

Memory Screen Report

Monday, January 20, 2025 1:48 PM

Subject: Anonymous Subject294361
Informant: Anonymous User
Relationship: The Subject is the informant.

History

This is a 53 year old male with 18 years of education who was screened for the very earliest symptoms related to dementia due to Alzheimer's disease or other causes. This screening test has 94% sensitivity for detecting very mild dementia and 80% specificity for detecting normal aging. ^{2, 3, 4}

At present, the informant does not believe the subject has a memory problem.

Test Result

Cognitive and Functional Impairment: Subjective evidence of cognitive impairment requiring some human assistance.

Cognitive Impairment means impairment of language, judgment, memory or other mental skills.

Test Accuracy

This test is 94% accurate in detecting the earliest stage of memory loss or dementia due to Alzheimer's disease and related disorders (ADRD). It is 80% accurate in detecting normal aging^{2,3,4}.

Quality of Information Provided for Dementia Screening

All relevant areas of mental ability could be assessed, which gives a high level of confidence in the results, provided the rest of the subject information is reasonably accurate.

List of Symptoms

The following information summarizes responses to the questions about mental abilites and memory that the patient may be experiencing:

Symptom	Severity	Change from 10 years ago
Remembering appointments, family occasions, holidays or remembering to take medications/supplements	Requires only occasional assistance from others	A Little Worse
Remembering appointments	Has some difficulty, but can handle on their own, without help from others	A Little Worse

Remembering family events	Requires only occasional assistance from others	A Little Worse
Remembering holidays	Requires frequent assistance from others	A Little Worse
Remembering to take medications or supplements	Has some difficulty, but can handle on their own, without help from others	A Little Worse
Recalling conversations a few days later	Has some difficulty, but can handle on their own, without help from others	A Little Worse
Remembering important events in history that they used to know	Has some difficulty, but can handle on their own, without help from others	A Little Worse
Everyday arithmetic estimations such as knowing how much food to buy or how long ago family or friends last visited	Has some difficulty, but can handle on their own, without help from others	About The Same
Remembering events that have happened recently	Requires only occasional assistance from others	A Little Worse
Reasoning things through	Has some difficulty, but can handle on their own, without help from others	A Little Worse
Handling the finances they usually take care of	Has some difficulty, but can handle on their own, without help from others	A Little Worse

Summary

Compared to 10 years ago, the subject's cognitive abilities have gotten a lot worse in at least one area, and require some assistance from others. This pattern of performance is frequently seen in the early and most potentially treatable stages of Alzheimer's disease and related disorders(ADRD). Because some individuals overestimate the severity of their impairments, this Subjective Screening Test result should be objectively confirmed and further evaluated if indicated.

What Could Cause a Positive Screening Test Result?

As indicated above, the positive screening test result does not mean that there is definitely a problem. There are many causes of a positive screening test result that need to be considered. Some of the more common ones include:

- Overestimating the degree of difficulty with memory and other abilities
- Visual or hearing problems
- Depression (see DEPRESSION STATUS further down)
- Sleep apnea and other chronic conditions causing insomnia or poor sleep quality(see DEPRESSION STATUS further down)
- Newly developed diseases
- Poorly controlled diseases
- Head injury, usually involving a period of unconsciousness
- Complications of surgery involving general anesthesia
- Certain medications, especially alcohol, sleeping pills, tranquilizers, antipsychotics, older antidepressants, anticonvulsants, bladder incontinence drugs, painkillers, and cancer drugs
- Diseases of the immune system such as chronic fatigue immunodeficiency syndrome, lupus, HIV, etc.

- Stroke that may or may not have been felt or noticed
- Heart disease affecting blood flow to the brain
- Diseases that directly damage nerve cells, especially parkinson's, multiple sclerosis, epilepsy, Alzheimer's disease, Lewy body disease, Pick's disease, etc.
- And many others

Recommendation

We suggest that the subject confirm the findings of the subjective test with an objective test to improve screening accuracy. An objective test also helps track age- or disease-related memory changes, plus helps measure effects of any treatments used. Early detection, evaluation and treatment of memory loss due to Alzheimer's disease or a related disorder (ADRD) is key to the best possible outcome.

By taking this screening test, the subject has taken a positive step in keeping them and their loved ones healthy. Now, take the next step to decide if further evaluation is needed, or if preventive, disease-delaying options should be considered.

How To Confirm Whether or Not Memory Loss, Cognitive Impairment or Dementia Exists

There are several ways to objectively assess mental skills and functional abilities.

[1] The primary doctor may be able to test the subject. However, the tests used usually do not detect memory loss due to ADRD early. For example, the Mini-Mental Status Exam, which is the most widely used one, only detects about 30% of persons in early stage ADRD.

[2] A professional neuropsychologist can administer a 1-to-2 hour battery of tests to the subject. Referrals can be obtained either through a physician or through the local chapter of the Alzheimer's Association.

[3] A dementia specialist can be consulted either by getting a referral from a doctor or by contacting the local chapter of the Alzheimer's Association, (call 1-800-272-3900 for the local chapter, or go to <http://www.alz.org/findchapter.asp>). The Alzheimer's Association offers a wide variety of services to families and their loved ones affected by ADRD.

[4] A quick, accurate and convenient alternative to these standard options is to test the subject with the **MCI Screen**. The MCI Screen was developed from research originally conducted at one of the National Institute of Aging Alzheimer's research centers, and was derived from their neuropsychologic test battery, which has been the gold standard for ADRD assessment for over 15 years.

The MCI Screen²⁵:

- Is 97.3% accurate in distinguishing mild cognitive impairment from normal aging.
- Takes 10-15 minutes.
- Provides immediate results for the subject and their doctor.
- Indicates which tests are needed to be 90% accurate in getting a correct diagnosis using NINDS-ADRDA criteria¹.
- Requires minimal training to be able to accurately test the subject.
- Can be given either in person or over the telephone.

Importance of Early Detection

Detecting dementia early is very important because in many cases, it can be diagnosed and treated by a physician to stop or delay the decline in mental function for years. Detecting dementia early can keep individuals at a higher level of function so they can continue to do the things they enjoy. Also, better treatments for Alzheimer's disease will be available within a few years. Early detection and

treatment can keep an individual more healthy until these better treatments become available.

Background on the Screening Test

This screening test was developed from the recommendations of the Dept. of Health and Human Services and the Agency For Health Care Policy Research (AHCPR)¹. By applying methods similar to those used by NASA to explore the universe, Medical Care Corporation has greatly increased the accuracy of nationally recommended screening tests for detecting dementia in its very mildest stage². Without these methods, the standard ways of interpreting these tests are less than 30% accurate³. With these methods, this screening test is 94% accurate in detecting the earliest stage of memory loss (known as mild cognitive impairment), and 80% accurate in correctly detecting normally aging memory^{2,3,4}. This test is not affected by an individual's education, culture or ethnic background.

Assessing Depression

If the subject is experiencing symptoms of sadness, loss of motivation, or changes in weight, sleep or energy, then consider taking the Depression Screening Test, which is a part of the subject's Memory Tracking System. It is a brief, yet accurate questionnaire that assesses for depression using the American Psychiatric Association guidelines. It can be taken indirectly by someone who knows the subject well, or directly by the subject if they seem to be reasonably aware of their symptoms. Upon completion, it provides comprehensive reports for the subject and their physician about what to do if depression is detected. If the subject is being treated for depression, it assesses the treatment's effect and offers suggestions for adjusting treatment if indicated. The lifetime risk of depression has risen from 20%, in persons born before 1910, to 60% in persons born after 1949. If the subject has a parent, child or sibling who developed depression for the first time after 40 years old, then the subject is 2 to 3 times more likely to develop depression. However, if their family member developed depression for the first time before 40 years old, then the subject is 4 to 6 times more likely to develop depression.

REFERENCES:

1. Early identification of Alzheimer's disease and related dementias. Agency for Health Care Policy and Research. Clin Pract Guidel Quick Ref Guide. 1996;19:1-28.
2. Shankle, W.R., Datta, P., and Pazzani, M. Machine Learning Methods and Dementia Diagnosis. *Alzheimer's Research*, 2:95-99 (1996).
3. Shankle, W.R., Mani, S., Pazzani, M. J. and Smyth, P. (1997). Use of a Computerized Subject Record Database of Normal Aging and Very Mildly Demented Patients to Compare Classification Accuracies Obtained with Machine Learning Methods and Logistic Regression. *Computing Science and Statistics*, 29: 201-209.
4. W.R. Shankle, Subramani Mani, Michael J. Pazzani, and Padhraic Smyth. "Dementia Screening with Machine Learning methods." In *Intelligent Data Analysis in Medicine and Pharmacology*, Eds. Elpida Keravnou, Nada Lavrac and Blaz Zupan, Kluwer Academic Publishers. (1997)
5. DesRosiers G, Hodges JR, Berrios G. The neuropsychological differentiation of patients with very mild Alzheimer's disease and/or major depression. *J Am Geriatr Soc*. 1995;43:1256-63.
6. Chapman LL, White DA, Storandt M. Prose recall in dementia. A comparison of delay intervals. *Arch Neurol*. 1997;54:1501-4.
7. Larumbe R. Detection of early cases of Alzheimer's disease. Application of the CERAD neuropsychological test battery. *Rev Med Univ Navarra*. 1997;41:6-11.
8. Schmand B, Walstra G, Lindeboom J, Teunisse S, Jonker C. Early detection of Alzheimer's disease using the Cambridge Cognitive Examination. *Psychol Med*. 2000;30:619-27.
9. Bayley PJ, Salmon DP, Bondi MW, Bui BK, Olichney J, Delis DC, Thomas RG, Thal LJ. Comparison of the serial position effect in very mild Alzheimer's disease, mild Alzheimer's disease, and amnesia associated with electroconvulsive therapy. *J Int Neuropsychol Soc* 2000;6:290-8.
10. Wang PN, Wang SJ, Fuh JL, Teng EL, Liu CY, Lin CH, Shyu HY, Lu SR, Chen CC, Liu HC. Subjective memory complaint in relation to cognitive performance and depression: a longitudinal study of a rural Chinese population. *J Am Geriatr Soc* 2000;48:295-9.
11. McCleary, R., Mulnard, R.A., and Shankle, W.R. Reproductive Health Risks in Dementia: Evidence From the 1986 National Mortality Followback Survey. *Alzheimer's Research* (1996).
12. Yaffe et al., *Arch Neurol*, 2002;59:378-384.

13. Morris MC, Evans DA, Bienias JL, Tangney CC, Wilson RS. Vitamin E and cognitive decline in older persons. *Arch Neurol.* 2002;59:1125-32.
14. Zandi PP, Anthony JC, Khachaturian AS, Stone SV, Gustafson D, Tschanz JT, Norton MC, Welsh-Bohmer KA, Breitner JC; Cache County Study Group. Reduced risk of Alzheimer disease in users of antioxidant vitamin supplements: the Cache County Study. *Arch Neurol.* 2004;61(1):82-8.
15. Engelhart MJ, Geerlings MI, Ruitenberg A, van Swieten JC, Hofman A, Witteman JC, Breteler MM. Dietary intake of antioxidants and risk of Alzheimer disease. *JAMA.* 2002;287:3261-3.
16. Breitner JC, Gau BA, Welsh KA, et al. Inverse association of anti-inflammatory treatments and Alzheimer's disease: initial results of a co-twin control study. *Neurology.* 1994;44:227-232.
17. Andersen K, Launer LJ, Ott A, Hoes AW, Breteler MMB, Hofman A. do nonsteroidal anti-inflammatory drugs decrease the risk of Alzheimer's disease? *Neurology.* 1995;45:1441-1445.
18. Stewart WF, Kawas C, Corrada M, Metter EJ. Risk of Alzheimer's disease and duration of NSAID use. *Neurology.* 1997;48:626-632.
19. McGeer PL, McGeer E, Rogers J, Sibley J. Anti-inflammatory drugs and Alzheimer's disease. *Lancet.* 1990;335:1037.
20. Broe GA, Grayson DA, Creasey HM, Waite LM, Casey BJ, Bennett HP, Brooks WS, Halliday GM. Anti-inflammatory drugs protect against Alzheimer disease at low doses.
21. Rozzini R, Ferrucci L, Losonczy K et al. Protective effect of chronic NSAID use on cognitive decline in older persons. *J Am Geriatr Soc.* 1996;44:1025-1029.
22. Fassbender K, Simons M, Bergmann C, Stroick M, Lutjohann D, Keller P, Runz H, Kuhl S, Bertsch T, von Bergmann K, Hennerici M, Beyreuther K, Hartmann T. Simvastatin strongly reduces levels of Alzheimer's disease beta -amyloid peptides Abeta 42 and Abeta 40 in vitro and in vivo. 10: *Proc Natl Acad Sci U S A* 2001 May 8;98(10):5856-61.
23. Rockwood et al., *Arch Neurol.*, 2002. 59:223-7.
24. Buxbaum JD, Cullen EI, Friedhoff LT. Pharmacological concentrations of the HMG-CoA reductase inhibitor lovastatin decrease the formation of the Alzheimer beta-amyloid peptide in vitro and in patients *Front Biosci* 2002;7:a50-9.
25. Shankle WR, Hara J, Chan T, Chen JM, Germain R, Ortiz M. Computer-Assisted CERAD Battery For Early Stage Detection of Dementia. Conference Proceeding: 2003 APA Annual Meeting, San Francisco, CA, May 17-22, 2003.