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Cognitive Rehabilitation, Inc.  
One Jungian Way  
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March 8, YR-1

I. M. Newrough, M.D.  
The Head Clinic  
One Horses Tail Way  
Flagstaff; New State 03333

**Re: Margaret A. Hertz**  
**Date of Birth: 11/17/YR-44**  
**Date of accident: 11/18/YR-2**

Dear Dr. Newrough:

Thank you for referring the above referenced patient to me for neuropsychological testing. I had the opportunity to meet and examine Margaret A. Hertz at my office on March 8, YR-01. Ms. Hertz is a lovely, 44-year-old, well-developed, well-nourished adult female who gives a history of having been injured in an accident on November 18, YR-2.

My examination of Ms. Hertz was comprised of both a verbal interview and neuropsychological testing.

**HISTORY:** Pre-accident intelligence above average. Ms. Hertz graduated from Flagstaff High School in YR-26. She then attended New State University where she received her B.S. in mathematics, with a minor in philosophy in YR-22. She was on Dean's list through most of her college career. Upon graduating from New State University she began working for Bolder Computer Corporation. She successfully completed various technical courses in computer programming. Her math background and the logic courses which she took in pursuit of her philosophy minor helped her to become an excellent programmer. Since the accident she has suffered from headaches and irregular sleep patterns. She has become irritable, easily frustrated and has difficulty in problem solving skills. She remembers exactly what she was doing immediately before the bus struck her but cannot remember how to structure codes needed for computer programming. She believes that she has lost her ability to recall dates and numbers. These deficits have further added to her frustration and anxiety.

**NEUROPSYCHOLOGICAL TESTING:** Due to her obviously genuine symptoms, Ms. Hertz was given a complete battery of neuropsychological tests in order to determine the nature of her residual cognitive disabilities. The following tests were administered:

Trail Making Test;

Wisconsin Card Sorting Test; Wechsler Adult Intelligence Scale; California Verbal Learning Test;

Wechsler Memory Scale-Revised: Logical Memory Subtest

Multilingual Aphasia Examination; Benton Test of Facial Recognition; Benton Test of Line Orientation.

## **NEUROPSYCHOLOGICAL FINDINGS:**

**Higher Level Cognition:** The Trail Making test was administered. Part A directed her to sequence a series of numbers, which were dispersed about a page. The basic task was completed in 55 seconds converting to a t-score of 35. This reflects mild to moderate impaired time in visual scanning. Part B increased in complexity and she was directed to sequence both numbers and letters while alternating between them. This more complex task was completed in 114 seconds converting to a t-score of 31. This finds her time of simultaneously processing two sets of stimuli to be within the mild to moderately impaired range.

Categorical reasoning was measured with the Wisconsin Card Sorting Test. This psychometric procedure directed the patient to sort stimulus cards according to categorical cues. She learned the first category by the second stimulus card and maintained ten consecutive correct responses. She successfully completed six categories requiring a maximum of three stimuli. Her overall performance reveals evidence of preservation but some impairment in categorical reasoning.

Global Index TQ scores were obtained with the Wechsler Adult Intelligence Scale-Revised. A full scale IQ of 105 was obtained, placing her within the average range for intelligence, but within the mildly impaired range for her educational background. A subtest score of 13 on Digit Span converted to a t-score of 63. This reflects above average immediate rote recall of forward and backward digit spans. Her arithmetic subtest score of seven converted to a t-score of 42. This is below average borderline performance for verbal arithmetic reasoning. These subtests weigh heavily on attention and concentration indicating inconsistent performance. Her verbal scores were all appropriate. Within the performance domain, subtest scores range from four through six. A subtest score of six was evident on Picture Completion converting to a t-score of 39. This reflects mild impairment with discarding essential details. A subtest score of six was also evident on Block Design converting to a t-score of 38. This indicates mild impairment with visuo-spatial processing as measured by her capacity to determine similarities among diverse word pairs.

**Memory:** The California Verbal Learning Test was administered in order to examine rote memory for verbal stimuli. This psychometric procedure directed her to learn a list of related items over five trials. 5 of 16 items were retained upon initial presentation indicating a weakness with initial encoding of verbal information. Her learning curve increased to a modest extent as 10 items were retained by the fifth trial showing a clear weakness in short term memory.

The Logical Memory Subtest of the Wechsler Memory Scale-Revised was administered in order to examine more complex verbal information recall. This procedure directed her to learn two brief paragraphs presented in an oral format. A profound amount of story facts omissions were noted. Here, her score places her only at the 25th percentile. Consolidation difficulties were also evident as only 40 percent of the story facts initially learned were retained after a delay. This placed her long-term memory well below average.

Visual memory was measured with graphic reproductions of the Complex Rey Figure. Her short-term reproduction was less than the 30th percentile indicating a weakness with short-term visual memory.

Visuo-spatial, motor and mental status examinations were all within the normal range.

**MOTOR TESTING:** Ms. Hertz exhibits right hemisphere bias. She does extremely well with stimulation of the left side of the body, such as grip strength and tactile performance. On the other hand, she does extremely poorly with all things associated with the right side of her body.

**MAJOR DEPRESSION EPISODE:** Ms. Hertz has experienced weeks during which she is either depressed or has lost interest in nearly all activities. As further evidence that she is experiencing a major depressive episode, she has sleep disturbance and difficulty concentrating. She denies any changes in appetite, weight loss or weight gain, or recurrent suicidal ideations.

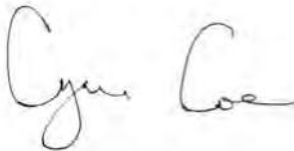
**IMPRESSION:** As a result of the November 18, YR-2 automobile accident, Margaret A. Hertz suffered a serious head injury with resulting cognitive deficits in memory and problem solving abilities. She complains of posttraumatic headache that dates back to the time of the accident.

Ms. Hertz sustained a significant head injury with persistent post-accident personality changes by history. Her increased irritability, lower frustration tolerance, problem solving and concentration difficulties are all symptoms consistent with a closed head injury/post-concussion syndrome. Her sleep disturbance is likewise causally related to her traumatic injury.

From the history available to me, it is my opinion to a reasonable degree of medical probability, that all of the aforementioned problems are a result of her traumatic closed head injury and are causally related to the November 18, YR-2 motor vehicle accident. Ms. Hertz has suffered significant cognitive disabilities in memory and problem solving, which are incompatible with her usual occupation as a computer programmer. Further treatment is appropriate for the above problems and I would recommend a course of cognitive rehabilitation. Ms. Hertz' prognosis is guarded and she will most likely be left with some degree of permanent disability.

I thank you for referring this most pleasant woman, and I hope that I may continue to provide support in her overall treatment plan.

As always,

A handwritten signature in cursive script that reads "Cyrus Coe". The signature is written in dark ink on a white background.

Cyrus Coe, Ph.D.