?

☐ NO  ☐ YES

How many? ____________________ daily / weekly / monthly / yearly (circle one)

For how long? ________________ years ________________ months

When did you quit? ____________________ (approximate date)

Do you currently smoke small cigars?

☐ NO  ☐ YES

How many? ____________________ daily / weekly / monthly / yearly (circle one)

For how long? ________________ years ________________ months

Have you tried to quit?  ☐ NO  ☐ YES

How many times? ________________
Have you ever smoked small cigars in the past?

☐ NO  ☐ YES

How many? _______________ daily / weekly / monthly / yearly (circle one)

For how long? _______________ years _______________ months

When did you quit? ________________________________ (approximate date)

Do you currently smoke cigarillos?

☐ NO  ☐ YES

How many? _______________ daily / weekly / monthly / yearly (circle one)

For how long? _______________ years _______________ months

Have you tried to quit? ☐ NO  ☐ YES

How many times? _______________

Have you ever smoked cigarillos in the past?

☐ NO  ☐ YES

How many? _______________ daily / weekly / monthly / yearly (circle one)

For how long? _______________ years _______________ months

When did you quit? ________________________________ (approximate date)

Do you currently use smokeless tobacco, such as dip or chew?

☐ NO  ☐ YES

About how much/ many? __________ daily / weekly / monthly / yearly (circle one)

For how long? _______________ years _______________ months

Have you tried to quit? ☐ NO  ☐ YES

How many times? _______________

Have you ever used smokeless tobacco in the past?

☐ NO  ☐ YES

About how much/ many? __________ daily / weekly / monthly / yearly (circle one)

For how long? _______________ years _______________ months

When did you quit? ________________________________ (approximate date)

Do you currently use any other nicotine-containing products?

☐ NO  ☐ YES
Which kind? ______________________________________________________
For how long? ___________ years ___________ months
How often? ______________________________________________________
Have you tried to quit? □ NO □ YES
   How many times? _________________

Have you ever used any other kind of nicotine containing products?
□ NO □ YES
Which kind? ______________________________________________________
For how long? ___________ years ___________ months
How often? ______________________________________________________
Have you tried to quit? □ NO □ YES
   How many times? _________________

Are you currently taking diet pills?
□ NO □ YES
What brand? _____________________________________________________
For how long? ___________ years ___________ months ___________ days
How much? ______________________________________________________
How often? _________________ daily / weekly / monthly / yearly (circle one)

Are you currently taking any medications, vitamins, or supplements?
□ NO □ YES
Please list:
Name: ________________ Dosage: ________________
Name: ________________ Dosage: ________________
Name: ________________ Dosage: ________________
Name: ________________ Dosage: ________________

Have you ever used marijuana?
□ NO □ YES
At what age did you start? _________________________________________
On approximately how many occasions have you used marijuana? _________
At what age did you quit? __________________________________________
In the past year, did you use marijuana?
☐ NO  ☐ YES
How often? ____________________ daily / weekly / monthly / yearly (circle one)

Do you currently use marijuana?
☐ NO  ☐ YES
How often? ____________________ daily / weekly / monthly / yearly (circle one)
Have you tried to quit? ☐ NO  ☐ YES
How many times? _________________

Have you ever used any other street drugs?
☐ NO  ☐ YES
What? __________________________________________________________
How much? _______________________________________________________
How often? _______________________________________________________ 

In the past year, did you use any other street drugs?
☐ NO  ☐ YES
What? __________________________________________________________
How much? _______________________________________________________
How often? _______________________________________________________ 

Do you currently use any other street drugs?
☐ NO  ☐ YES
What? __________________________________________________________
How much? _______________________________________________________
How often? _______________________________________________________ 

Do you drink alcohol?
☐ NO  ☐ YES
How many times per month? _________________________________________
Using the below chart, what is the average number of drinks you consume on these occasions? ____________________________
Using the chart, what is the largest number of drinks you consume? ________
One drink equals:

<table>
<thead>
<tr>
<th>Amount</th>
<th>Alcohol Content</th>
</tr>
</thead>
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<tr>
<td>12 fl oz of regular beer</td>
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<tr>
<td>8-9 fl oz of malt liquor (shown in a 12-oz glass)</td>
<td>about 7% alcohol</td>
</tr>
<tr>
<td>5 fl oz of table wine</td>
<td>about 12% alcohol</td>
</tr>
<tr>
<td>3-4 oz of fortified wine (such as sherry or port; 3.6 oz shown)</td>
<td>about 17% alcohol</td>
</tr>
<tr>
<td>2-3 oz of cordial, liqueur, or aperitif (2.5 oz shown)</td>
<td>about 24% alcohol</td>
</tr>
<tr>
<td>1.5 oz of brandy (a single jigger or shot)</td>
<td>about 40% alcohol</td>
</tr>
<tr>
<td>1.5 fl oz shot of 80-proof spirits (&quot;hard liquor&quot;)</td>
<td>about 40% alcohol</td>
</tr>
</tbody>
</table>
INFORMATION ON THE MOST RECENT DOCUMENTED INJURY

Injury date and time:  ____ / ____ / ____  ____ : ____ (24 hour clock)  
(day /month/ year)

What happened? _____________________________________________________________  
__________________________________________________________________________  
__________________________________________________________________________  
______________________________________________________________

Did you experience any symptoms or changes after the injury?
☐ NO  ☐ YES, IMMEDIATELY AFTER THE INJURY  
☐ YES, NOT IMMEDIATELY AFTER THE INJURY

Which symptoms or changes did you experience?
__________________________________________________________________________  
__________________________________________________________________________  
__________________________________________________________________________  
__________________________________________________________________________

At the time of the injury, were you under the influence of alcohol, medication or drugs at that time?
☐ NO  ☐ YES, ALCOHOL  
☐ YES, MEDICATION (which?) ________________________________  
☐ YES, DRUGS (which?) ________________________________

Were medical services received after injury?
☐ NO  ☐ DO NOT KNOW  ☐ YES

Did you “see stars” during your last concussion?
☐ NO  ☐ DO NOT KNOW  ☐ YES

Did you experience loss of consciousness?
☐ NO  ☐ DO NOT KNOW  ☐ YES

Duration of loss of consciousness:
How was the loss of consciousness verified?
☐ Self-report ☐ Witness ☐ Medical chart

Do you have a PERSONAL memory of the event/ incident itself?
☐ YES, I FULLY REMEMBER ☐ YES, BUT THERE ARE GAPS IN MY MEMORY
☐ NO, I DO NOT REMEMBER AT ALL

How much do you NOT remember after the injury?
☐ <1 minute ☐ 1-29 minutes ☐ 30-59 minutes ☐ 1-24 hours ☐ 1-7 days ☐ > 7 days ☐ Unknown

How was the memory loss verified?
☐ Self-report ☐ Witness ☐ Medical chart

After the injury, when did you feel back to yourself or 100%?

___________________________________________________________________________
___________________________________________________________________________

Approved McLean IRB
2012p001515 08/31/2012 through 08/30/2013
SLEEP HABITS

How much sleep did you get last night? ______________ HRS

**Before** your injury, what time did you typically awaken on:

- Weekdays (Mon-Fri)? ________ AM    PM (midnight = 12 AM; noon = 12 PM)
- Weekends (Sat-Sun)? ________ AM    PM

**Before** your injury, how long did it typically take you to fall asleep at night?

- Week nights (Sun-Thur) ________ MIN    HRS (midnight = 12 AM; noon = 12 PM)
- Weekends (Fri-Sat) ________ MIN    HRS

**Before** your injury, at what time did you normally go to bed at night on:

- Week nights (Sun-Thur)? ________ AM    PM (midnight = 12 AM; noon = 12 PM)
- Weekends (Fri-Sat)? ________ AM    PM

**Before** the injury, did you experience sleep problems?

- [ ] NO
- [ ] YES, I had trouble falling asleep.
  How often? ________ times per WEEK  MONTH  YEAR

- [ ] YES, I had trouble staying asleep.
  How often? ________ times per WEEK  MONTH  YEAR

**Since the injury**, did you notice that your sleep became worse?

- [ ] NO
- [ ] YES

What sleep problems became more noticeable to you? (check all that apply)

- [ ] I get sleepier during the day.
- [ ] I get drowsier than I used to when trying to concentrate or work.
- [ ] I fall asleep when I should not.
- [ ] It is harder to stay alert during the day.
- [ ] It is harder to fall asleep at night.
  How often? ________ times per WEEK  MONTH  YEAR

- [ ] I fall asleep much later than I used to.
I fall asleep much earlier than I used to.
☐ I sleep later in the morning than I used to.
☐ I have trouble staying asleep.

How often? ________ times per WEEK MONTH YEAR
☐ I wake up much earlier in the morning than I used to.
☐ When I do sleep, it is fitful or less restful than it used to be.
☐ I wake up off and on throughout the night more than I used to.
☐ I have more nightmares than I used to.

Since your injury, how much do you typically sleep on weeknights (Sun-Thur)? _____ HRS

Since your injury, how much do you typically sleep on weekend nights (Fri-Sat)? _____ HRS

Since your injury, at what time do you normally go to bed at night on:
   Week nights (Sun-Thur)? ________ AM    PM (midnight = 12 AM; noon = 12 PM)
   Weekends (Fri-Sat)? ________ AM    PM

Since your injury, what time do you typically awaken on:
   Weekdays (Mon-Fri)? ________ AM    PM
   Weekends (Sat-Sun)? ________ AM    PM

Since your Injury, how long does it typically take you to fall asleep at night?
   Week nights (Sun-Thur)? ________ MIN    HRS
   Weekends (Fri-Sat)? ________ MIN    HRS

Since your injury,
   at what time of day do you feel sleepiest? ________ AM    PM
   at what time of day do you feel most alert? ________ AM    PM
   how many hours do you need to sleep to feel your best? __________
   if you get less than ______ hours of sleep, you notice impairment in your ability to function at work.
   if you get more than ______ hours of sleep, you notice impairment in your ability to function at work.

Approved McLean IRB
2012p001515 08/31/2012 through 08/30/2013
Since your injury, do you take more than two daytime naps per month?

☐ NO  ☐ YES

How many times per week do you nap? _________

At what time? _____:____ AM/PM to _____:____AM/PM

Do you consider yourself a light, normal, or heavy sleeper?

☐ LIGHT  ☐ NORMAL  ☐ HEAVY

Have you been told or do you think that you snore excessively?

☐ NO  ☐ YES

Have you ever been diagnosed or treated for sleep apnea or sleep disordered breathing?

☐ NO  ☐ YES

Is daytime sleepiness currently a problem for you?

☐ NO  ☐ YES
### Epworth Sleepiness Scale

How likely are you to doze off or fall asleep in the following situations, in contrast to feeling just tired? This refers to your **usual way of life in recent times**. Even if you have not done some of these things recently try to work out how they would have affected you. Use the following scale to choose the most appropriate number for each situation:

0 = would never doze  
1 = slight chance of dozing  
2 = moderate chance of dozing  
3 = high chance of dozing

<table>
<thead>
<tr>
<th>SITUATION</th>
<th>CHANCE OF DOZING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting and reading</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Watching TV</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Sitting, inactive in a public place (e.g. a theater or meeting)</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>As a passenger in a car for an hour without a break</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Lying down to rest in the afternoon when circumstances permit</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Sitting and talking to someone</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Sitting quietly after a lunch without alcohol</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>In a car, while stopped for a few minutes in the traffic</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>
DAY OF SCAN INFORMATION QUESTIONNAIRE

SUBJECT #:______ DATE: ____/____/_____

DATE OF BIRTH ________/________/________

AGE ___________ years

HEIGHT ___________ ft/inches

WEIGHT ___________ lbs

SEX
☐ MALE ☐ FEMALE

For females only:
When was the start of your last menstrual period?
Be as precise as possible.
Date of period:_________________________
or about _________days ago.

RIGHT or LEFT-HANDED?
☐ RIGHT
☐ LEFT
☐ BOTH/NEITHER

Do you have any problems with reading?
☐ NO ☐ YES
EDUCATION: What is the highest grade or level of school you have completed or the highest degree you have obtained? Please choose one:

- 9th Grade
- 10th Grade
- 11th Grade
- 12th Grade, no diploma
- High school graduate
- GED or equivalent
- Some college, no degree
- Associate degree: occupational, technical, or vocational program
- Associate degree: academic program
- Bachelor's degree (e.g., BA, AB, BS, BBA)
- Master's degree (e.g., MA, MS, MEng, MEd, MBA)
- Professional school degree (e.g., MD, DDS, DVM, JD)
- Doctoral degree (e.g., PhD, EdD)
- Unknown

Are you currently doing shift work (e.g., working early morning, evening, or night shifts)?
- NO
- YES

Do you engage in regular exercise?
- NO
- YES

Which sport? ________________________________________________________________

How many days per week? __________________________________________________

How many minutes per exercise session (on average)? __________________________
CAFFEINE USE

Did you have any caffeine containing products today?

☐ NO ☐ YES  How much? ________________________________

On average, how many cups (=8oz) of caffeinated coffee do you drink per day? __________
On average, how many cups (=8oz) of caffeinated tea do you drink per day? ______________
On average, how many cans of caffeinated soda do you drink per day? __________________
On average, how many caffeinated sports drinks do you drink per day? ___________ (brand)

Do you use any other caffeinated products (e.g. Vivarin)?

☐ NO ☐ YES  Brand? ________________________________

How much? ________________________________
How often? ________________________________
NICOTINE AND OTHER SUBSTANCE USE

Do you currently smoke cigarettes?
☐ NO  ☐ YES
How many? ___________________ daily / weekly / monthly / yearly (circle one)
For how long? _________________ years ________________ months
Have you tried to quit?  ☐ NO  ☐ YES
How many times? ________________

Have you ever smoked cigarettes in the past?
☐ NO  ☐ YES
How many? ___________________ daily / weekly / monthly / yearly (circle one)
For how long? _________________ years ________________ months
When did you quit? ________________________________ (approximate date)

Do you currently smoke large cigars?
☐ NO  ☐ YES
How many? ___________________ daily / weekly / monthly / yearly (circle one)
For how long? _________________ years ________________ months
Have you tried to quit?  ☐ NO  ☐ YES
How many times? ________________

Have you ever smoked large cigars in the past?
☐ NO  ☐ YES
How many? ___________________ daily / weekly / monthly / yearly (circle one)
For how long? _________________ years ________________ months
When did you quit? ________________________________ (approximate date)

Do you currently smoke small cigars?
☐ NO  ☐ YES
How many? ___________________ daily / weekly / monthly / yearly (circle one)
For how long? _________________ years ________________ months
Have you tried to quit?  ☐ NO  ☐ YES
How many times? ________________
Have you ever smoked small cigars in the past?
☐ NO  ☐ YES
How many? ___________________ daily / weekly / monthly / yearly (circle one)
For how long? ________________ years ________________ months
When did you quit? ________________________________ (approximate date)

Do you currently smoke cigarillos?
☐ NO  ☐ YES
How many? ___________________ daily / weekly / monthly/ yearly (circle one)
For how long? ________________ years ________________ months
Have you tried to quit?  ☐ NO  ☐ YES
How many times? _________________________

Have you ever smoked cigarillos in the past?
☐ NO  ☐ YES
How many? ___________________ daily / weekly / monthly / yearly (circle one)
For how long? ________________ years ________________ months
When did you quit? ________________________________ (approximate date)

Do you currently use smokeless tobacco, such as dip or chew?
☐ NO  ☐ YES
About how much/ many? ________daily / weekly / monthly / yearly (circle one)
For how long? ________________ years ________________ months
Have you tried to quit?  ☐ NO  ☐ YES
How many times? _________________________

Have you ever used smokeless tobacco in the past?
☐ NO  ☐ YES
About how much/ many? ________ daily / weekly / monthly / yearly (circle one)
For how long? ________________ years ________________ months
When did you quit? ________________________________ (approximate date)

Do you currently use any other nicotine-containing products?
☐ NO  ☐ YES
Which kind? ______________________________________________________
For how long? _________________ years ________________ months
How often? _______________________________________________________
Have you tried to quit?  □ NO  □ YES
How many times? _________________

Have you ever used any other kind of nicotine containing products?
□ NO  □ YES
Which kind? ______________________________________________________
For how long? _________________ years ________________ months
How often? _______________________________________________________
Have you tried to quit?  □ NO  □ YES
How many times? _________________

Are you currently taking diet pills?
□ NO  □ YES
What brand? ______________________________________________________
For how long? ___________ years ___________ months ___________ days
How much? ______________________________________________________
How often? _________________ daily / weekly / monthly / yearly (circle one)

Are you currently taking any medications, vitamins, or supplements?
□ NO  □ YES
Please list:
Name: ___________________  Dosage: ____________________
Name: ___________________  Dosage: ____________________
Name: ___________________  Dosage: ____________________
Name: ___________________  Dosage: ____________________

Have you ever used marijuana?
□ NO  □ YES
At what age did you start? __________________________________________
On approximately how many occasions have you used marijuana? _________
At what age did you quit? ___________________________________________
In the past year, did you use marijuana?

☐ NO  ☐ YES

How often? ____________________ daily / weekly / monthly / yearly (circle one)

Do you currently use marijuana?

☐ NO  ☐ YES

How often? ____________________ daily / weekly / monthly / yearly (circle one)

Have you tried to quit?  ☐ NO  ☐ YES

How many times? _________________

Have you ever used any other street drugs?

☐ NO  ☐ YES

What? __________________________________________________________

How much? _____________________________________________________

How often? _____________________________________________________

In the past year, did you use any other street drugs?

☐ NO  ☐ YES

What? __________________________________________________________

How much? _____________________________________________________

How often? _____________________________________________________

Do you currently use any other street drugs?

☐ NO  ☐ YES

What? __________________________________________________________

How much? _____________________________________________________

How often? _____________________________________________________

Do you drink alcohol?

☐ NO  ☐ YES

How many times per month? _________________________________

Using the below chart, what is the average number of drinks you consume on these occasions? _________________________________
Using the chart, what is the largest number of drinks you consume? 

One drink equals:

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<thead>
<tr>
<th>Drink Type</th>
<th>Alcohol Content</th>
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<td>2-3 oz of cordial, liqueur, or aperitif (2.5 oz shown)</td>
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<tr>
<td>1.5 oz of brandy (a single jigger or shot)</td>
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</tbody>
</table>
SLEEP HABITS

How much sleep did you get last night? ___________ HRS

What time do you typically awaken on:

Weekdays (Mon-Fri)? ________ AM PM (midnight = 12 AM; noon = 12 PM)
Weekends (Sat-Sun)? ________ AM PM

How long does it typically take you to fall asleep at night?

Week nights (Sun-Thur) ________ MIN HRS (midnight = 12 AM; noon = 12 PM)
Weekends (Fri-Sat) ________ MIN HRS

At what time do you normally go to bed at night on:

Week nights (Sun-Thur)? ________ AM PM (midnight = 12 AM; noon = 12 PM)
Weekends (Fri-Sat)? ________ AM PM

Did you ever experience sleep problems?

☐ NO ☐ YES, I have trouble falling asleep.
How often? ________ times per WEEK MONTH YEAR

☐ YES, I have trouble staying asleep.
How often? ________ times per WEEK MONTH YEAR

At what time of day do you feel sleepiest? ________ AM PM
At what time of day do you feel most alert? ________ AM PM

How many hours do you need to sleep to feel your best? __________
If you get less than ______ hours of sleep, you notice impairment in your ability to function at work.
If you get more than ______ hours of sleep, you notice impairment in your ability to function at work.

Do you take more than two daytime naps per month?

☐ NO ☐ YES
How many times per week do you nap? __________
At what time? _____:____ AM/PM to _____:_____AM/PM
Do you consider yourself a light, normal, or heavy sleeper?
☐ LIGHT  ☐ NORMAL  ☐ HEAVY

Have you been told or do you think that you snore excessively?
☐ NO  ☐ YES

Have you ever been diagnosed or treated for sleep apnea or sleep disordered breathing?
☐ NO  ☐ YES

Is daytime sleepiness currently a problem for you?
☐ NO  ☐ YES
**Epworth Sleepiness Scale**

How likely are you to doze off or fall asleep in the following situations, in contrast to feeling just tired? This refers to your **usual way of life in recent times**. Even if you have not done some of these things recently try to work out how they would have affected you. Use the following scale to choose the most appropriate number for each situation:

0 = would never doze  
1 = slight chance of dozing  
2 = moderate chance of dozing  
3 = high chance of dozing

<table>
<thead>
<tr>
<th>SITUATION</th>
<th>CHANCE OF DOZING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting and reading</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Watching TV</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Sitting, inactive in a public place (e.g. a theater or meeting)</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>As a passenger in a car for an hour without a break</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Lying down to rest in the afternoon when circumstances permit</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Sitting and talking to someone</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>Sitting quietly after a lunch without alcohol</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>In a car, while stopped for a few minutes in the traffic</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>
PITTSBURGH SLEEP QUALITY INDEX

INSTRUCTIONS:
The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply for the majority of days and nights in the past month. Please answer all questions.

1. During the past month, what time have you usually gone to bed at night?
   BED TIME ___________

2. During the past month, how long (in minutes) has it usually taken you to fall asleep each night?
   NUMBER OF MINUTES ___________

3. During the past month, what time have you usually gotten up in the morning?
   GETTING UP TIME ___________

4. During the past month, how many hours of actual sleep did you get at night? (This may be different than the number of hours you spent in bed.)
   HOURS OF SLEEP PER NIGHT ___________

For each of the remaining questions, check the one best response. Please answer all questions.

5. During the past month, how often have you had trouble sleeping because you . . .
   a) Cannot get to sleep within 30 minutes
      Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____ 
   b) Wake up in the middle of the night or early morning
      Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____ 
   c) Have to get up to use the bathroom
      Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____
d) Cannot breathe comfortably

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____ 


e) Cough or snore loudly

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____ 


f) Feel too cold

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____ 


g) Feel too hot

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____ 


h) Had bad dreams

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____ 


i) Have pain

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____ 


j) Other reason(s), please describe________________________________________________________

________________________________________________________

How often during the past month have you had trouble sleeping because of this?

Not during the past month_____ Less than once a week_____ Once or twice a week_____ Three or more times a week_____ 


6. During the past month, how would you rate your sleep quality overall?

Very good __________

Fairly good __________

Fairly bad __________

Very bad __________
7. During the past month, how often have you taken medicine to help you sleep (prescribed or "over the counter")?

Not during the past month _____ Once a week _____ 
Less than a week _____ Once or twice a week _____ 
Three or more times a week _____

8. During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity?

Not during the past month _____ Once a week _____ 
Less than a week _____ Once or twice a week _____ 
Three or more times a week _____

9. During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done?

No problem at all ____________
Only a very slight problem ____________
Somewhat of a problem ____________
A very big problem ____________

10. Do you have a bed partner or room mate?

No bed partner or room mate ____________
Partner/room mate in other room ____________
Partner in same room, but not same bed ____________
Partner in same bed ____________

If you have a room mate or bed partner, ask him/her how often in the past month you have had . . .

a) Loud snoring

Not during the past month _____ Once a week _____ 
Less than a week _____ Once or twice a week _____ 
Three or more times a week _____

b) Long pauses between breaths while asleep

Not during the past month _____ Once a week _____ 
Less than a week _____ Once or twice a week _____ 
Three or more times a week _____

c) Legs twitching or jerking while you sleep

Not during the past month _____ Once a week _____ 
Less than a week _____ Once or twice a week _____ 
Three or more times a week _____
d) Episodes of disorientation or confusion during sleep

<table>
<thead>
<tr>
<th>Not during the past month</th>
<th>Less than once a week</th>
<th>Once or twice a week</th>
<th>Three or more times a week</th>
</tr>
</thead>
</table>

e) Other restlessness while you sleep; please describe

<table>
<thead>
<tr>
<th>Not during the past month</th>
<th>Less than once a week</th>
<th>Once or twice a week</th>
<th>Three or more times a week</th>
</tr>
</thead>
</table>
CURRICULUM VITAE

DATE PREPARED:  September 2, 2015

NAME:  WILLIAM DALE (SCOTT) KILLGORE

CHRONOLOGY OF EDUCATION
8/83 - 5/85  A.A. (Liberal Arts), San Antonio College
8/83 - 5/85  A.A.S (Radio-TV-Film), San Antonio College
8/85 - 5/90  B.A. (Psychology), Summa cum laude with Distinction, University of New Mexico
8/90 - 5/92  M.A. (Clinical Psychology), Texas Tech University
8/92 - 8/96  Ph.D. (Clinical Psychology), Texas Tech University

Dissertation Title: Development and validation of a new instrument for the measurement of transient mood states: The facial analogue mood scale (FAMS). Lubbock, TX: Texas Tech University; 1995. Advisor: Bill Locke, Ph.D.

POST-DOCTORAL TRAINING
8/95 - 7/96  Predoctoral Fellow, Clinical Psychology, Yale School of Medicine
8/96 - 7/97  Postdoctoral Fellow, Clinical Neuropsychology, University of OK Health Sciences Center
8/97 - 7/99  Postdoctoral Fellow, Clinical Neuropsychology, University of Pennsylvania Medical School
8/99 - 9/00  Research Fellow, Neuroimaging, McLean Hospital/ Harvard Medical School
9/13 - 5/14  Certificate in Applied Biostatistics, Harvard Medical School

LICENSURE/CERTIFICATION
2001 -  Licensed Psychologist
CHRONOLOGY OF EMPLOYMENT

Academic Appointments

10/00 - 8/02  Instructor in Psychology in the Department of Psychiatry
             Harvard Medical School, Boston, MA
9/02 - 7/07   Clinical Instructor in Psychology in the Department of Psychiatry
             Harvard Medical School, Boston, MA
8/07 - 10/10  Instructor in Psychology in the Department of Psychiatry
             Harvard Medical School, Boston, MA
4/08-         Faculty Affiliate, Division of Sleep Medicine
             Harvard Medical School, Boston, MA
10/10 - 10/12 Assistant Professor of Psychology in the Department of Psychiatry
             Harvard Medical School, Boston, MA
10/12 - 6/14  Associate Professor of Psychology in the Department of Psychiatry
             Harvard Medical School, Boston, MA
7/14-         Associate Professor of Psychology in the Department of Psychiatry (part-time)
             Harvard Medical School, Boston, MA
7/14-         Professor of Psychiatry—TE
             University of Arizona College of Medicine, Tucson, AZ
7/14-         Professor of Medical Imaging—Non TE
             University of Arizona College of Medicine, Tucson, AZ
9/14         Professor of Psychology—Non TE
             University of Arizona College of Science, Tucson, AZ

Hospital/Clinical/Institutional Appointments

10/00 - 8/02  Assistant Research Psychologist, McLean Hospital, Belmont, MA
8/02 - 7/04   Research Psychologist, Department of Behavioral Biology, Walter Reed Army Institute of Research, Silver Spring, MD
7/04 - 10/07  Chief, Neurocognitive Performance Branch, Walter Reed Army Institute of Research, Silver Spring, MD
10/07 - 3/10  Chief Psychologist, GovSource, Inc., U.S. Department of Defense (DoD) Contractor
8/08         Consulting Psychologist, The Brain Institute, University of Utah
9/02 - 4/05   Special Volunteer, National Institute on Deafness and Other Communication Disorders (NIDCD), National Institutes of Health (NIH), Bethesda, MD
9/02 - 7/07   Research Consultant, McLean Hospital, Belmont, MA
8/05 - 5/06   Neuropsychology Postdoctoral Research Program Training Supervisor, Walter Reed Hospital, Washington, DC
8/07 -       Research Psychologist, McLean Hospital, Belmont, MA
7/11 - 6/14   Director, Social Cognitive, and Affective Neuroscience (SCAN) Laboratory, McLean Hospital, Belmont, MA
7/14-         Director, Social, Cognitive, and Affective Neuroscience (SCAN) Laboratory, University of Arizona, Tucson, AZ

Military Positions

11/01 - 8/02  First Lieutenant, Medical Service Corps, United States Army Reserve (USAR)
8/02 - 7/05 Captain, Medical Service Corps, United States Army-Active Regular Army (RA)
8/05 - 10/07 Major, Medical Service Corps, United States Army-Active Regular Army (RA)
10/07 - 7/12 Major, Medical Service Corps, United States Army Reserve (USAR)
7/12 - Lieutenant Colonel, Medical Service Corps, United States Army Reserve (USAR)

HONORS AND AWARDS

1990 Outstanding Senior Honors Thesis in Psychology, University of New Mexico
1990-1995 Maxey Scholarship in Psychology, Texas Tech University
2001 Rennick Research Award, Co-Author, International Neuropsychological Society
2002 Honor Graduate, AMEDD Officer Basic Course, U.S. Army Medical Department Center and School
2002 Lynch Leadership Award Nominee, AMEDD Officer Basic Course, U.S. Army Medical Department Center and School
2003 Outstanding Research Presentation Award, 2003 Force Health Protection Conference, U.S. Army Center for Health Promotion and Preventive Medicine
2003 Who’s Who in America
2004 Who’s Who in Medicine and Healthcare
2005 Edward L. Buescher Award for Excellence in Research by a Young Scientist, Walter Reed Army Institute of Research (WRAIR) Association
2009 Merit Poster Award, International Neuropsychological Society
2009 Outstanding Research Presentation Award, 2009 Force Health Protection Conference, U.S. Army Center for Health Promotion and Preventive Medicine
2010 Best Paper Award, Neuroscience, 27th U.S. Army Science Conference
2011 Published paper included in Best of Sleep Medicine 2011
2011 Blue Ribbon Finalist, 2011 Top Poster Award in Clinical and Translational Research, Society of Biological Psychiatry
2012 Defense Advance Research Projects Agency (DARPA) Young Faculty Award in Neuroscience
2014 Blue Ribbon Finalist, 2014 Top Poster Award in Basic Neuroscience, Society of Biological Psychiatry
2014 Harvard Medical School Excellence in Mentoring Award Nominee
2014 AASM Young Investigator Award (co-author), Honorable Mention, American Academy of Sleep Medicine

SERVICE/OUTREACH

Local/State Service/Outreach

2003 Scientific Review Committee, Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD
2005 Scientific Review Committee, Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD
2012- McLean Hospital Research Committee, McLean Hospital, Belmont, MA

National/International Service/Outreach
<table>
<thead>
<tr>
<th>Year</th>
<th>Committee/Program</th>
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<tbody>
<tr>
<td>2004</td>
<td>University of Alabama, Clinical Nutrition Research Center (UAB CNRC) Pilot/Feasibility Study Program Review Committee</td>
</tr>
<tr>
<td>2006</td>
<td>U.S. Small Business Administration, Small Business Technology Transfer (STTR) Program Review Committee</td>
</tr>
<tr>
<td>2006</td>
<td>Cognitive Performance Assessment Program Area Steering Committee, U.S. Army Military Operational Medicine Research Program Funding Panel</td>
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<td>2006</td>
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<td>2006</td>
<td>United States Army Medical Research and Materiel Command (USAMRMC) Congressionally Directed Medical Research Programs (CDMRP) Extramural Grant Review Panel</td>
</tr>
<tr>
<td>2009</td>
<td>NIH-CSR Brain Disorders and Clinical Neuroscience N02 Member Study Conflict Section Review Panel</td>
</tr>
<tr>
<td>2009</td>
<td>Sleep Physiology and Fatigue Interventions Program Area Steering Committee, U.S. Army Military Operational Medicine Research Program</td>
</tr>
<tr>
<td>2009</td>
<td>Scotland, UK, Biomedical and Therapeutic Research Committee, Grant Reviewer</td>
</tr>
<tr>
<td>2010</td>
<td>Canada, Social Sciences and Humanities Research Council of Canada, Grant Reviewer</td>
</tr>
<tr>
<td>2011</td>
<td>National Science Foundation (NSF) Grant Reviewer</td>
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<tr>
<td>2011</td>
<td>National Network of Depression Centers (NNDC), Military Task Group</td>
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<tr>
<td>2011</td>
<td>Israel, Israel Science Foundation (ISF), Grant Reviewer</td>
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<tr>
<td>2011</td>
<td>Scientific Review Committee, US Army Institute of Environmental Medicine (USARIEM)</td>
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<tr>
<td>2012</td>
<td>National Science Foundation (NSF) Grant Reviewer</td>
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<tr>
<td>2012</td>
<td>American Academy of Sleep Medicine, Member</td>
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<tr>
<td>2013</td>
<td>Israel, Israel Science Foundation (ISF), Grant Reviewer</td>
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<tr>
<td>2014</td>
<td>Organization for Human Brain Mapping, Member</td>
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<td>2015</td>
<td>Human Affectome Project Advisory Board Member</td>
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**Departmental Committees**

<table>
<thead>
<tr>
<th>Year</th>
<th>Committee</th>
</tr>
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<tbody>
<tr>
<td>2006</td>
<td>Chair, Undergraduate Honors Thesis Committee, Jessica Richards, Department of Psychology, University of Maryland, Baltimore County, MD</td>
</tr>
<tr>
<td>2012-</td>
<td>Member, Research Committee, McLean Hospital, Belmont, MA</td>
</tr>
<tr>
<td>2014</td>
<td>Psychiatry Senior Research Manager Candidate Search Committee, Department of Psychiatry, University of Arizona, Tucson, AZ</td>
</tr>
<tr>
<td>2014-2015</td>
<td>Member, Faculty Search Committee, Department of Psychology, University of Arizona, Tucson, AZ</td>
</tr>
<tr>
<td>2014-2015</td>
<td>Member, Comprehensive Examination Committee, Natalie Bryant, Department of Psychology, University of Arizona, Tucson, AZ</td>
</tr>
<tr>
<td>2014-2015</td>
<td>Chair/Research Faculty Mentor, Undergraduate Honors Thesis Committee, Haley Kent, Department of Biochemistry, University of Arizona, Tucson, AZ</td>
</tr>
<tr>
<td>2014-</td>
<td>Member, Psychiatry Research Investigator Committee, Department of Psychiatry, University of Arizona, Tucson, AZ</td>
</tr>
<tr>
<td>2015</td>
<td>Member, Dissertation Committee, Ryan S. Smith, Ph.D., Department of Psychology, University of Arizona, Tucson AZ</td>
</tr>
<tr>
<td>2015-</td>
<td>Member, Mentoring Committee, Department of Psychiatry, University of Arizona, Tucson, AZ</td>
</tr>
</tbody>
</table>
University Committees

2006  External Member, Doctoral Thesis Committee, Belinda J. Liddle, Ph.D., University of Sydney, Australia
2014  Ad Hoc Member, Interview Committee for Defense and Security Research Institute Director Position, University of Arizona, Tucson, AZ.
2014- Member, Mechanisms of Emotion, Social Relationships, and Health Interdisciplinary Developing Research Program, Clinical and Translational Science Institute, BIO5, University of Arizona, Tucson, AZ
2015  Vice President’s Executive Committee for Defense and Security Strategic Planning, University of Arizona, Tucson, AZ
2015  Imaging Excellence Cluster Hire Search Committee, University of Arizona, Tucson, AZ
2015  MRI Operations Committee, University of Arizona, Tucson, AZ

Editorial Board Membership

2009- Editorial Board Member, International Journal of Eating Disorders
2012- Editorial Board Member, Dataset Papers in Neuroscience
2012- Editorial Board Member, Dataset Papers in Psychiatry
2012- Editor, Journal of Sleep Disorders: Treatment and Care

Ad Hoc Journal Reviewer

2001-2012  Reviewer, Psychological Reports
2001-2012  Reviewer, Perceptual and Motor Skills
2002  Reviewer, American Journal of Psychiatry
2002-2013  Reviewer, Biological Psychiatry
2003  Reviewer, Clinical Neurology and Neurosurgery
2004, 2013  Reviewer, NeuroImage
2004-2006  Reviewer, Neuropsychologia
2004  Reviewer, Journal of Neuroscience
2004  Reviewer, Consciousness and Cognition
2005  Reviewer, Experimental Brain Research
2005  Reviewer, Schizophrenia Research
2005-2012  Reviewer, Archives of General Psychiatry
2005  Reviewer, Behavioral Brain Research
2005-2009  Reviewer, Human Brain Mapping
2005-2013  Reviewer, Psychiatry Research: Neuroimaging
2006  Reviewer, Journal of Abnormal Psychology
2006  Reviewer, Psychopharmacology
2006  Reviewer, Developmental Science
2006  Reviewer, Acta Psychologica
2006, 2015  Reviewer, Neuroscience Letters
2006-2014  Reviewer, Journal of Sleep Research
2006-2013  Reviewer, Physiology and Behavior
2006-2014  Reviewer, SLEEP
2007  Reviewer, Journal of Clinical and Experimental Neuropsychology
2008 Reviewer, European Journal of Child and Adolescent Psychiatry
2008 Reviewer, Judgment and Decision Making
2008-2010 Reviewer, Aviation, Space, & Environmental Medicine
2008 Reviewer, Journal of Psychophysiology
2008 Reviewer, Brazilian Journal of Medical and Biological Research
2008 Reviewer, The Harvard Undergraduate Research Journal
2008 Reviewer, Bipolar Disorders
2008-2013 Reviewer, Chronobiology International
2008 Reviewer, International Journal of Obesity
2009 Reviewer, European Journal of Neuroscience
2009 Reviewer, Psychophysiology
2009 Reviewer, Traumatology
2009 Reviewer, Clinical Medicine: Therapeutics
2009 Reviewer, Acta Pharmacologica Sinica
2009 Reviewer, Collegium Antropologicum
2009 Reviewer, Journal of Psychopharmacology
2009-2014 Reviewer, Obesity
2009 Reviewer, Scientific Research and Essays
2009 Reviewer, Child Development Perspectives
2009-2010 Reviewer, Personality and Individual Differences
2009-2010 Reviewer, Noise and Health
2009-2010 Reviewer, Sleep Medicine
2010 Reviewer, Nature and Science of Sleep
2010 Reviewer, Psychiatry and Clinical Neurosciences
2010 Reviewer, Learning and Individual Differences
2010 Reviewer, Cognitive, Affective, and Behavioral Neuroscience
2010 Reviewer, BMC Medical Research Methodology
2010-2011 Reviewer, Journal of Adolescence
2010-2012 Reviewer, Brain Research
2011 Reviewer, Brain
2011 Reviewer, Social Cognitive and Affective Neuroscience
2011 Reviewer, Journal of Traumatic Stress
2011 Reviewer, Social Neuroscience
2011-2014 Reviewer, Brain and Cognition
2011 Reviewer, Frontiers in Neuroscience
2011-2012 Reviewer, Sleep Medicine Reviews
2012 Reviewer, Journal of Experimental Psychology: General
2012 Reviewer, Ergonomics
2012 Reviewer, Behavioral Sleep Medicine
2012 Reviewer, Neuropsychology
2012 Reviewer, Emotion
2012 Reviewer, JAMA
2012 Reviewer, BMC Neuroscience
2012-2015 Reviewer, Cognition and Emotion
2012 Reviewer, Journal of Behavioral Decision Making
2012 Reviewer, Psychosomatic Medicine
2012-2014 Reviewer, PLoS One
2012 Reviewer, American Journal of Critical Care
2012-2014 Reviewer, Journal of Sleep Disorders: Treatment and Care
2013 Reviewer, Experimental Psychology
2013 Reviewer, Clinical Interventions in Aging
2013 Reviewer, Frontiers in Psychology
2013 Reviewer, Brain Structure and Function
2013 Reviewer, Appetite
2013 Reviewer, JAMA Psychiatry
2013 Reviewer, Acta Psychologica
2013 Reviewer, Neurology
2013 Reviewer, Applied Neuropsychology: Child
2013 Reviewer, Journal of Applied Psychology
2015 Reviewer, Early Childhood Research Quarterly
2015 Reviewer, Behavioral Neuroscience

PUBLICATIONS/CREATIVE ACTIVITY

Refereed Journal Articles


79. **Killgore, WD**, Castro, CA, & Hoge, CW. Preliminary Normative Data for the Evaluation of Risks Scale—Bubble Sheet Version (EVAR-B) for Large Scale Surveys of Returning Combat


82. Rupp, TL, **Killgore, WD,** & Balkin, TJ. Socializing by day may affect performance by night: Vulnerability to sleep deprivation is differentially mediated by social exposure in extraverts vs. introverts. Sleep, 33: 1475-1485, 2010.


89. **Killgore, WD,** Capaldi, VF, & Guerrero, ML. Nocturnal polysomnographic correlates of daytime sleepiness. Psychol Rep, 110(10), 63-72, 2012.


116. **Killgore, WD**, Kamimori, GH, & Balkin, TJ. Caffeine improves the efficiency of planning and sequencing abilities during sleep deprivation. Journal of Clinical Psychopharmacology, 34,


Book Chapters/Editorials

1. Killgore, WD. Cortical and limbic activation during visual perception of food. In Dube, L,


**Published U.S. Government Technical Reports**


**WORKS IN PROGRESS**

1. **Killgore, WD,** Sonis, LA, Rosso, IM, and Rauch, SL. Emotional intelligence partially mediates the association between anxiety sensitivity and anxiety symptoms. Psychological Reports (under revision).


5. **Killgore, WD.** Individual differences in rested activation of the ventral striatum predicts overeating during sleep deprivation. (in preparation).


CONFERENCES/SCHOLARLY PRESENTATIONS

Colloquia

2000 The Neurobiology of Emotion in Children, McLean Hospital, Belmont, MA [Invited Lecture]

2001 The Neurobiology of Emotion in Children and Adolescents, McLean Hospital, Belmont, MA [Invited Lecture]

2002 Cortico-Limbic Activation in Adolescence and Adulthood, Youth Advocacy Project, Cape Cod, MA [Invited Lecture]

2008 Lecture on Sleep Deprivation, Executive Function, and Resilience to Sleep Loss; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2008 Lecture on The Role of Research Psychology in the Army; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2008 Lecture on Combat Stress Control: Basic Battlemind Training; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2009 Lecture entitled Evaluate a Casualty, Prevent Shock, and Prevent Cold Weather injuries; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2009 Lecture on Combat Exposure and Sleep Deprivation Effects on Risky Decision-Making; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2009 Lecture on the Sleep History and Readiness Predictor (SHARP); 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2009 Lecture on The Use of Actigraphy for Measuring Sleep in Combat and Military Training;
105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2010 Lecture entitled Casualty Evaluation; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2010 Lecture entitled Combat Stress and Risk-Taking Behavior Following Deployment; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2010 Lecture entitled Historical Perspectives on Combat Medicine at the Battle of Gettysburg; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2010 Lecture entitled Sleep Loss, Stimulants, and Decision-Making; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2010 Lecture entitled PTSD: New Insights from Brain Imaging; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2011 Lecture entitled Effects of bright light therapy on sleep, cognition and brain function after mild traumatic brain injury; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2011 Lecture entitled Laboratory Sciences and Research Psychology in the Army; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2011 Lecture entitled Tools for Assessing Sleep in Military Settings; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2011 Lecture entitled The Brain Basis of Emotional Trauma and Practical Issues in Supporting Victims of Trauma, U.S. Department of Justice, United States Attorneys Office, Serving Victims of Crime Training Program, Holyoke, MA [Invited Lecture]

2011 Lecture entitled The Brain Altering Effects of Traumatic Experiences; 105th Reinforcement Training Unit (RTU), U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2012 Lecture entitled Sleep Loss, Caffeine, and Military Performance; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2012 Lecture entitled Using Light Therapy to Treat Sleep Disturbance Following Concussion; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2013 Lecture entitled Brain Responses to Food: What you See Could Make you Fat; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2013 Lecture entitled Predicting Resilience Against Sleep Loss; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2014 Lecture entitled Get Some Shut-Eye or Get Fat: Sleep Loss Affects Brain Responses to
Lecture entitled *Emotional Intelligence: Developing a Training Program*; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2014

Lecture entitled Supporting Cognitive and Emotional Health in Warfighters. Presented to the Senior Vice President for the Senior Vice President for Health Sciences and Dean of the Medical School, University of Arizona, Tucson, AZ [Invited Lecture]

2014

Lecture entitled *Understanding the Effects of Mild TBI (Concussion) on the Brain*; 105th IMA Detachment, U.S. Army Reserve Center, Boston, MA [Invited Lecture]

2015

Presentation entitled Superhuman Brains: The Neurocircuitry that Underlies the Ability to Resist Sleep Deprivation. Presented at the Neuroscience Datablitz, University of Arizona, Tucson, AZ [Invited Lecture]

Seminars

2001

Using Functional MRI to Study the Developing Brain, Judge Baker Children's Center, Harvard Medical School, Boston, MA [Invited Lecture]

2002

Lecture on the Changes in the Lateralized Structure and Function of the Brain during Adolescent Development, Walter Reed Army Institute of Research, Washington, DC [Invited Lecture]

2005

Lecture on Functional Neuroimaging, Cognitive Assessment, and the Enhancement of Soldier Performance, Walter Reed Army Institute of Research, Washington, DC [Invited Lecture]

2005

Lecture on The Sleep History and Readiness Predictor: Presented to the Medical Research and Materiel Command, Ft. Detrick, MD [Invited Lecture]

2006

Lecture on Optimization of Judgment and Decision Making Capacities in Soldiers Following Sleep Deprivation, Brain Imaging Center, McLean Hospital, Belmont MA [Invited Lecture]

2006

Briefing to the Chairman of the Cognitive Performance Assessment Program Area Steering Committee, U.S. Army Military Operational Medicine Research Program, entitled Optimization of Judgment and Decision Making Capacities in Soldiers Following Sleep Deprivation, Walter Reed Army Institute of Research [Invited Lecture]

2010

Lecture on Patterns of Cortico-Limbic Activation Across Anxiety Disorders, Center for Anxiety, Depression, and Stress, McLean Hospital, Belmont, MA [Invited Lecture]

2010

Lecture on Cortico-Limbic Activation Among Anxiety Disorders, Neuroimaging Center, McLean Hospital, Belmont, MA [Invited Lecture]
<table>
<thead>
<tr>
<th>Year</th>
<th>Lecture Title</th>
<th>Location</th>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td>2011</td>
<td>Lecture on <em>Shared and Differential Patterns of Cortico-Limbic Activation Across Anxiety Disorders</em>, McLean Research Day Brief Communications, McLean Hospital, Belmont, MA</td>
<td>[Invited Lecture]</td>
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<tr>
<td>2014</td>
<td>Lecture entitled <em>Supporting Cognitive and Emotional Health in Warfighters</em>. Presented to the Senior Vice President for Health Sciences and Dean of the Medical School, University of Arizona, Tucson, AZ</td>
<td>[Invited Lecture]</td>
<td></td>
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<tr>
<td>2015</td>
<td>Lecture entitled <em>Sleep Loss and Brain Responses to Food</em>. Presented for the Sleep Medicine Lecture Series, University of Arizona Medical Center, Tucson, AZ</td>
<td>[Invited Lecture]</td>
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<tr>
<td>2015</td>
<td>Presentation entitled <em>Superhuman Brains: The Neurocircuitry that Underlies the Ability to Resist Sleep Deprivation</em>. Presented at the Neuroscience Datablitz, University of Arizona, Tucson, AZ</td>
<td>[Invited Lecture]</td>
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<tr>
<td>2005</td>
<td>Briefing to the Chairman of the National Research Council (NRC) Committee on Strategies to Protect the Health of Deployed U.S. Forces, John H. Moxley III, on the Optimization of Judgment and Decision Making Capacities in Soldiers Following Sleep Deprivation, Walter Reed Army Institute of Research, Washington, DC</td>
<td>[Invited Lecture]</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Lecture on <em>Cerebral Responses During Visual Processing of Food</em>, U.S. Army Institute of Environmental Medicine, Natick, MA</td>
<td>[Invited Lecture]</td>
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<tr>
<td>2007</td>
<td>Lecture on <em>The Effects of Fatigue and Pharmacological Countermeasures on Judgment and Decision-Making</em>, U.S. Army Aeromedical Research Laboratory, Fort Rucker, AL</td>
<td>[Invited Lecture]</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Lecture on the <em>Validation of Actigraphy and the SHARP as Methods of Measuring Sleep and Performance in Soldiers</em>, U.S. Army Aeromedical Research Laboratory, Fort Rucker, AL</td>
<td>[Seminar]</td>
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</tbody>
</table>
2009 Lecture Entitled *Influences of Combat Exposure and Sleep Deprivation on Risky Decision-Making*, Evans U.S. Army Hospital, Fort Carson, CO [Invited Lecture]

2009 Lecture on *Making Bad Choices: The Effects of Combat Exposure and Sleep Deprivation on Risky Decision-Making*, 4th Army, Division West, Quarterly Safety Briefing to the Commanding General and Staff, Fort Carson, CO [Invited Lecture]

2011 Lecture Entitled *The effects of emotional intelligence on judgment and decision making*, Military Operational Medicine Research Program Task Area C, R & A Briefing, Walter Reed Army Institute of Research, Silver Spring, MD [Invited Lecture]

2011 Lecture Entitled *Effects of bright light therapy on sleep, cognition, brain function, and neurochemistry following mild traumatic brain injury*, Military Operational Medicine Research Program Task Area C, R & A Briefing, Walter Reed Army Institute of Research, Silver Spring, MD [Invited Lecture]

2012 Briefing to GEN (Ret) George Casey Jr., former Chief of Staff of the U.S. Army, entitled *Research for the Soldier*. McLean Hospital, Belmont, MA. [Invited Lecture]

2012 Lecture Entitled *Effects of bright light therapy on sleep, cognition, brain function, and neurochemistry following mild traumatic brain injury*, Military Operational Medicine Research Program In Progress Review (IPR) Briefing, U.S. Army Medical Research and Materiel Command, Fort Detrick, MD [Invited Lecture]

2013 Lecture Entitled *Update on the Effects of Bright light therapy on sleep, cognition, brain function, and neurochemistry following mild traumatic brain injury*, Military Operational Medicine Research Program In Progress Review (IPR) Briefing, U.S. Army Medical Research and Materiel Command, Fort Detrick, MD [Invited Lecture]

2013 Lecture Entitled *Internet Based Cognitive Behavioral Therapy: Effects on Depressive Cognitions and Brain Function*, Military Operational Medicine Research Program In Progress Review (IPR) Briefing, U.S. Army Medical Research and Materiel Command, Fort Detrick, MD [Invited Lecture]

2013 Seminar Entitled *Predicting Resilience Against Sleep Loss*, United States Military Academy at West Point, West Point, NY [Invited Symposium].

2014 Lecture entitled *Sleep Loss, Brain Function, and Cognitive Performance*, presented to the Psychiatric Genetics and Translational Research Seminar, Massachusetts General Hospital/Harvard Medical School, Boston, MA [Invited Lecture]


2014 Psychology Department Colloquium entitled *Sleep Loss, Brain Function, and Performance of the Emotional-Executive System*. University of Arizona Department of Psychology, Tucson, AZ. [Invited Lecture]


2015 Lecture Entitled Multimodal Neuroimaging to Predict Resistance to Sleep Deprivation, presented at the Pulmonary Research Conference, Department of Medicine, Sleep Medicine Sleep Lecture Series, University of Arizona College of Medicine, Tucson, AZ [Invited Lecture].


2015 Lecture Entitled *Effects of bright light therapy on sleep, cognition, brain function, and neurochemistry following mild traumatic brain injury*, Military Operational Medicine Research Program In Progress Review (IPR) Briefing, U.S. Army Medical Research and Materiel Command, Fort Detrick, MD [Invited Lecture]

2015 Lecture Entitled *A Non-Pharmacologic Method for Enhancing Sleep in PTSD*, Military Operational Medicine Research Program In Progress Review (IPR) Briefing, U.S. Army Medical Research and Materiel Command, Fort Detrick, MD [Invited Lecture]

2015 Lecture Entitled *Internet Based Cognitive Behavioral Therapy: Effects on Depressive Cognitions and Brain Function*, Military Operational Medicine Research Program In Progress Review (IPR) Briefing, U.S. Army Medical Research and Materiel Command, Fort Detrick, MD [Invited Lecture]

2015 Lecture Entitled *Operating Under the Influence: The Effects of Sleep Loss and Stimulants on Decision-Making and Performance*. Presented at the annual SAFER training for interns and residents, University of Arizona Department of Psychiatry, Tucson AZ. [Invited Lecture]

**Symposia/Conferences**


2000 Lecture on the *Neurobiology of Emotional Development in Children*, 9th Annual Parents
as Teachers Born to Learn Conference, St. Louis, MO [Invited Lecture]

2001 Oral Platform Presentation entitled *Sex differences in functional activation of the amygdala during the perception of happy faces*, 29th Annual Meeting of the International Neuropsychological Society, Chicago, IL. [Submitted Presentation]

2002 Oral Platform Presentation entitled *Developmental changes in the lateralized activation of the prefrontal cortex and amygdala during the processing of facial affect*, 30th Annual Meeting of the International Neuropsychological Society, Toronto, Ontario, Canada. [Submitted Presentation]


2004 Lecture on the *Regional Cerebral Blood Flow Correlates of Electroencephalographic Activity During Stage 2 and Slow Wave Sleep: An H215O PET Study*: Presented at the Bi-Annual 71F Research Psychology Short Course, Ft. Detrick, MD, U.S. Army Medical Research and Materiel Command [Invited Lecture]


2006 Lecture on *The Sleep History and Readiness Predictor*: Presented at the Bi-Annual 71F Research Psychology Short Course, Ft. Rucker, AL, U.S. Army Medical Research and Materiel Command [Invited Lecture]


2008 Lecture on *Sleep Deprivation, Executive Function, & Resilience to Sleep Loss*, First Franco-American Workshop on War Traumatism, IMNSSA, Toulon, France [Invited Lecture]

2009 Symposium Entitled *Sleep Deprivation, Judgment, and Decision-Making*, 23rd Annual Meeting of the Associated Professional Sleep Societies, Seattle, WA [Invited Symposium]

2009 Symposium Session Moderator for *Workshop on Components of Cognition and Fatigue: From Laboratory Experiments to Mathematical Modeling and Operational Applications*, Washington State University, Spokane, WA [Invited Speaker]
2009  Lecture on *Comparative Studies of Stimulant Action as Countermeasures for Higher Order Cognition and Executive Function Impairment that Results from Disrupted Sleep Patterns*, Presented at the NIDA-ODS Symposium entitled: Caffeine: Is the Next Problem Already Brewing, Rockville, MD [Invited Lecture]

2010  Oral Platform Presentation entitled *Sleep deprivation selectively impairs emotional aspects of cognitive functioning*, 27th Army Science Conference, Orlando, FL. [Submitted Presentation]

2010  Oral Platform Presentation entitled *Exaggerated amygdala responses to masked fearful faces are specific to PTSD versus simple phobia*, 27th Army Science Conference, Orlando, FL. [Submitted Presentation]

2012  Oral Symposium Presentation entitled *Shared and distinctive patterns of cortico-limbic activation across anxiety disorders*, 32nd Annual Conference of the Anxiety Disorders Association of America, Arlington, VA. [Invited Symposium]

2012  Oral Platform Presentation entitled *Shared and unique patterns of cortico-limbic activation across anxiety disorders*. 40th Meeting of the International Neuropsychological Society, Montreal, Canada. [Submitted Presentation]

2013  Lecture entitled *Brain responses to visual images of food: Could your eyes be the gateway to excess?* Presented to the NIH Nutrition Coordinating Committee and the Assistant Surgeon General of the United States, Bethesda, MD [Invited Lecture]

2014  Symposium Entitled *Operating Under the Influence: The Effects of Sleep Loss and Stimulants on Decision-Making and Performance*, Invited Faculty Presenter at the 34th Annual Cardiothoracic Surgery Symposium (CREF), San Diego, CA [Invited Symposium].

2014  Symposium Entitled *The Effects of Sleep Loss on Food Preference*, SLEEP 2014, Minneapolis, MN [Invited Symposium]

2015  Symposium Entitled *The Neurobiological Basis and Potential Modification of Emotional Intelligence in Military Personnel*. Invited presentation at the Yale Center for Emotional Intelligence, New Haven, CT [Invited Lecture]

2015  Lecture Entitled *Predicting Resilience to Sleep Loss with Multi-Modal Neuroimaging*. Invited presentation at the DARPA Sleep Workshop 2015, Arlington, VA [Invited Lecture]

2015  Symposium Entitled: *The Brain and Food: How your (sleepy) Eyes Might be the Gateway to Excess*, Invited Faculty Presenter at the 2015 University of Arizona Update on Psychiatry, Tucson, AZ [Invited Symposium].

2015  Oral Platform presentation entitled *Multimodal Neuroimaging to Predict Resistance to Sleep Deprivation*, Associated Professional Sleep Societies (APSS) SLEEP meeting, Seattle, WA [Submitted Presentation]
Peer Reviewed Published Abstracts


2. **Killgore, WD, & Locke, B.** A nonverbal instrument for the measurement of transient mood states: The Facial Analogue Mood Scale (FAMS) [Abstract]. Proceedings of the Annual Conference of the Oklahoma Center for Neurosciences 1996, Oklahoma City, OK.


11. **Killgore, WD, Glosser, G, King, D, French, JA, Baltuch, G, & Detre, JA.** Functional MRI


33. Killgore, WD, Young, AD, Femia, LA, Bogorodzki, P, Rogowska, J, & Yurgelun-Todd, DA.


42. Belenky, G, Reichardt, R, Thorne, D, **Killgore, WD,** Balkin, T, & Wesensten, N. Caffeine, dextroamphetamine, and modafinil during 85 hours of sleep deprivation. III. Effect on recovery sleep and post-recovery sleep performance [abstract]. Oral paper presentation at the 17th Congress of the European Sleep Research Society, Prague, Czech Republic, October 5-9,
2004.


52. Killgore, WD, Balkin, TJ, & Wesensten, NJ. Decision-making is impaired following 2-days of sleep deprivation. Poster presented at the 34th Meeting of the International


59. Huck, NO, Kendall, AP, McBride, SA, **Killgore, WD.** The perception of facial emotion is enhanced by psychostimulants following two nights of sleep deprivation [abstract]. Abstract presented at the 20th Meeting of the Associated Professional Sleep Societies, Salt Lake City, UT, June 17-22, 2006. SLEEP, 29 (Supplement), A136.

60. O’Sullivan, M, Reichardt, RM, Krugler, AL, Killgore, DB, & **Killgore, WD.** Premorbid intelligence correlates with duration and quality of recovery sleep following sleep deprivation [abstract]. Abstract presented at the 20th Meeting of the Associated Professional Sleep Societies, Salt Lake City, UT, June 17-22, 2006. SLEEP, 29 (Supplement), A372.


62. McBride, SA, Killgore DB, Balkin, TJ, Kamimori, GH, & **Killgore, WD.** Sleepy people smell worse: Olfactory decrements as a function of sleep deprivation [abstract]. Abstract presented at the 20th Meeting of the Associated Professional Sleep Societies, Salt Lake City, UT, June


72. Killgore, DB, Kahn-Green, E, Balkin, TJ, Kamimori, GH, & Killgore, WD. 56 hours of wakefulness is associated with a sub-clinical increase in symptoms of psychopathology [abstract]. Abstract presented at the 20th Meeting of the Associated Professional Sleep Societies, Salt Lake City, UT, June 17-22, 2006. SLEEP, 29 (Supplement), A130.


74. Reichardt, RM, Killgore, DB, Lipizzi, EL, Li, CJ, Krugler, AL, & Killgore, WD. The effects of stimulants on recovery sleep and post-recovery verbal performance following 61-hours of sleep deprivation [abstract]. Abstract presented at the 20th Meeting of the Associated Professional Sleep Societies, Salt Lake City, UT, June 17-22, 2006. SLEEP, 29 (Supplement), A42.

75. Bailey, JD, Richards, J, & Killgore, WD. Prediction of mood fluctuations during sleep deprivation with the SAFTE Model [abstract]. Abstract presented at the 20th Meeting of the Associated Professional Sleep Societies, Salt Lake City, UT, June 17-22, 2006. SLEEP, 29 (Supplement), A60.

76. Kendall, AP, McBride, S. A, & Killgore, WD. Visuospatial perception of line orientation is resistant to one night of sleep loss [abstract]. Abstract presented at the 20th Meeting of the Associated Professional Sleep Societies, Salt Lake City, UT, June 17-22, 2006. SLEEP, 29 (Supplement), A369.

77. Kendall, AP, McBride, SA, Kamimori, GH, & Killgore, WD. The interaction of coping skills and stimulants on sustaining vigilance: Poor coping may keep you up at night [abstract]. Abstract presented at the 20th Meeting of the Associated Professional Sleep Societies, Salt Lake City, UT, June 17-22, 2006. SLEEP, 29 (Supplement), A129.

78. Muckle, A, Killgore, DB, & Killgore, WD. Gender differences in the effects of stimulant medications on the ability to estimate unknown quantities when sleep deprived [abstract]. Abstract presented at the 20th Meeting of the Associated Professional Sleep Societies, Salt Lake City, UT, June 17-22, 2006. SLEEP, 29 (Supplement), A369.


89. **Richards, JM, Lipizzi, EL, Kamimori, GH, & Killgore, WD.** Extroversion predicts change in attentional lapses during sleep deprivation [abstract]. Abstract presented at the 21st Meeting of the Associated Professional Sleep Societies, Minneapolis, MN, June 9-14, 2007. SLEEP, 30 (Supplement), A137.

90. **Lipizzi, EL, Richards, JM, Balkin, TJ, Grugle, NL, & Killgore, WD.** Morningness-Eveningness and Intelligence [abstract]. Abstract presented at the 21st Meeting of the Associated Professional Sleep Societies, Minneapolis, MN, June 9-14, 2007. SLEEP, 30 (Supplement), A345.


92. **McBride, SA, Ganesan, G, Kamimori, GH, & Killgore, WD.** Odor identification ability predicts vulnerability to attentional lapses during 77 hours of sleep deprivation [abstract]. Abstract


98. Rupp, TL, Grugle, NL, Krugler, AL, Balkin, TJ, & Killgore, WD. Caffeine, dextroamphetamine, and modafinil improve PVT performance after sleep deprivation and recovery sleep [abstract]. Abstract presented at the 21st Meeting of the Associated Professional Sleep Societies, Minneapolis, MN, June 9-14, 2007. SLEEP, 30 (Supplement), A44.


100. Killgore, WD, Richards, JM, Balkin, TJ, Grugle, NL, & Killgore DB. The effects of sleep deprivation and stimulants on risky behavior [abstract]. Abstract presented at the 21st Meeting of the Associated Professional Sleep Societies, Minneapolis, MN, June 9-14, 2007. SLEEP, 30 (Supplement), A41.

102. Richards, JM, Lipizzi, EL, Balkin, TJ, Grugle, NL, & Killgore, WD. Objective alertness predicts mood changes during 44 hours of sleep deprivation [abstract]. Abstract presented at the 21st Meeting of the Associated Professional Sleep Societies, Minneapolis, MN, June 9-14, 2007. SLEEP, 30 (Supplement), A56.


104. Estrada, A, Killgore, WD, Rouse, T, Balkin, TJ, & Wildzunas, RM. Total sleep time measured by actigraphy predicts academic performance during military training [abstract]. Abstract presented at the 22nd Meeting of the Associated Professional Sleep Societies, Baltimore, MD, June 7-12, 2008. SLEEP, 31 (Supplement), A134.


107. Reid, CT, Smith, K, Killgore, WD, Rupp, TL, & Balkin, TJ. Higher intelligence is associated with less subjective sleepiness during sleep restriction [abstract]. Abstract presented at the 22nd Meeting of the Associated Professional Sleep Societies, Baltimore, MD, June 7-12, 2008. SLEEP, 31 (Supplement), A375.


110. Lipizzi, EL, Killgore, WD, Rupp, TL, & Balkin, TJ. Risk-taking behavior is elevated during recovery from sleep restriction [abstract]. Abstract presented at the 22nd Meeting of the Associated Professional Sleep Societies, Baltimore, MD, June 7-12, 2008. SLEEP, 31 (Supplement), A376.

111. Lipizzi, EL, Rupp, TL, Killgore, WD, & Balkin, TJ. Sleep restriction increases risk-taking behavior [abstract]. Poster presented at the 11th Annual Force Health Protection Conference,


122. Killgore, WD, Rupp, TL, Killgore, DB, Grugle, NL, and Balkin, TJ. Differential effects of

123. **Killgore, WD**, Killgore, DB, Kamimori, GH, & Balkin, TJ. When being smart is a liability: More intelligent individuals may be less resistant to sleep deprivation. Abstract presented the 37th Annual Meeting of the International Neuropsychological Society, Atlanta, GA, February 11-14, 2009.


133. **Killgore, DB, Killgore, WD, Grugle, NL, & Balkin, TJ.** Executive functions predict the ability to sustain psychomotor vigilance during sleep loss. Abstract presented at the 23rd Annual Meeting of the Associated Professional Sleep Societies, Seattle, Washington, June 7-12, 2009.

134. **Killgore, WD, & Yurgelun-Todd, DA.** Trouble falling asleep is associated with reduced activation of dorsolateral prefrontal cortex during a simple attention task. Abstract presented at the 23rd Annual Meeting of the Associated Professional Sleep Societies, Seattle, Washington, June 7-12, 2009.


142. **Killgore, WD & Balkin, TJ.** Vulnerability to sleep loss is affected by baseline executive function capacity. Abstract presented at the 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico, February 3-6, 2010.


146. **Killgore, WD** & Yurgelun-Todd, DA. Self-reported insomnia is associated with increased activation within the default-mode network during a simple attention task. Abstract presented at the 38th Annual Meeting of the International Neuropsychological Society, Acapulco, Mexico, February 3-6, 2010.


153. Rupp, TL, **Killgore, WD**, & Balkin, TJ. Extraverts may be more vulnerable than introverts to


164. Rupp, TL, Killgore, WD, & Balkin, TJ. Evaluation of personality and social exposure as


185. Schwab, ZJ, Weiner, MR, Rauch, SL, & Killgore, WD. Emotional and cognitive intelligence:


197. Song, CH, Kizielewicz, J, Schwab, ZJ, Weiner, MR, Rauch, SL, & Killgore, WD. Time is of the essence: The Design Organization Test as a valid, reliable, and brief measure of visuospatial


219. DelDonno, S, Schwab, ZJ, Kipman, M, Weber, M, & Killgore, WD. Weekend sleep is related to greater coping and resilience capacities. Abstract presented at the 26th Annual Meeting of the


225. Killgore WD. Multimodal neuroimaging to predict cognitive resilience against sleep loss. Abstract presented at the DARPA Young Faculty Award 2012 Meeting, Arlington, VA, July 30-31, 2012. [*Winner Young Faculty Award in Neuroscience]*


261. Olson, EA, Weber, M, Tkachenko, O, & Killgore, WD. Daytime sleepiness is associated with


291. Brennan, B, Tkachenko, O, Schwab, Z, Ryan, E, Athey, A, Pope, H, Dougherty, D, Jenike, M, **Killgore, WD, Hudson, J, Jensen, E, & Rauch SL.** Abstract accepted for presentation at the
53rd Annual Meeting of the American College of Neuropsychopharmacology, Phoenix, AZ, December 7-11, 2014.


294. Shane, BR, Alkozei, A, & Killgore, WD. The contribution of general intelligence and emotional intelligence to the ability to appreciate humor. Abstract accepted for presentation at the 43rd Annual Meeting of the International Neuropsychological Society, Denver, CO, February 4-7, 2015.


June 6-10, 2015.


**AWARDED GRANTS AND CONTRACTS**

**Completed**

2001-2003 fMRI of Unconscious Affect Processing in Adolescence. NIH, 1R03HD41542-01 PI: **Killgore**

2003-2006 The Effects of Sleep-Loss and Stimulant Countermeasures on Judgment and Decision Making. U.S. Army Medical Research and Materiel Command (USAMRMC) Competitive Medical Research Proposal Program (CMRP); Intramural Funding, PI: **Killgore**


2005-2006 Functional Neuroimaging Studies of Neural Processing Changes with Sleep and Sleep Deprivation. U.S. Army Medical Research and Materiel Command (USAMRMC); Intramural Funding Task Area C (Warfighter Judgment and Decision Making) Program Funding PI: **Killgore**

2006-2007 Establishing Normative Data Sets for a Series of Tasks to Measure the Cognitive Effects of Operationally Relevant Stressors.
U.S. Army Medical Research and Materiel Command (USAMRMC); Intramural Funding
Task Area C (Warfighter Judgment and Decision Making) Program Funding,
PI: Killgore

2006-2007  Military Operational Medicine Research Program (MOM-RP), Development of the Sleep
History and Readiness Predictor (SHARP),
U.S. Army Medical Research and Materiel Command (USAMRMC),
Funding PI: Killgore

2009-2014  The Neurobiological Basis and Potential Modification of Emotional Intelligence through
Affective Behavioral Training (W81XWH-09-1-0730),
U.S. Army Medical Research and Materiel Command (USAMRMC),
PI: Killgore
Major Goal: To identify the neurobiological basis of cognitive and emotional intelligence
using functional and structural magnetic resonance imaging.

2011-2014  Effects of Bright Light Therapy on Sleep, Cognition, and Brain Function following Mild
Traumatic Brain Injury (W81XWH-11-1-0056),
U.S. Army Medical Research and Materiel Command (USAMRMC),
PI: Killgore
Major Goal: To evaluate the effectiveness of morning exposure to bright light as a treatment
for improving in sleep patterns among individuals with post-concussive syndrome. Effects of
improved sleep on recovery due to this treatment will be evaluated using neurocognitive
testing as well as functional and structural neuroimaging.

2012-2014  Neural Mechanisms of Fear Extinction Across Anxiety Disorders
NIH NIMH
PI: Milad, M. Site Subcontract PI: Killgore
Major Goal: To examine the neurocircuitry involved in fear conditioning, extinction, and
extinction recall across several major anxiety disorders.

2012-2014  Multimodal Neuroimaging to Predict Cognitive Resilience Against Sleep Loss
Defense Advance Research Projects Agency (DARPA) Young Faculty Award in
Neuroscience (D12AP00241)
PI: Killgore
Major Goal: To combine several neuroimaging techniques, including functional and structural
magnetic resonance imaging, diffusion tensor imaging, and magnetic resonance spectroscopy
to predict individual resilience to 24 hours of sleep deprivation.

2012-2015  Internet Based Cognitive Behavioral Therapy Effects on Depressive Cognitions and Brain
function (W81XWH-12-1-0109),
U.S. Army Medical Research and Materiel Command (USAMRMC),
PI: Rauch, SL; Co-PI: Killgore
Major Goal: To evaluate the effectiveness of an internet-based cognitive behavioral therapy
treatment program on improving depressive symptoms, coping and resilience skills, cognitive
processing and functional brain activation patterns within the prefrontal cortex.

Current
2012-2016  A Model for Predicting Cognitive and Emotional Health from Structural and Functional Neurocircuitry following Traumatic Brain Injury (W81WH-12-0386)  
Congressionally Directed Medical Research Program (CDMRP), Psychological Health/Traumatic Brain Injury (PH/TBI) Research Program: Applied Neurotrauma Research Award.  
PI: Killgore  
Percent Effort: 25%  
Major Goal: To evaluate the relation between axonal damage and neurocognitive performance in patients with traumatic brain injury at multiple points over the recovery trajectory, in order to predict recovery.

2014-2017  Bright Light Therapy for Treatment of Sleep Problems following Mild TBI (W81XWH-14-1-0571).  
Psychological Health and Traumatic Brain Injury Research Program (PH/TBI RP) Traumatic Brain Injury Research Award-Clinical Trial.  
PI: Killgore  
Percent Effort: 40%  
Major Goal: To verify the effectiveness of morning exposure to bright light as a treatment for improving in sleep patterns, neurocognitive performance, brain function, and brain structure among individuals with a recent mild traumatic brain injury.

2014-2018  A Non-pharmacologic Method for Enhancing Sleep in PTSD (W81XWH-14-1-0570)  
Military Operational Medicine Research Program (MOMRP) Joint Program Committee 5 (JPC-5), FY13 Basic and Applied Psychological Health Award (BAPHA)  
PI: Killgore  
Percent Effort: 35%  
Major Goal: To evaluate the effectiveness of blue light exposure to modify sleep in PTSD and its effects on fear conditioning/extinction, symptom expression, and brain functioning.

2015  Effects of Blue Light on Melatonin Levels and EEG Power Density Spectrum  
Arizona Area Health Education Centers (AHEC) Program  
Co-PI: Alkozei, A.; Co-PI: Killgore  
Percent Effort: 0%  
Major Goal: Adjunct intramural funding to add a melatonin collection to an ongoing study of the effects of blue wavelength light on alertness and brain function.

Pending

2014-2018  Refinement and Validation of a Military Emotional Intelligence Training Program (JW150005)  
Joint Warfighter Medical Research Program 2015  
PI: Killgore  Percent Effort: 45%
Major Goal: To develop and validate a new internet-based training program to enhance emotional intelligence capacities in military Service Members.

**LIST OF COLLABORATORS ON GRANTS AND PUBLICATIONS FROM LAST FIVE YEARS**

<table>
<thead>
<tr>
<th>Acharya, D.</th>
<th>Fridman, Andrew</th>
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<tr>
<td>Alkozei, Anna</td>
<td>Fukunaga, Rena</td>
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<td>Athey, A. J.</td>
<td>Ginsberg, Jay P.</td>
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<td>Baker, Justin. T.</td>
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<td>Balkin, Thomas J.</td>
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<td>Bark, John S.</td>
<td>Gonenc, Atilla</td>
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<td>Brennan, Brian P.</td>
<td>Gruber, Staci A.</td>
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<td>Britton, Jennifer C.</td>
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<td>Bruyere, J.</td>
<td>Guerrero, Melanie L.</td>
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<td>Buchholz, Jennifer L.</td>
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<td>Capaldi, Vincent F.</td>
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<td>Castro, Carl A.</td>
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<td>Chosak, A.</td>
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<td>Cohen-Gilbert, Julia E.</td>
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<td>Conrad, Turner A.</td>
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<td>Covell, Michael J.</td>
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<td>Crowley, David J.</td>
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<td>Cui, Jiaolong</td>
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<td>Dahlgren, Mary Kate</td>
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<td>Deckersbach, Thilo</td>
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<td>Demers, Lauren A.</td>
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<td>Dillon, Daniel G.</td>
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<td>Divatia, Shreya C.</td>
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<td>Dougherty, Darin</td>
<td>Kizielewicz, Jill</td>
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<td>Engle, Charles C.</td>
<td>Knight, Sara A.</td>
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<td>Estrada, Arthur</td>
<td>Koehlmoos, T. P.</td>
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<td>Freed, Michael C.</td>
<td>Krizan, Zlatan</td>
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</table>
GRADUATE, POSTDOCTORAL, THESIS ADVISORS OR SPONSORS

Steven W. Gangestad, Ph.D.—Undergraduate Senior Honors Thesis Advisor
Lawrence Overby, III, Ph.D.—Masters Thesis Advisor
Bill J. Locke, Ph.D.—Doctoral Thesis Advisor
Keith A. Hawkins, Ph.D.—Doctoral Internship Advisor
Russell L. Adams, Ph.D.—Postdoctoral Fellowship Advisor
James G. Scott, Ph.D.—Postdoctoral Fellowship Advisor
Guila Glosser, Ph.D.—Postdoctoral Fellowship Advisor
Deborah A. Yurgelun-Todd, Ph.D.—Postdoctoral Fellowship Advisor

This is a true and accurate statement of my activities and accomplishments. I understand that misrepresentation in securing promotion and tenure may lead to dismissal or suspension under ABOR Policy 6-201 J.1.b.

_____________________________________
William D. “Scott” Killgore, Ph.D.