

The Institute for the Advancement of Human Behavior

THE
BRAIN AND
BEHAVIOR

*A COMPREHENSIVE CLINICAL
COURSE ON THE NEUROBIOLOGY OF
EVERYDAY LIFE*

Presented by

DANIEL G. AMEN, MD

HOME STUDY
25 CE/CME CREDITS

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GUIDELINES, INSTRUCTIONS, PROCEDURES & INFORMATION

After you read these guidelines, simply follow these CE/CME procedures:

- Please watch all 15 DVDs.
- Complete the participation documentation form, post-test answer sheet and evaluation. Please sign the Certification Statement (at the end of the participation documentation).
- Mail or fax the participation documentation form with the signed Certification Statement, post-test answer sheet and evaluation to IAHB. Please retain a copy for your records.

IAHB

Attn: Home Study

4370 Alpine Road, Suite 209

Portola Valley, CA 94028

Fax: 650-851-0406

- If you passed the post test with 75% or above, IAHB will send you the CE/CME certificate within four (4) weeks of receiving the CE/CME materials.
- If you do not pass the test with 75% or above, a different test will be mailed to you. You will be expected to return it within six months.
- If you do not pass the second test, you will get a third and final test, also to be returned within 6 months.
- If you need your home study corrected in less than ten business days, there will be a \$25 rush fee. Please attach a check in the amount of \$25 made payable to IAHB with your returned materials or to use a credit card, call and request a Rush Home Study Form.

Additional Information:

- You must answer the post-test entirely without the help of any other person.
- **The date of completion, which will appear on your certificate, is the date we receive your CE/CME materials.**
- If you fax your materials, please do NOT also mail them.
- Partial credit is not available.

Note: Although IAHB maintains participant records, you should retain your certificate for a period of five years as a personal record and reference.

COURSE DESCRIPTION

The brain is involved in everything you do. When your brain works right, you work right and when your brain has trouble, you have trouble in your life. Developing an intimate knowledge of neuroscience is essential to understanding others and having the best life possible. *The Brain and Behavior* is an entertaining, practical, 15-week, master's-level university course taught by Dr. Amen. It's filled with practical neuroscience to make you a better clinician and a more effective person.

STATEMENT OF NEED

Complex psychiatric patients are becoming the norm for mental health practitioners. The straightforward patients are being treated by primary care physicians, and experienced mental health practitioners are routinely seeing patients with 2-5 DSM-IV diagnoses. In order to be effective with complex cases it is essential to move beyond the DSM-IV diagnostic labels and include brain system pathology in the mix of understanding. Needs assessment data collected from a variety of sources indicate training in neuroscience would be of ongoing value to professional therapists. Daniel Amen's course, *The Brain and Behavior*, was developed to address these needs. This home study will allow professionals for whom attending a live workshop is difficult or inconvenient to receive the same training benefit and increase their clinical skills.

GOALS & OBJECTIVES

EDUCATIONAL TARGETS AND GOALS OF THE COURSE

This course engages students in the educational targets and goals of:

- **Intellectual Engagement**, as they learn to apply neuroscience principles to the counseling profession.
- **Professional Excellence**, as they learn how neuroscience applies to their clinical work in the field of psychological counseling.
- **Socio-cultural Responsiveness**, as they learn how neuroscience applies to culture (political and social problems, such as crime, racism, family issues).
- **Responsible Stewardship**, by becoming more competent providers in the mental health system with new, relevant information.
- **Spiritual Formation**, as they develop and maintain a deeper understanding of the brain's importance to behavior and the concepts of good and evil and the possible role in the health of one's soul.

COURSE OBJECTIVES

Participants will be better able to:

- Summarize information on brain function as it relates to cognition, emotions and behavior
- Demonstrate how to take a brain system history and apply it to clinical practice
- Describe a host of psychiatric illnesses from a brain dysfunction perspective
- Utilize various tools (from psychotherapy, supplements, exercise, mental exercises and medication) to optimize brain function
- Illustrate how the brain interacts in relationships

Date of Original Release:
September 2005

Revised:
December 2008

Termination Date:
June 2012

Disclosure to Participants

- The name of the individual: **Dr Daniel G. Amen**
- The name of the commercial interest(s); **Amen Clinic**
- The nature of the relationship the person has with each commercial interest. **CEO and Medical Director**

Resolution:

IAHB has resolved this conflict by means of the presenter agreeing to give a balanced view of therapeutic options, use of generic names when applicable, and if the CME educational content includes trade names, where available trade names from several companies will be used, not just trade names from a single company.

In addition, the presenter has agreed to abide by ACCME content validation statements, which state that:

(a) All the recommendations involving clinical medicine in a CME activity [are] based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients.

(b) All scientific research referred to, reported or used in CME in support or justification of a patient care recommendation [conforms] to the generally accepted standards of experimental design, data collection and analysis. Providers are not eligible for accreditation if they present activities that promote recommendations, treatment or manners of practicing medicine that are not within the definition of CME, or known to have risks or dangers that outweigh the benefits, or known to be ineffective in the treatment of patients.

When you complete your evaluation, please tell us if you think the presenter has achieved these goals.

ACCREDITATION

Continuing education activities sponsored by the **Institute for the Advancement of Human Behavior (IAHB)**, a 501(c)3, non-profit, educational organization in Portola Valley, CA, is approved for CE/CME credit by the following organizations. In all cases, IAHB, as the approved sponsor, maintains responsibility for all programs. Certifications by these accrediting organizations are continuously renewed. Consequently, the following list is subject to modification following the date of its printing, December 2008. *Please contact your state licensing board to determine its acceptance of reciprocity with the organizations listed below. Not all state-level boards accept home study/independent study for continuing education nor do they all accept the national-level of accreditation listed below.*

ALCOHOLISM AND DRUG ABUSE COUNSELORS: This course has been approved by the National Association of Alcoholism and Drug Abuse Counselors for 25 educational credits (NAADAC Education Provider #187). Provider approved by CAADAC, Provider #4S-86-074-0111, an ICRC member which has reciprocity with *most* ICRC member states for 25 CEHs.

COUNSELORS & MFTs: IAHB is approved by the Florida Board of Clinical Social Work, Marriage and Family Therapy, and Mental Health Counseling (Provider #BAP-261) for 25 CEUs. CE Broker Tracking #10-926206. This course meets the qualifications for MFTs as required by the California Board of Behavioral Sciences (Provider # PCE 36). IAHB has been approved by the State of Texas Marriage and Family Therapists to provide continuing education activities.

NURSES: The Institute for the Advancement of Human Behavior is an approved provider of continuing nursing education by the Utah Nurses Association, as accredited by the American Nurses Credentialing Center's Commission on Accreditation. (UNA=30 CEUs; UNA Provider Code P06-02). Provider approved by the California Board of Registered Nursing (BRN Provider CEP# 2672) for 25 contact hours.

PHYSICIANS: The Institute for the Advancement of Human Behavior, A Medical Education Company (IAHB-AMEDCO) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. IAHB-AMEDCO designates this educational activity for a maximum of 25 *AMA PRA Category 1 Credits*™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

PSYCHOLOGISTS: IAHB is approved by the American Psychological Association to sponsor continuing education for psychologists. IAHB maintains responsibility for this program and its content.

SOCIAL WORKERS: IAHB is approved by the Florida Board of Clinical Social Work, Marriage and Family Therapy, and Mental Health Counseling (Provider #BAP-261) for 25 CEUs. CE Broker Tracking #10-926206; the Alabama State Board of Social Work Examiners (Provider #0103); the Illinois Department of Professional Regulation (Provider #159-000223); the State of Maryland Board of Social Work Examiners to sponsor Category I continuing education programs. This course meets the qualifications for LCSWs as required by the California Board of Behavioral Sciences (Provider #PCE-36). IAHB has been approved by the State of Texas Board of Social Work Examiners to provide continuing education activities for social workers. Provider No. CS3876. This activity is eligible for 25 credit hours.

PARTICIPATION DOCUMENTATION FORM

Name & Degree _____ License # & State _____

Street Address _____

City _____ State _____ Zip _____

Phone # _____ Fax # _____

Email _____

Occupation:

- Alcoholism/Drug Abuse Counselor Nurse Other _____
 Counselor (Certified, LPC) Physician _____
 CEAP Psychologist
 MFCC/MFT Social Worker

Disclaimer

This form must be read, signed, and dated by the applicant and returned with the answer sheet and evaluation form in order to receive 25 hours of CE/CME credit.

This continuing education/continuing medical education activity has been developed by the Institute for the Advancement of Human Behavior (IAHB). IAHB assumes full responsibility for its content and for following the standards and regulations of the organizations which approve and accredit IAHB as a provider of CE/CME. Any questions or comments regarding the activity content should be directed to the CE/CME Director at (650) 851-8411 or 4370 Alpine Road, Suite 209, Portola Valley, CA 94028. IAHB does not warrant this activity for any other purpose or make any representation of any other kind with respect to the activity or its content.

It is the responsibility of the participant to contact their specific licensing boards to ensure that his/her board accepts home study for fulfillment of continuing education credits and that it accepts reciprocity from the list of professional boards and organizations listed on page 4.

Certification Statement: *(No credit will be awarded without this signed certification.)*

I hereby certify that I have completed *The Brain and Behavior*. I also hereby certify that the work presented on the answer sheet is my own and that I received no assistance in completing this evaluation.

Signature: _____ **Date:** _____

Please Print Name: _____

POST-TEST

Please use the *Answer Sheet* found at the end of the post-test to write in your answers.

The following statements are True (T) or False (F).

1. It is estimated that the brain has 100 billion neurons.
2. The brain uses about 10% of the calories humans consume.
3. The brain is about the consistency of soft butter.
4. Dorsal is toward the top of the brain while ventral is toward the underside of the brain.
5. Anterior is toward the back of the brain while posterior is toward the front of the brain.
6. Most psychiatric illnesses show the same pattern on brain imaging.
7. SPECT stands for single photon emission computed tomography.
8. Accepted indications for brain SPECT include brain trauma, seizures, strokes and dementia.
9. Prefrontal cortex is involved with executive functions, such as judgment and impulse control.
10. Anterior cingulate gyrus is involved with auditory processing.
11. Temporal lobes are involved with language and memory.
12. Parietal lobes are involved with direction sense and localizing objects in space.
13. Occipital lobes are involved with visual processing.
14. Basal ganglia play a role in anxiety.
15. Antisocial personality disorder is associated with low activity in the prefrontal cortex.
16. Spiritual experience has been associated with the temporal lobes.
17. Violence has been associated with problems in the temporal lobes, prefrontal cortex and anterior cingulate gyrus.
18. The limbic system is not associated with emotion.
19. Cerebellum has been connected to executive function, motor and thought coordination.
20. Toxicity shows up as a scalloped appearance on SPECT scans.
21. Right hemisphere is associated with detail and language processing.

22. Left hemisphere is considered the holistic processing part of the brain.

23. Dendrites are nerve cell antennae.

24. The axon sends signals from the nerve cell body.

25. Gray matter is made up of white tracks.

26. White matter is made up of nerve cell bodies.

27. Dopamine is implicated in Parkinson's disease.

28. Acetylcholine is implicated in Alzheimer's disease.

29. Serotonin is implicated in some forms of depression.

30. You are born with all the nerve cells you will ever have.

31. The prefrontal cortex finishes development at age 10.

32. Brain injuries often affect the prefrontal cortex and temporal lobes.

33. Brain injuries are rare in our society.

34. Hyperbaric oxygen treatment may be helpful for brain injury.

35. Brain SPECT imaging is more sensitive than MRI in evaluating brain injuries.

36. Loss of consciousness is the best predictor of brain injury outcome.

37. Personality changes are associated with prefrontal lobe abnormalities.

38. Flattening of the prefrontal cortex is an indication of brain injury.

39. Brain imaging by itself cannot date brain traumas.

40. Cognitive rehabilitation has not been shown to be helpful for brain injury.

41. Brain injury often causes chronic stress

42. ADD is overdiagnosed.

43. ADD is a single, simple disorder.

44. ADD is only a minor problem in our society.

45. ADD is not associated with increased drug abuse or criminal behavior.
46. ADD is a uniquely American problem.
47. In ADD the problem is not all attention but rather routine attention.
48. There are six different types of ADD described in this course.
49. Stimulants make four of the six types worse if started first.
50. “Ring of fire” ADD may be associated with bipolar disorder.
51. Diet and exercise can have a positive impact on ADD.
52. Anxiety and depression are the most common psychiatric disorders in the U.S.
53. There are many different types of depressive disorders.
54. Overfocused anxiety and depression is often responsive to serotonergic interventions.
55. Serotonergic medications, such as Prozac, work for almost all types of anxiety and depression.
56. Exercise is of little value in depression.
57. Depression is a rare side effect of medications.
58. Wellbutrin works through the dopamine pathways in the brain.
59. St. John’s Wort works in a similar manner as Prozac.
60. SAMe is an effective natural antidepressant with anti-pain qualities.
61. Bipolar disorder can be associated with suicide and bankruptcy.
62. Stimulant medications usually help people with bipolar disorder.
63. Fish oil has been shown to help mood stability in patients with bipolar disorder.
64. There is not much people who are at risk for Alzheimer’s disease can do to prevent it.
65. Vitamin C and Vitamin E have little to offer people as far as protection from diseases of aging.
66. Brain injuries are not associated with an increased risk for Alzheimer’s disease.
67. Diabetes, cancer treatment and smoking increases the risk for dementia.

68. Depression and coronary artery bypass surgery increases the risk for dementia.

69. The Apo E4 gene is associated with an increased risk for Alzheimer's disease.

70. Gingko biloba and phosphatidyl serine have good research that show they can help memory.

71. Aricept and Exelon boost acetylcholine levels and help early in Alzheimer's disease.

72. Namenda is a glutamate modulator and has been shown to be helpful for Alzheimer's disease.

73. Mental exercise and physical exercise are not helpful in preventing cognitive impairment.

74. Dropping out of school is a risk factor for Alzheimer's disease.

75. High alcohol intake protects the brain from Alzheimer's disease.

Please answer the following questions by choosing the best answer.

76. Causes of memory problems include all of the following except:

- a. drug abuse
- b. early Alzheimer's disease
- c. brain trauma
- d. fish oil

77. Most people should take a 100% multiple vitamin everyday because:

- a. most people do not have balanced diets
- b. the AMA says we should
- c. to help support pharmaceutical companies
- d. to prevent chronic illness
- e. a & d

78. Most people would benefit from taking high dose, high quality fish oil everyday. Which is the one reason below that does not apply to taking this supplement?

- a. the American diet is deficient in omega-3-fatty acids found in fish oil
- b. to lower heart disease
- c. to treat urinary tract infections
- d. to improve brain function

79. Brain science has a role in evaluating difficult relationships by:

- a. telling if people are compatible
- b. showing underlying brain dysfunction that may be associated with behavioral problems
- c. by demonstrating intelligence
- d. by demonstrating social competence

80. Prefrontal cortex problems are associated with all problems in relationships except:

- a. thoughtfulness and forethought
- b. impulsivity
- c. erratic behavior
- d. lack of empathy

81. Excitement seeking behavior is associated with the following conditions:

- a. ADD
- b. antisocial personality disorder
- c. bipolar disorder, manic phase
- d. alcohol intoxication
- e. all of the above

82. Too much activity in the anterior cingulate gyrus can be associated with which problem in relationships?

- a. chronic arguing
- b. trouble reading social cues
- c. impulsivity
- d. lack of caring

83. Temporal lobe problems are associated with which problem in relationships?

- a. temper problems
- b. chronic arguing
- c. excitement seeking behavior
- d. poor direction sense

84. Basal ganglia issues are associated with which problems in relationships?

- a. anxiety
- b. insecurity
- c. physical stress symptoms
- d. all of the above

85. Limbic system problems are associated with which problems in relationships?

- a. depression
- b. negativity
- c. lack of sexual desire
- d. all of the above

86. ADD can negatively affect a relationship by:

- a. impulse control issues
- b. disorganization
- c. conflict driven behavior
- d. all of the above

87. Antidepressants can cause sexual problems by:

- a. decreasing the ability to have an orgasm
- b. increasing sexual sensitivity
- c. increasing sexual interest
- d. none of the above

88. Brain injury or toxic exposure has been linked to domestic violence by:

- a. damaging prefrontal cortex function and increasing impulsivity
- b. damaging temporal lobe function and increasing temper issues
- c. damaging parietal lobe function and decreasing direction sense
- d. a and b

89. Depression is associated with higher rates of divorce because:

- a. it increases bonding in couples
- b. it increases negativity and decreases sexual interest
- c. it increases sexual interest
- d. none of the above

90. Meditation has been shown to have the following effect on the brain:

- a. enhancing a sense of calm
- b. calm left parietal lobe activity
- c. enhance the God area of the brain (right temporal lobe)
- d. all of the above

91. The regular practice of prayer has been shown to have the following positive effects on the body:
- a. faster recovery from surgery
 - b. less depression
 - c. less fear and anxiety
 - d. all of the above
92. Behavior therapy for OCD has been shown to effect which area of the brain?
- a. basal ganglia
 - b. prefrontal cortex
 - c. occipital lobes
 - d. parietal lobes
93. Cognitive therapy for depression has been shown to be helpful for which condition(s)?
- a. antisocial personality disorder
 - b. schizophrenia
 - c. depression
 - d. conversion disorder
94. Cognitive therapy for spider phobia has been found to:
- a. calm right prefrontal cortex activity
 - b. be an effective treatment
 - c. a & b
 - d. have no effect
95. Hypnosis has been found to have the following brain effects:
- a. enhance left hemisphere function
 - b. worsen the areas of the brain that feel pain
 - c. increase felt pain
 - d. increase a sense of anxiety
96. Hypnosis is all of the following except:
- a. focused concentration
 - b. an altered state of consciousness
 - c. where time distortion is common
 - d. where people are under the spell of the hypnotist
97. Placebo, when it works, has been shown to affect brain function by the following mechanism.
- a. similar to medication
 - b. no effect
 - c. increased limbic activity
 - d. decreased occipital lobe activity
98. Long term potentiation occurs when:
- a. learning enhances connections between cells
 - b. neurons disconnect from each other
 - c. neurons engage in programmed cell death
 - d. neurons are malnourished
99. Nobel prize winner Eric Kandel found:
- a. learning actually affected the formation of synapses
 - b. learning had no effect on brain cells
 - c. learning decreased brain activity
 - d. learning enhanced on the prefrontal cortex
100. Interpersonal psychotherapy deals with:
- a. past hurts
 - b. current relationships
 - c. only female issues
 - d. only sexual issues

101. Males are diagnosed with alcohol dependence or abuse:
- a. about twice as often as females
 - b. half as much as females
 - c. the same as females
 - d. four times more than females

102. According to the class, how many people in the U.S. drove under the influence of an illicit drug in the past year?
- a. 100,000
 - b. 1,000,000
 - c. 7,000,000
 - d. 250

103. What percentage of U.S. adults are considered either pathological or problem gamblers?
- a. 10%
 - b. 3%
 - c. <1%
 - d. 25%

104. Which of the following characterizes a component of pathological gambling:
- a. good impulse control throughout life
 - b. first big win
 - c. no family history of substance abuser or obsessive compulsive disorder
 - d. consistently losing

105. Components of pathological gambling include:
- a. pleasure
 - b. obsession
 - c. lack of control and triggers
 - d. all of the above

106. Which of the following is considered a factor in addictions?
- a. advertising
 - b. genetics
 - c. family environment
 - d. all of the above

107. When people have overactive brains they tend to use which of the following abuse substances as a form of self medication?
- a. pain killers
 - b. caffeine
 - c. cocaine
 - d. methamphetamines

108. People with ADD are more likely to use which drug(s) of abuse?
- a. cocaine
 - b. methamphetamines
 - c. nicotine
 - d. caffeine
 - e. all of the above

109. Inhalants are one of the most brain destructive drugs of abuse because:
- a. they cause global brain damage
 - b. the abuse often starts early
 - c. they have no reinforcing effects
 - d. a & b

110. Brain trauma increases the risk of substances abuse because it:
- a. damages parts of the brain involved in judgment and impulse control
 - b. causes depression
 - c. causes negative life changes
 - d. all of the above

111. Posttraumatic stress disorder (PTSD) increases substance abuse because:

- a. sufferers try to self medicate their PTSD induced anxiety.
- b. people want to forget the repetitive trauma they experienced.
- c. a & b
- d. none of the above

112. In the Mark Laaser Study sexual addicts were found to have:

- a. lower prefrontal cortex activity
- b. increased anterior cingulate activity
- c. normal brain activity
- d. a & b

113. The amygdala is involved in the following functions:

- a. alerts us to anxious situations
- b. helps read facial cues
- c. protects us against perceived threats
- d. all of the above

114. EMDR has been shown to be an effective treatment for PTSD by:

- a. increasing the emotional intensity of trauma
- b. calming limbic structures associated with trauma and stored memories
- c. showing no before and after brain changes on neuroimaging
- d. none of the above

115. The following brain systems have been implicated in PTSD

- a. prefrontal cortex
- b. basal ganglia
- c. thalamus
- d. anterior cingulate
- e. right temporal lobe
- f. all have been implicated in PTSD

116. Which brain areas are involved in early Alzheimer's disease?

- a. parietal lobes
- b. medial temporal lobes
- c. posterior cingulate gyrus
- d. all of the above

117. Kindling of neurons:

- a. makes it hard for them to fire
- b. makes it easier for them to fire
- c. has no effect
- d. none of the above

118. Emergency "first responders" such as firemen and policemen:

- a. have a higher incidence of PTSD than the general population
- b. have a lower incidence of PTSD than the general population
- c. have the same incidence of PTSD as the general population
- d. have no correlation to PTSD

119. PTSD can develop:

- a. only after 10 years old
- b. early or late
- c. must be present immediately after the trauma
- d. only after a second traumatic event

120. Symptoms of PTSD include re-experiencing the trauma by all of the following except:

- a. flashbacks
- b. memories
- c. nightmares
- d. calming thoughts

121. Stress causes an increase in neurochemicals that:

- a. damage cells in the hippocampus
- b. lessen the risk for depression
- c. lessen the risk of hypertension
- d. lessen the risk for anxiety

122. People with PTSD produce higher levels of intrinsic opiates which are responsible for:

- a. making them feel emotionally hyped up
- b. making them feel numb
- c. making them feel high
- d. making them feel angry

123. Hypnoanalysis takes patients back to the original events causing trauma and helps them:

- a. break up the emotional bridges involved with the symptoms
- b. diminish the anxiety associated with the symptoms
- c. permanently relieve symptoms in many cases
- d. all of the above

124. EMDR was originally developed by:

- a. Bill Wilson
- b. David Grand
- c. Francine Shapiro
- d. Carl Jung

125. EMDR involves:

- a. single hemisphere stimulation
- b. bilateral hemisphere stimulation
- c. pressure point stimulation
- d. acupuncture

126. SPECT scans have shown:

- a. positive changes after EMDR
- b. no changes after EMDR
- c. worsening after EMDR
- d. decreased prefrontal cortex activity

127. Low activity in the prefrontal cortex is involved with:

- a. compulsive violence
- b. impulsive violence
- c. past trauma
- d. b & c

128. The anterior cingulate gyrus is involved with:

- a. compulsive violence
- b. stalkers
- c. arguing
- d. domestic violence
- e. all of the above

129. Left temporal lobe problems are involved in:

- a. dark, evil, awful thoughts
- b. a long fuse
- c. happy thoughts
- d. patience

130. Violence only shows which pattern in the brain:

- a. only one pattern
- b. multiple patterns (violence is not one thing)
- c. only prefrontal cortex problems
- d. only temporal lobe patterns

131. Substances of abuse associated with violence include:

- a. caffeine
- b. methamphetamine
- c. marijuana
- d. benzodiazepines

132. Alcohol abuse tends to unleash violence by:

- a. decreasing a person's ability to read a situation
- b. decreasing impulse control
- c. decreasing judgment
- d. all of the above

133. According to the research of Adrian Raine, antisocial personality disorder is associated with the following:

- a. 11% less volume in the prefrontal cortex
- b. faster heart rates
- c. low sweat gland activity
- d. all of the above

134. Toxic chemical exposure to the brain can be from:

- a. environmental toxins
- b. substances of abuse
- c. a & b
- d. none of the above

135. Road rage is often associated with:

- a. increased anterior cingulate activity and trouble letting go of negative thoughts
- b. poor prefrontal cortex activity
- c. diminished left temporal lobe activity
- d. all of the above

136. Suicide is often associated with:

- a. left temporal lobe problems.
- b. poor prefrontal cortex activity
- c. a & b
- d. low basal ganglia activity

137. Having brain problems:

- a. excuses people from criminal responsibility
- b. may be involved in mitigating sentences
- c. is a reason to kill offenders because they will be a drain on society
- d. offers little hope for rehabilitation

138. Medications have:

- a. only positive effects on brain function
- b. only negative effects on brain function
- c. can be positive or negative
- d. minimal effects on brain function

139. It is best to treat DSM-IV categories:

- a. all the same as disorders are simple
- b. along the lines of underlying brain pathology
- c. with psychotherapy only
- d. with medication only

140. Psychiatric medicine:

- a. can enhance brain function
- b. can hurt brain function
- c. can have no effect
- d. all of the above

141. The wrong medication:

- a. can be lethal to self and others
- b. will have little effect
- c. a & b
- d. none of the above

142. Stimulants tend to:

- a. enhance prefrontal cortex activity
- b. calm anterior cingulate gyrus activity
- c. calm basal ganglia activity
- d. lower cerebellar activity

143. Serotonergic medication tends to:

- a. ramp up cingulate gyrus activity
- b. calm anterior cingulate gyrus activity
- c. activate basal ganglia activity
- d. lower cerebellar activity

144. Benzodiazepines tend to:

- a. help anxiety, but may cause addiction and memory problems
- b. activate anterior cingulate gyrus activity
- c. activate basal ganglia activity
- d. activate cerebellar activity

145. Anticonvulsants have been shown to be:

- a. helpful for mood stability, pain, anxiety and irritability
- b. activate anterior cingulate gyrus activity
- c. activate basal ganglia activity
- d. activate cerebellar activity

146. One of the benefits of natural supplements is:

- a. they are natural
- b. you never have to tell an insurance company that you take them
- c. they do not have any side effects
- d. none of the above

147. One of the disadvantages of natural supplements is:

- a. they are more expensive than most medicines
- b. they have more side effects than many medicines
- c. quality control can be a problem
- d. none of the above

148. St. John's Wort has:

- a. studies involving more than 4,000 patients
- b. studies that include only a couple of dozen patients
- c. no well designed studies
- d. shown it is less effective than Zoloft for mild to moderate depression

149. SAME:

- a. has been shown to be effective for depression and pain
- b. has been shown to be ineffective for depression and pain
- b. has been shown to be effective for depression but not pain
- b. has been shown to be ineffective for depression but effective for pain

150. Treatment for the Irlen Syndrome (Scotopic Sensitivity Syndrome) has been shown to be:

- a. effective for depth perception problems and light sensitivity
- b. helpful for reading problems
- c. helpful to decrease headaches
- d. all of the above

151. Hyperbaric oxygen treatment has been shown to:

- a. boost blood flow to the brain
- b. lower blood flow to the brain
- c. help in healing strokes
- d. a & c

152. ADD has the following risks:

- a. 35% never finish high school
- b. 43% of untreated aggressive hyperactive boys are arrested for felonies by age 16
- c. 52% of adults abuse drugs or alcohol
- d. 75% have interpersonal problems
- e. all of the above

153. ADD is associated with:

- a. more usage of medical services
- b. fewer head injuries
- c. lower incidence of Alzheimer's disease
- d. all of the above

154. ADD is associated with:

- a. making a lower income than people of similar education
- b. making a higher income than people of similar education
- c. making the same income as people of similar education
- d. none of the above

155. ADD is associated with higher levels of emotional trauma because:

- a. impulsivity is associated with poor judgment
- b. conflict driven behavior
- c. a & b
- d. none of the above

156. SPECT scans of people with ADD:

- a. show at least 6 different patterns
- b. show no changes from normal
- c. often show high prefrontal cortex activity as part of the picture
- d. often show high cerebellar activity

157. Low activity in the prefrontal cortex is involved with:

- a. ADD
- b. antisocial personality disorder
- c. suicidal behavior
- d. alcohol abuse
- e. all of the above

158. The anterior cingulate gyrus is involved with:

- a. OCD
- b. anorexia
- c. oppositional defiant disorder
- d. all of the above

159. Left temporal lobe problems are involved in:

- a. epilepsy
- b. déjà vu
- c. dark thoughts
- d. memory problems
- e. all of the above

160. Basal ganglia problems are associated with:

- a. anxiety
- b. conflict avoidance
- c. a & b
- d. none of the above

161. Cerebellum is associated with:

- a. coordination
- b. posture
- c. gait
- d. thought coordination
- e. all of the above

162. Alcohol is toxic to what parts of the brain:

- a. prefrontal cortex
- b. temporal lobes
- c. cerebellum
- d. all of the above

163. Brain development in the prefrontal cortex is not complete until age:

- a. 12
- b. 17
- c. 21
- d. 25

164. Myelination is important to:

- a. slow nerve cell conduction
- b. speed nerve cell conduction
- c. increase nerve cell growth
- d. none of the above

165. Antisocial behavior can result from:

- a. head injury
- b. lack of bonding
- c. prenatal toxic exposure
- d. all of the above

166. Preventing Alzheimer's includes all of the following except:

- a. calorie restriction
- b. anti-oxidants
- c. exercise
- d. increased television watching

167. Increased television watching has been associated with:

- a. increased incidence of ADD
- b. increased school performance
- c. improved social responsibility
- d. less violence

168. Meditation has been shown to be helpful to:

- a. decrease stress
- b. lower blood pressure
- c. alleviate anxiety
- d. all of the above

169. Things that take away brain reserve include:

- a. brain trauma
- b. toxic exposure
- c. excessive stress
- d. all of the above

170. What helps the brain:

- a. social connections
- b. beer
- c. multiple vitamins
- d. a & c

171. Omega three fatty acid levels have been shown to be low in:

- a. ADD
- b. dementia
- c. suicidal behaviors
- d. depression
- e. all of the above

172. What is the percentage of people who will have a psychiatric illness at some point in their lives?

- a. 14%
- b. 25%
- c. 49%
- d. 85%

173. The brain is the consistency of:

- a. custard
- b. soft butter
- c. between egg whites and jello
- d. tofu
- e. all of the above

174. According to Dr. Amen there are ____ types of anxiety and depression?

- a. 1
- b. 3
- c. 7
- d. 45

175. Which of the following are causes of depression?

- a. loss
- b. chemical imbalances
- c. physical trauma
- d. toxic exposure
- e. all of the above

176. Which of the following are causes of ADD symptoms?

- a. brain trauma
- b. chemical imbalances
- c. poor teachers
- d. toxic exposure
- e. all of the above

177. What helps clinicians distinguish between ADD and bipolar disorder?

- a. response to medication
- b. history
- c. incidents of discreet manic episodes
- d. all of the above

178. The brain uses about what percentage of the body's blood flow?

- a. 5%
- b. 10%
- c. 15%
- d. 20%

179. When your brain works right:

- a. you tend to be more irritable
- b. you tend to be your best
- c. you tend to be less thoughtful
- d. none of the above

180. The brain is involved in:

- a. everything you do
- b. only your thoughts
- c. only your behaviors
- d. only your feelings

ANSWER SHEET

Instructions: Please mark all of your answers from the post-test on this answer sheet.

1	27	53	79	105	131	157
2	28	54	80	106	132	158
3	29	55	81	107	133	159
4	30	56	82	108	134	160
5	31	57	83	109	135	161
6	32	58	84	110	136	162
7	33	59	85	111	137	163
8	34	60	86	112	138	164
9	35	61	87	113	139	165
10	36	62	88	114	140	166
11	37	63	89	115	141	167
12	38	64	90	116	142	168
13	39	65	91	117	143	169
14	40	66	92	118	144	170
15	41	67	93	119	145	171
16	42	68	94	120	146	172
17	43	69	95	121	147	173
18	44	70	96	122	148	174
19	45	71	97	123	149	175
20	46	72	98	124	150	176
21	47	73	99	125	151	177
22	48	74	100	126	152	178
23	49	75	101	127	153	179
24	50	76	102	128	154	180
25	51	77	103	129	155	
26	52	78	104	130	156	

EVALUATION

Use the following key to respond:

1-Strongly Agree 2-Mildly Agree 3-Neutral 4-Mildly Disagree 5-Strongly Disagree

Quality of instruction and instructor expertise:

_____ The Home Study course presentation focused on the course topic.

_____ The material held my attention.

_____ The presenter seemed professional and knowledgeable.

_____ The instructor seemed ethical.

Program content: The Home Study course met its stated Educational Objectives.

_____ **Overall Goal:** Participants will better understand current scientific understandings of the brain and its relationship to and effect on emotions, behaviors and cognitions.

_____ Summarize information on brain function as it relates to cognition, emotions and behavior.

_____ Demonstrate how to take a brain system history and apply it to clinical practice.

_____ Describe a host of psychiatric illnesses from a brain dysfunction perspective.

_____ Utilize various tools (from psychotherapy, supplements, exercise, mental exercises and medication) to optimize brain function.

_____ Illustrate how the brain interacts in relationships.

Administration of the course and general participant satisfaction:

_____ I received the ordered material in a timely fashion.

_____ The instructions for the Home Study were clear.

_____ The Home Study Agreement was clear and appropriate.

_____ The overall value of the program was good.

_____ The overall success of the course in achieving its objectives was positive.

Comments:

Please list other topics you would find relevant to your professional practice:

Did you feel that this activity was commercially biased? Yes No

If yes, how? _____

THE PRINCIPAL FACULTY

Daniel G. Amen, M.D., is a child and adult psychiatrist, brain imaging specialist, and the medical director of Amen Clinics, Inc. with offices in Newport Beach and Fairfield, CA; Tacoma, WA and Reston, VA. He is an Assistant Clinical Professor of Psychiatry and Human Behavior at the University of California, Irvine School of Medicine and a Distinguished Fellow of the American Psychiatric Association. Dr. Amen is a nationally recognized expert in neuropsychiatry, and has pioneered the use of brain imaging in clinical psychiatric practice.

Dr. Amen did his general psychiatric training at the Walter Reed Army Medical Center in Washington, DC and his child and adolescent psychiatry training at Tripler Army Medical Center in Honolulu, Hawaii. He has won writing and research awards from the American Psychiatric Association, the US Army and the Baltimore-DC Institute for Psychoanalysis.

Dr. Amen has been published around the world. He is the author of numerous professional and popular articles, 19 books and a number of audio and video programs. His books include *Change Your Brain, Change Your Life*, which has been on the New York Times bestseller list, translated into 12 languages, *Healing ADD*, *Healing The Hardware of the Soul*, and the forthcoming *Making A Good Brain Great*. You can read Dr. Amen's column, "Head Check", every month in Men's Health Magazine.

ABOUT THE INSTITUTE

The Institute for the Advancement of Human Behavior is a non-profit, nationally recognized educational institute founded in 1977. Our mission is to provide innovative, top-quality continuing education and continuing medical education activities for professionals across the US. The Institute's programs encompass a comprehensive and multidisciplinary array of educational activities in the form of workshops, conferences, multimedia home study materials and customized training programs.

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Fast, Effective Treatment for Anxiety Disorders
David Burns, MD **13 CE/CME**

In this workshop, Dr. Burns describes three powerful models for the treatment of anxiety disorders: The Cognitive Model, The Behavioral Model, and The Hidden Emotion Model and illustrates numerous techniques for each model. He emphasizes that the purpose of therapy is to fail as fast as you can so you can find the most effective technique for each patient as quickly as possible. He shows how to create a warm, vibrant collaborative relationship and develop a systematic, individualized treatment plan that specifically targets each person’s unique problems and needs.

“...And It’s All Your Fault!”

How to Overcome Anger and Interpersonal Conflict
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Cognitive Interpersonal Therapy (CIT) is a new treatment developed by Dr. Burns to help patients deal with anger, resolve conflicts and develop more satisfying relationships. In this workshop you will learn this basic, flexible approach, which can be used to treat patients with a wide variety of relationship conflicts. You will learn strategies for dealing with angry patients who blame others and resist change; and paradoxical methods to boost motivation and empower the patient.



Reconsidering Trauma

Treatment Advances, Relational Issues and Mindfulness in Integrated Trauma Therapy

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This workshop presents new material that formally integrates Buddhist philosophy and empirically-based mindfulness approaches with effective trauma treatment. Also included is new information on interview based assessment, cross-cultural issues, psychosis, stress reduction training, clinician counter-activation, and the neurobiology and psychopharmacology of trauma. Dr. Briere provides cutting-edge, directly-applicable information that takes trauma theory and treatment to an even more advanced level.

Relationships in Conflict

*New Perspectives & Innovations for Working with Couples, Teenagers
and their Parents, Co-Workers and Friends*

David B. Wexler, PhD **12 CE/CME**

In this workshop, Dr. Wexler reviews the most current theories and research about the roots of conflict and the motivations that lead people to behave destructively or abusively with the people closest to them. Using a “relentlessly positive” framework, he will demonstrate a series of specific strategies to help relationship partners bring out the best of each other and access pre-existing fundamental strengths. He focuses on the primacy of personal narrative and self talk to help people understand, cope, and develop intelligent strategies for these relationship conflicts.

Treating Complex Psychological Trauma

PTSD, Borderline Personality and Beyond

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Until recently, post-traumatic stress was considered a relatively straightforward response to a single traumatic event. However, recent research indicates that trauma-related disturbance can be quite complex symptomatically, involving a variety of symptoms and difficulties beyond PTSD. Drawing on the latest trauma research and theory, Dr. Briere present a nonpathologizing, developmentally-informed therapy for these complex post-traumatic presentations that integrates cognitive-behavioral and psychodynamic perspectives.

When Push Comes to Shove

Advances in the Treatment of Domestic Violence: Research, Theory, and Clinical Interventions
David B. Wexler, Ph.D. **7 CE/CME**

Dr. Wexler's very practical approach covers recent research into the causes of and treatments for violent behavior in modern society. Using practical case examples as well as excerpts from recent movies, Dr. Wexler demonstrates how to recognize the potential for violence, assist victims to reveal and discuss violent patterns, intervene effectively when violence has occurred, and employ the most effective prevention strategies. Meets Domestic Violence requirements for California Psychologists, MFTs, Counselors and Social Workers.

The Titans' Fire

Integrated Care and Empowerment for People in the Bipolar Spectrum
Michael A. Freeman, MD **7 CE/CME**

The force of bipolar passions has powered cultural leaders whose contributions shape the context of our lives. In this results-oriented workshop, participants will become familiar with the rapid evolution of, and current state-of-the-art treatment for, people in the bipolar spectrum. Psychopharmacology, cognitive and behavioral therapy, life management and wellness skills updates will be presented in an application-oriented manner designed to enhance the effectiveness of the practicing clinician. Includes audio recording, available on CD or cassette, plus a CD-Rom which contains the handouts and CE kit.

Stop Walking On Eggshells

Therapy with Reactive, Explosive, Indulged, and Other Difficult Adolescents
Janet Edgette, PsyD **6 CE/CME**

Dr. Edgette discusses how to work with teenagers who may show little interest in sitting in a room and discussing their "problems" with an unfamiliar adult. She teaches how to hold the adolescent client accountable for his/her actions without fracturing the therapist/client relationship. The workshop also covers working collaboratively with parents, teachers, and other third parties who may have unrealistic expectations about how therapy can work.

Comprehensive Treatment of Children and Adolescents with Bipolar Disorder

Kiki Chang, MD **6 CE/CME**

Bipolar disorder is increasingly recognized in children and adolescents. Pediatric Bipolar Disorder commonly occurs with aggression, anxiety, ADHD, OCD, and substance abuse. Distinctions can be subtle, and completing an accurate differential diagnosis can be challenging. Dr Chang discusses selecting and integrating treatment options from the array of available pharmacotherapies, psychotherapies, and educational interventions.

Compassion's Boundaries

Paradoxes of Law, Ethics and Professional Regulation in Psychotherapy
Steven Frankel, PhD, JD **6 CE/CME**

Tragically, many acts that originate in kindness and compassion subsequently bring dark clouds to the lives of mental health professionals. Dr. Frankel has developed a unique workshop on law, ethics and regulation of mental health practice that explores these boundaries and limits of compassion. Meets the Law & Ethics requirement for California Psychologists, MFTs, and Social Workers.

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