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| <b>CNS Vital Signs Report</b>     | <b>Test Date: August 27, 2013 13:21:15</b> |
| Subject Reference/ID: JillMackay  | Administrator: Mark Squibb                 |
| Age: 55                           | Language: English (United States)          |
| Total Test Time: 26:03 (min:secs) | Online Version 1.0                         |

| Patient Profile       | Percentile Range     |                |            |               | > 74  | 25 - 74  | 9 - 24      | 2 - 8   | < 2      |
|-----------------------|----------------------|----------------|------------|---------------|-------|----------|-------------|---------|----------|
|                       | Standard Score Range |                |            |               | > 109 | 90 - 109 | 80 - 89     | 70 - 79 | < 70     |
| Domain Scores         | Subject Score        | Standard Score | Percentile | Valid Score** | Above | Average  | Low Average | Low     | Very Low |
| Psychomotor Speed     | 146                  | 86             | 18         | Yes           |       |          | X           |         |          |
| Reaction Time*        | 609                  | 110            | 75         | Yes           | X     |          |             |         |          |
| Complex Attention*    | 3                    | 112            | 79         | Yes           | X     |          |             |         |          |
| Cognitive Flexibility | 48                   | 106            | 66         | Yes           |       | X        |             |         |          |
| Processing Speed      | 47                   | 95             | 37         | Yes           |       | X        |             |         |          |
| Executive Function    | 48                   | 105            | 63         | Yes           |       | X        |             |         |          |
| Sustained Attention   | 31                   | 108            | 70         | Yes           |       | X        |             |         |          |
| Working Memory        | 11                   | 108            | 70         | Yes           |       | X        |             |         |          |
| Simple Attention      | 40                   | 107            | 68         | Yes           |       | X        |             |         |          |
| Motor Speed           | 96                   | 82             | 12         | Yes           |       |          | X           |         |          |

Domain Dashboard: Above average domain scores indicate a standard score (SS) greater than 109 or a Percentile Rank (PR) greater than 74, indicating a high functioning test subject. Average is a SS 90-109 or PR 25-74, indicating normal function. Low Average is a SS 80-89 or PR 9-24 indicating a slight deficit or impairment. Below Average is a SS 70-79 or PR 2-8, indicating a moderate level of deficit or impairment. Very Low is a SS less than 70 or a PR less than 2, indicating a deficit and impairment. Reaction times are in milliseconds. An \* denotes that "lower is better", otherwise higher scores are better. Subject Scores are raw scores calculations generated from data values of the individual subtests.

VI\*\* - Validity Indicator: Denotes a guideline for representing the possibility of an invalid test or domain score. "No" means a clinician should evaluate whether or not the test subject understood the test, put forth their best effort, or has a clinical condition requiring further evaluation.

| Finger Tapping Test (FTT)      | Score | Standard | Percentile |   |
|--------------------------------|-------|----------|------------|---|
| Right Taps Average             | 50    | 86       | 18         | The FTT is a test of motor speed and fine motor control ability. There are three rounds of tapping with each hand. The FTT test measures the speed and the number of finger-taps with each hand. Low scores indicate motor slowing. Speed of manual motor activity varies with handedness. Most people are faster with their preferred hand but not always.   |
| Left Taps Average              | 46    | 81       | 10         |   |
| Symbol Digit Coding (SDC)      | Score | Standard | Percentile |   |
| Correct Responses              | 50    | 99       | 47         | The SDC test measures speed of processing and draw upon several cognitive processes simultaneously, such as visual scanning, visual perception, visual memory, and motor functions. Errors may be due to impulsive responding, misperception, or confusion.   |
| Errors*                        | 3     | 76       | 5          |   |
| Stroop Test (ST)               | Score | Standard | Percentile |   |
| Simple Reaction Time*          | 340   | 95       | 37         | The ST measures simple and complex reaction time, inhibition / disinhibition, mental flexibility or directed attention. The ST helps assess how well a subject is able to adapt to rapidly changing and increasingly complex set of directions. Prolonged reaction times indicate cognitive slowing / impairment. Errors may be due to impulsive responding, misperception, or confusion.   |
| Complex Reaction Time Correct* | 594   | 103      | 58         |   |
| Stroop Reaction Time Correct*  | 624   | 113      | 81         |   |
| Stroop Commission Errors*      | 0     | 110      | 75         |   |
| Shifting Attention Test (SAT)  | Score | Standard | Percentile |   |
| Correct Responses              | 51    | 102      | 55         | The SAT measures executive function or how well a subject recognizes set shifting (mental flexibility) and abstraction (rules, categories) and manages multiple tasks simultaneously. Subjects have to adjust their responses to randomly changing rules. The best scores are high correct responses, few errors and a short reaction time. Normal subjects may be slow but accurate, or fast but not so accurate. Attention deficit may be apparent. |
| Errors*                        | 3     | 108      | 70         |   |
| Correct Reaction Time*         | 1035  | 109      | 73         |   |

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| <b>Continuous Performance Test (CPT)</b>     | <b>Score</b> | <b>Standard</b> | <b>Percentile</b> |  |
|--|--------------|-----------------|-------------------|--|
| Correct Responses                            | 40           | 103             | 58                | The CPT measures sustained attention or vigilance and choice reaction time. Most normal subjects obtain near-perfect scores on this test. A long response time may suggest cognitive slowing and/or impairment. More than 2 errors (total) may be clinically significant. More than 4 errors (total) indicate attentional dysfunction.   |
| Omission Errors*                             | 0            | 103             | 58                |  |
| Commission Errors*                           | 0            | 107             | 68                |  |
| Choice Reaction Time Correct*                | 462          | 90              | 25                |  |
| <b>Four Part Continuous Performance Test</b> | <b>Score</b> | <b>Standard</b> | <b>Percentile</b> |  |
| <b>Part 1</b>                                |              |                 |                   | The FPCPT test is a four part test that measures a subject's working memory and sustained attention. The FPCPT is a four part test: PART ONE - is a simple reaction time test, the subject must press the space bar when any stimulus is presented; PART TWO - is a variant of the continuous performance test, the subject is asked to respond to one stimulus, but not to any others. Discrimination is required, so the reaction times that are generated are "choice reaction times". PART THREE - is a "one back" CPT. The subject has to respond to a figure only if the figure immediately preceding was the same. PART FOUR - is a "two-back" CPT. It is a difficult task and is used to measure working memory. Parts two, three, and four of the tests are used to calculate sustained attention domain. |
| Average Correct Response Time*               | 333          | 104             | 61                |  |
| <b>Part 2</b>                                |              |                 |                   |  |
| Correct Responses                            | 6            | 103             | 58                |  |
| Average Correct Response Time*               | 419          | 93              | 32                |  |
| Incorrect Responses*                         | 1            | 99              | 47                |  |
| Average Incorrect Response Time*             | 476          | 71              | 3                 |  |
| Omission Errors*                             | 0            | 103             | 58                |  |
| <b>Part 3</b>                                |              |                 |                   |  |
| Correct Responses                            | 15           | 108             | 70                |  |
| Average Correct Response Time*               | 556          | 98              | 45                |  |
| Incorrect Responses*                         | 0            | 104             | 61                |  |
| Average Incorrect Response Time*             | 0            |                 |                   |  |
| Omission Errors*                             | 1            | 108             | 70                |  |
| <b>Part 4</b>                                |              |                 |                   |  |
| Correct Responses                            | 14           | 116             | 86                |  |
| Average Correct Response Time*               | 825          | 87              | 19                |  |
| Incorrect Responses*                         | 3            | 90              | 25                |  |
| Average Incorrect Response Time*             | 884          | 91              | 27                |  |
| Omission Errors*                             | 2            | 116             | 86                |  |