

# **BRAIN AND COGNITION IN** HEALTH AND DISEASE

Lecture series by Elkhonon Goldberg, Ph.D., ABPP

### Luria Neuroscience Institute



Advancing and Disseminating Knowledge about the Brain and the Mind

## BRAIN AND COGNITION IN HEALTH AND DISEASE

This 5-day lecture sequence covers a wide range of topics on the relationship between the brain and the mind in health and disease. Brain mechanisms of major cognitive functions will be reviewed. Brain mechanisms and cognitive characteristics of major disorders affecting cognition will also be reviewed.

The number of participants will be limited to enable active audience participation.

The following topics will be addressed:

1. Basic functional neuroanatomy. Major brain structures and neurotransmitters and their contributions to neural computation.

2. Perception and perceptual disorders. Agnosias, cerebral hemispheres, and distributed mechanisms of perception.

3. Motor functions and motor disorders. Apraxias and hierarchic organization of motor control and action.

4. Language and language disorders. Aphasias and distributed nature of the mechanisms of language.

5. The deciding brain. Neural mechanisms of executive functions of the frontal lobes and dysexecutive syndromes.

6. The bicameral brain. Structural and functional hemispheric asymmetries. Novel approaches to hemispheric specialization.

7. The emotional brain. Limbic and cortical contributions to emotional regulation. Laterality and emotional control.

8. Attention and attentional disorders. Voluntary attention and ADHD. Automatic attention and hemiinattention.

9. Memory and amnesias. Neuroanatomical components of memory circuits. Types of memory and amnesias.

10. Brain development and aging. Current concepts of neuroplasticity. Factors behind healthy cognitive aging.

11. Major dementias. Alzheimer's type, Lewy body, frontotemporal, cerebrovascular, and mixed. Mild Cognitive Impairment (MCI) and its relationship to dementias.

12. Cerebrovascular disorders. Cerebrovascular accident (CVA) and transient ischemic attack (TIA). Aneurisms and AVM's.

13. Traumatic Brain Injury (TBI). Neuroanatomy, subtypes, natural history, cognitive profiles, and diagnosis. Forensic aspects of TBI.

14. Neuropsychiatric disorders. Schizophrenias and affective disorders. Diagnostic and differential diagnosis issues.

15. Neurodevelopmental disorders. Dyslexias, non-verbal learning disabilities, autism, ADHD, Tourette's syndrome.

16. Infectious diseases of the brain. Bacterial (Lyme), viral (HIV and Herpes Simplex), prion (Jacob-Kreuzfeld) encephalopathies.

17. Seizures and their effect on cognition. Classification, neurobiology, and cognitive profiles. Diagnostic and differential diagnosis issues.

18. Neoplasms and their effects on cognition. Types of brain tumors and their effects on cognition.

19. Movement disorders. Parkinson's disease, Huntington's disease, ALS and their effects on cognition.

20. Addictions and substance abuse. The effects of various illicit substances on the brain. Alcohol abuse and Korsakoff syndrome.

To register online or for more information visit www.lninstitute.org

CE credits: 40 for a 5-day sequence.

Location: 315 West 57th Street, Suite 401, New York, NY 10019 Dates: January 16; February 20; March 19; April 23; May 21 2016 (all Sundays) Time: 8am - 6pm (with a lunch break and two short breaks). Fee: \$2450

### ABOUT THE INSTRUCTOR



Eax / Mail Persistration Form

The course is taught by Elkhonon Goldberg, Ph.D., ABPP. Goldberg is a cognitive neuroscientist, a practicing neuropsychologist, and an educator who lectures worldwide. He is a Clinical Professor, Department of Neurology, NYU School of Medicine and a Diplomate of The American Board of Professional Psychology in Clinical Neuropsychology. Goldberg authored research papers on cortical organization, hemispheric specialization, frontal lobes, memory, traumatic brain injury, dementias, schizophrenia, and other topics.

Goldberg's books The Executive Brain (2001), The Wisdom Paradox (2005), and The New Executive Brain (2009) have been translated into 16 languages. He coauthored The SharpBrains Guide to Cognitive Fitness (2013) and is the Chief Scientific Adviser of www.sharpbrains.com. Goldberg is a recipient of The Copernicus Prize for "contributions to interdisciplinary dialogue between neurosciences and neuropsychology," and The Tempos Hominis medal "for international medical sciences education." He is a foreign member of The Venetian Institute of Science, Literature and Arts. Elkhonon Goldberg was a close associate of Alexander Luria.

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digits on the front of AmEx card)
Signature
Mail to 315 West 57th Street. Ste 401. New York, NY 10019 or fax 21224689

Grievances: If a participant is not satisfied with the program and explains why, a full refund will be issued upon request made within 30 days of registration.