



COMPREHENSIVE DIAGNOSIS
AND EVALUATION
OF CHILD & ADULT ATTENTION,
LEARNING, AND MEMORY DISORDERS
(ON-SITE EVALUATIONS AVAILABLE)

Winter/Spring
2008-2009

Generating dialogue and
educating professionals who
work with LD/ADHD
students is an
ongoing process.



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Learning Disability & ADHD Update

In Memory of H.M.



On December 2, 2008 the most famous neurological patient who ever lived, died in Windsor Locks, Connecticut. Known for over fifty years by the initials H.M., Henry Gustav Molaison was indirectly responsible for the birth and development of modern memory research.

As a result of radical surgery to contain intractable seizures that had plagued him from the age of seven to twenty-seven due to a bicycle accident, H.M. had most of his hippocampus, amygdala and entorhinal cortices removed in 1953. Since that time he had almost no ability to form long-term memories, although his working memory (memory for information imparted to him on an auditory level for a period of up to thirty seconds), and procedural memory

(IN MEMORY OF H.M. cont'd. on pg. 2)

New Medications for the Treatment of ADHD

Significant refinements and advances continue regarding the treatment of both child and adult ADHD.

In the last year the F.D.A. has approved the use of Daytrana, which is the methylphenidate skin patch designed to be used with children between the ages of six and twelve years of age. Effective up to 12 hours, the most significant advantage of

this approach concerns the fact that the patch can be removed at any point in time to help fine tune and adjust the dosage of the medication. This can be helpful on weekends and vacations. The Daytrana patch is also potentially useful to children who have difficulty swallowing pills, as the patch is usually placed on the hip, and is barely noticed by the vast majority of children.

(NEW MEDICATIONS..... cont'd. on pg. 2)

Dr. Scott Howard is pleased to announce the opening of a new office at 1180 Beacon Street, Suite 7D in Brookline, MA (617-734-0091). The office is convenient to the Green line, and parking is readily available. Dr. Howard continues to teach graduate students at the Counseling program at Lesley University, as well as providing supervision, in-service presentations, and consultation to schools, healthcare facilities and clinics in both Massachusetts and New Hampshire. He appreciates the opportunity to perform neuropsychological evaluations for the educational and medical community in the Greater Boston area.



(IN MEMORY OF H.M. cont'd. from 1)



(the capacity to perform activities such as driving, dressing, eating) remained intact.

Through the years, H.M. was involved in many neurological experiments (including a 45 year collaboration with M.I.T.'s Suzanne Corkin) which led to the critical formation of cognitive neuropsychology and the creation of the current nomenclature to describe memory systems in the brain. H.M. suffered from difficulties with regard to his declarative memory, which includes episodic (autobiographical memory, related to personal memories with a temporal dimension), and semantic memory (or the kind of memory responsible for recalling facts, without reference to time or

personal recollection). H.M. was also responsible to contributing to our understanding that the hippocampus and related temporal lobe structures are essential for the registration and consolidation of new memories, and for the realization that long term memories exist through the initialization of these memories via the activation of these cortical structures.

In addition to deepening our understanding of dozens of neurological conditions (including Alzheimer's Disease, Head Trauma, Vascular Dementia and attentional issues), H.M. also provided much useful information through neuroimaging in order to understand the structural and functional activities of the brain in performing various cognitive tasks. This information is being directly related to research and treatments for various memory and attentional issues.

Upon his death, H.M.'s brain was removed at Massachusetts General Hospital, and is being sent to the Brain Observatory Lab at the University of California at San Diego, headed by Dr. Jacopo Annese, who will continue to analyze H.M.'s brain, albeit on a more microscopic and cellular level (More information on their work can be obtained at <http://thebrainobservatory.ucsd.edu>).

As with Phineas Gage before him (Gage is the mid-nineteenth century neurological patient who educated so many on the role of the orbitofrontal lobe and its contribution to judgment, reasoning and emotional modulation), H.M.'s contributions to modern neuroscience and cognitive neuropsychology will not be soon "forgotten".

Assessments for gifted and talented students and those applying to private schools are done on a regular basis.

(NEW MEDICATIONS... cont'd. from 1)



Focalin is another fairly recently released medication which has been shown to be quite effective with both adults

and children aged six to twelve. Focalin (Dexamethylphenidate), is made up of a more selective and precise stimulant compound than other ADHD medications, and is purported to have fewer side effects, able to be administered at a much smaller dose for the same benefit, and is also sold in time release preparations that work for up to twelve hours.

Vyvanse is another new medication that is similar to Adderall and Dexamphet-

amine, but has a much lower abuse potential due to the fact that it is absorbed through the stomach and cannot be inhaled to achieve a euphoric effect. In addition, the efficacy of Vyvanse is for a full twelve hours, and is soluble in liquids, and therefore can be mixed with juice or water for those children who have difficulty taking pills.

A drug in the final stages of development called Intuniv is being touted as a new alternative to the stimulant preparations. It actually is a new use of the current hypertensive medication Tenex, and has shown to be efficacious in enhancing auditory working memory, screening out distractions, as well as reducing impulsivity.

Finally, Stratterra continues to be used with success by more child psychiatrists and family physicians in those circumstances when a stimulant medication is contraindicated, such as for those individuals with cardiac problems, bipolar or tic disorders, or with those who show a propensity for substance abuse.

Dr. Howard is also available to assess other neuropsychological disorders, such as Alzheimer's disease, Head Trauma, and Stroke. He also does testing to evaluate emotional and behavioral disorders, and career and vocational issues.