Alzheimer’s Disease Assessment Scale – Cognitive (ADAS – Cog) List - 1

Compound: MK-8931
Protocol: 019

Visit 1
Visit 9
INTRODUCTION:

Description

The subtests of the ADAS-Cog should be given in the order indicated. Following the objective testing, subjective clinical ratings of language ability and the ability to remember subtest instructions are recorded by the tester. These ratings are based on information gathered during the interview.

The ADAS-Cog is not a timed test. Subtests should be administered so that the session moves smoothly and quickly, though the subject should not feel pressured to respond rapidly.

The overarching principle is to elicit the best possible performance from the subject, while closely following the administration and scoring guidelines outlined here and in tester training.

Feedback to the subject should be neutral and, usually, should not indicate whether or not the response was correct. Comments such as “That’s fine” or “You’re doing well” are appropriate as long as the subject is trying.

GENERAL GUIDELINES:

For each of the subtests of the ADAS–Cog, the set-up will be as follows:

- The first page (left facing page) will contain general administration guidelines.
- The Case Report Form (right facing page) will contain the instructions to the subject (in bold).
- Record subjects’ responses verbatim on the Case Report Form, where instructed to do so.
- For each subtest place a tick mark in the appropriate boxes to indicate the subject’s response. If any subtest is not completed, the subtest cannot be scored. Indicate this by entering a “-1” in both the # Correct and the # Incorrect Total Boxes (or in the # Recalled and # Not Recalled depending on the subtest). This will result in missing data, however, so testers must make every effort to encourage subjects to continue and do the best that they can.
- Testers need to be familiar with all instructions and scoring conventions as outlined here and in tester training before administering any subtests to the subject.
Initial Conversation:

General Guidelines

At the start of the test session, before formal testing begins, engage the subject in a short, open-ended conversation about neutral topics (e.g., the weather, what the subject likes to do for exercise or entertainment, how the subject’s appetite has been lately).

This conversation has multiple purposes:
• It helps to put the subject at ease before testing begins and builds rapport.
• It gives the tester an opportunity to make an initial assessment of the subject’s expressive and receptive speech (i.e., how well the subject can use and understand language). This conversation, as well as the subject’s speech throughout the ADAS-Cog testing, will be used to conduct the three clinical ratings of the subject's language ability.

Initial Conversation Notes on Page 3 must support the scoring of these clinical ratings.
## ADAS-COG Initial Conversation Notes

Was evaluation performed on visit date? □ or specify date: ___________________

Possible topics include appetite, sleep, exercise or other areas.

1) Spoken Language

2) Word Finding

3) Comprehension

Testing Comments:
Word Recall:

General Guidelines

MATERIALS:
Use the appropriate Word Recall list for this visit as indicated on the study worksheet (facing page).

ADMINISTRATION:
On this subtest, the subject is given three trials to learn a list of 10 high-frequency, high-imagery nouns. The 10 words are printed in block letters on white cards and are presented one at a time. If the subject cannot read a word or is slow, the tester can say the word out loud and have the subject repeat it. In some cases (e.g., anopsia), the tester may have to say all of the words and have the subject repeat them. Regardless, make sure the subject looks at each word while repeating it.

Note: The presentation of each word is not timed.

Note: Encouragement can be given if the subject is nervous or appears to be giving up.

Record the subject’s responses on the study worksheet.

SCORING:
For each trial, indicate the number of words recalled and not recalled. If a trial is completed as intended, then the total number recalled plus the total number not recalled must equal 10. Enter a “-1” in both the # recalled (correct) and the # not recalled (incorrect) boxes if the trial is not completed by the subject.
**ALZHEIMER’S DISEASE ASSESSMENT SCALE – COGNITIVE**

Specify completion date: __________________________ DD-Mon-YYYY

### 1. WORD RECALL (List-1)

**Trial 1:**
At the start of the first trial, the tester gives instruction similar to the following:

“I am going to show you some words printed on these white cards one at a time. Please read each word out loud and try to remember it, because later, I will ask you to try to remember all of the words I have shown you. Ready, read the word and try to remember it.”

As necessary, the tester can prompt with:

“Read it out loud and try to remember it.”

After the presentation, the tester asks the subject to try to recall as many of the words as possible by saying:

“Good, now tell me all of the words you remember that were on the list.”

Once the subject appears to have recalled as many words as possible, the tester can prompt with:

“Any others?”

**Trials 2 and 3:**
Say to the subject:

“Now, I am going to show you that same list again. Read each word out loud and try to remember it.”

After presentation of the list is completed say:

“Good, now tell me all of the words you remember that were on the list.”

<table>
<thead>
<tr>
<th>TRIAL 1</th>
<th>TRIAL 2</th>
<th>TRIAL 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter</td>
<td>Pole</td>
<td>Shore</td>
</tr>
<tr>
<td>Arm</td>
<td>Letter</td>
<td>Letter</td>
</tr>
<tr>
<td>Shore</td>
<td>Butter</td>
<td>Arm</td>
</tr>
<tr>
<td>Letter</td>
<td>Queen</td>
<td>Cabin</td>
</tr>
<tr>
<td>Queen</td>
<td>Arm</td>
<td>Pole</td>
</tr>
<tr>
<td>Cabin</td>
<td>Shore</td>
<td>Ticket</td>
</tr>
<tr>
<td>Pole</td>
<td>Grass</td>
<td>Engine</td>
</tr>
<tr>
<td>Ticket</td>
<td>Cabin</td>
<td>Grass</td>
</tr>
<tr>
<td>Grass</td>
<td>Ticket</td>
<td>Butter</td>
</tr>
<tr>
<td>Engine</td>
<td>Engine</td>
<td>Queen</td>
</tr>
</tbody>
</table>

# RECALLED (Correct)

# NOT RECALLED (Incorrect)

**Reminder** count all unchecked boxes.

**Reminder** count all unchecked boxes.

**Reminder** count all unchecked boxes.

Time Ended: __________________________ (24-hour clock)

---

**I confirm this information is accurate.**

Staff Initials: __________________________

Date: __________________________
Commands:

General Guidelines

MATERIALS:
A pencil, a watch and a card from the ADAS-Cog kit

ADMINISTRATION:
This subtest is designed to assess receptive speech. The subject is asked to carry out five separate commands with one to five steps per command.

All commands should be given to every subject. Speak in a clear voice with adequate volume. Each command should be read once. If the subject makes an error and recognizes that an error was made, the examiner says the entire command one more time. The subject may recognize that an error was made by requesting another attempt, stating that their first attempt was not correct, or indicating that they are not satisfied with their first attempt. If the subject does not recognize that they made an error, the examiner does not repeat the command.

If the subject has hearing or attentional difficulties, orient them prior to each command by saying: “Ready?” or “Now, I want you to…” prior to giving the command again.

Commands 3 and 4 require the use of stimulus materials (a pencil, a watch, and a card) that are placed on the table directly in front of the subject, in the specific order indicated on the facing page. There should be no other items (pens, paper, etc.) near these subtest materials during the commands, and the subtest materials should be removed before giving the last command ("Tap each shoulder...").

SCORING:
Each command is scored as a whole (i.e., no partial credit is given). All components must be correct for the response to be scored as correct. Check each command performed correctly on the right facing page.

For this subtest, indicate the total number correct and the total number incorrect. If the subtest is completed as intended, then the total number correct plus the total number incorrect must equal 5. Enter a “-1” in both the # correct and the # incorrect boxes if the subtest is not completed by the subject.
### ALZHEIMER’S DISEASE ASSESSMENT SCALE – COGNITIVE (CONTINUED)

2. **COMMANDS**

   "Now I am going to ask you to do a few things. First,..."

   **“Make a fist.”**
   - Correct [ ]
   - Incorrect [ ]

   **“Point to the ceiling, then to the floor.”**
   - Correct [ ]
   - Incorrect [ ]

   *From the patient’s left to right, line up a pencil, watch, and card on the table. Say:*

   **“Put the pencil on top of the card, then put it back.”**
   - Correct [ ]
   - Incorrect [ ]

   **“Put the watch on the other side of the pencil, then turn over the card.”**
   - Correct [ ]
   - Incorrect [ ]

   *Remove the pencil, watch, and card from the table. Say:*

   **“Tap each shoulder twice with two fingers, keeping your eyes shut.”**
   - Correct [ ]
   - Incorrect [ ]

   **TOTAL # CORRECT:**

   **TOTAL # INCORRECT:**

---

I confirm this information is accurate.  
Staff Initials:  
Date:
Constructional Praxis:
General Guidelines

MATERIALS:
Worksheets containing the four geometric shapes and a pencil with an eraser.

ADMINISTRATION:
The tester should give the subject a pencil with an eraser and present each figure one at a time. The figures should be presented in the following order: Circle, Overlapping Rectangles, Diamond, Cube.

The subject is allowed to spontaneously erase and correct (without prompting from the tester). After the subject completes a drawing, a second attempt is allowed if the subject asks or indicates a problem with his/her drawing. The subject is allowed up to two attempts for each figure. If the subject indicates that the reproduction is poor after the first attempt, query if they would like another try. When two attempts are made, ask the subject to indicate which one is best, and then score that attempt. The chosen figure needs to be clearly identified on the page. If the subject cannot reproduce the figure in two attempts, the tester should go on to the next item.

If the subject draws on top of the printed figure, count this as one attempt and indicate that they should try again on an empty part of the page.

Note: When providing instructions, do not provide the name of the actual figure.

SCORING:
A drawing should be scored as correct if the subject has reproduced all of the essential geometric features of the original. Changes in size do not count as errors. Small gaps between lines do not indicate an error, as long as the figure has been correctly reproduced.

CIRCLE: A closed curved figure.

OVERLAPPING RECTANGLES:
The two figures must be four-sided and overlap in a similar manner to the presented stimulus.

DIAMOND:
The figure must be four-sided, oriented so that the points are at the top and bottom, and the sides are of approximately equal length (i.e., longest side is not >1.5 times the length of the shortest side).

CUBE:
The figure is 3-dimensional, with the front face in the correct orientation, and internal lines drawn correctly between corners. Opposite faces of the cube should be approximately parallel.

Examples of correct and incorrect drawings are shown on the next page.

For each figure, check “CORRECT,” “INCORRECT,” or “NO RECOGNIZABLE ATTEMPT.” A “RECOGNIZABLE ATTEMPT” means that the subject drew at least one line or section that reasonably represents a side or portion of the shape.
**EXAMPLES OF CORRECT AND INCORRECT DRAWINGS:**

### CIRCLES

<table>
<thead>
<tr>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Correct Circle" /></td>
<td><img src="image2" alt="Incorrect Circle" /></td>
</tr>
</tbody>
</table>

### OVERLAPPING RECTANGLES

<table>
<thead>
<tr>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Correct Overlapping Rectangles" /></td>
<td><img src="image4" alt="Incorrect Overlapping Rectangles" /></td>
</tr>
</tbody>
</table>

### DIAMOND

<table>
<thead>
<tr>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="Correct Diamond" /></td>
<td><img src="image6" alt="Incorrect Diamond" /></td>
</tr>
</tbody>
</table>

### CUBE

<table>
<thead>
<tr>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image7" alt="Correct Cube" /></td>
<td><img src="image8" alt="Incorrect Cube" /></td>
</tr>
</tbody>
</table>

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Printed in USA
Training
Training
3. Constructional Praxis

To begin testing, say: “On this piece of paper is a shape. Try to draw another one that looks just like this, somewhere on the page.”

Note: The Constructional Praxis Total Score will be calculated, so there is no need to note it on the worksheet.

Circle:
A closed curved figure.
- Correct
- Incorrect (at least one side/section of shape drawn).
- No recognizable attempt at drawing any side/section of shape.

Two overlapping rectangles:
Each shape must be four-sided and overlap must be similar to presented diagram.
- Correct
- Incorrect (at least one side/section of shape drawn).
- No recognizable attempt at drawing any side/section of shape.

Rhombus (Diamond):
Shape must be four-sided, oriented so that the points are at the top and bottom, and the sides approximately equal in length (i.e., longest side is not > 1.5 times the length of the shortest side).
- Correct
- Incorrect (at least one side/section of shape drawn).
- No recognizable attempt at drawing any side/section of shape.

Cube:
The shape is 3-dimensional, with front face in the correct orientation, and internal lines drawn correctly between corners. Opposite sides of faces should be approximately parallel.
- Correct
- Incorrect (at least one side/section of shape drawn)
- No recognizable attempt at drawing any side/section of shape.
Delayed Word Recall:

General Guidelines

MATERIALS:
None

ADMINISTRATION:
Delayed free recall of the word list should be attempted approximately 5 minutes after trial 3 of the Word Recall Task. The interval should be filled by the ADAS Commands and Constructional Praxis items. If these tasks are completed in less than 5 minutes, the delay interval should be filled with the continuation of the interview to assess language, concentration, etc. before beginning delayed word recall.

Discontinue when there is no further response or if the subject indicates that he/she cannot recall any more words after prompting.

SCORING:
Indicate the number of words recalled and not recalled. The total number recalled plus the total number not recalled must equal 10. Enter a “-1” in both the # recalled (correct) and the # not recalled (incorrect) boxes if the trial is not completed by the subject.
4. DELAYED WORD RECALL

"A few minutes ago I had you read some words printed on these cards (point to word list). Tell me all of the words you can remember that were on the cards."

Prompt with: "Any others?" as necessary.

<table>
<thead>
<tr>
<th>Prompt</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shore</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Letter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Queen</td>
<td></td>
<td></td>
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<tr>
<td>Cabin</td>
<td></td>
<td></td>
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<tr>
<td>Pole</td>
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<td></td>
</tr>
<tr>
<td>Ticket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engine</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL # CORRECT

TOTAL # INCORRECT
Naming Objects and Fingers:

General Guidelines

MATERIALS: 12 objects provided in the ADAS-Cog kit

ADMINISTRATION:

In this subtest, the subject is asked to name 12 randomly presented real objects and is then asked to name the fingers on his/her dominant hand (i.e., thumb, index finger [pointer/forefinger], middle finger, ring finger, and pinky/little finger). The objects should be presented in random order. Show the objects to the subject but do not allow the subject to touch or handle the objects.

On the facing page, record the response given by the patient in the space provided next to the corresponding object or finger’s name.

SCORING:

Check each object and finger named correctly. The hardest part of scoring the naming subtest is determination of the range of correct responses based on the subject's cultural and geographical background. A response other than the name given on the response form should be scored as correct if it is a name that would be used by a cognitively healthy person with the same cultural background as the subject. For example, in some parts of the world, the Mask might be called a “false face,” the Wallet might be called a “billfold,” or the Harmonica might be called a “mouth organ.” Descriptions of the object, and semantic or phonemic paraphasic errors should not be scored as correct.

EXAMPLES OF INCORRECT RESPONSES: “listening thing” for Stethoscope, “cutter” for Scissors, or “prongs” for Tongs.

For this subtest, indicate the total number correct and the total number incorrect. If the subtest is completed as intended, then the total number correct plus the total number incorrect must equal 17. Enter a “-1” in both the # correct and the # incorrect boxes if the subtest is not completed by the subject.
### ALZHEIMER’S DISEASE ASSESSMENT SCALE – COGNITIVE (CONTINUED)

#### 5. NAMING OBJECTS AND FINGERS

**Objects:**

- Give the subject instructions similar to the following:
  
  "Now I am going to show you some objects. I want you to tell me what their names are. What is this called?"  (present object)

- Continue to present objects in random order. The first question about each object should be:
  
  "What is this called?" or "What is the name of this thing?"

- If the subject responds with the object's function say:
  
  "Yes, that's what it does, but what is its name?"

- If the subject does not respond, or makes an error, the tester must give the corresponding clue for that item. If the subject still does not respond or makes an error, go to the next object.

**Fingers:**

- Give the subject instructions similar to the following:
  
  "Now I am going to point to a part of your hand and I want you to tell me what it's called. What is this?"

- For the 4 fingers, if a query is necessary, say:
  
  "What is another name for this finger?"

#### OBJECTS

<table>
<thead>
<tr>
<th>Object</th>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flower (Clue: grows in a garden)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bed (Clue: used for sleeping in)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whistle (Clue: makes a sound when you blow on it)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pencil (Clue: used for writing)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rattle (Clue: a baby's toy)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mask (Clue: hides your face)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scissors (Clue: cuts paper)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comb (Clue: used on hair)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wallet (Clue: holds your money)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harmonica (Clue: a musical instrument)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stethoscope (Clue: doctor uses it to listen to your heart)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tongs (Clue: picks up food)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### FINGERS

<table>
<thead>
<tr>
<th>Finger</th>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thumb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index/forefinger/pointer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pinky/little</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL # CORRECT:**

**TOTAL # INCORRECT:**
Ideational Praxis:
General Guidelines

MATERIALS:
A standard envelope, a standard unlined sheet of paper, and a pencil with eraser

ADMINISTRATION:
Place the envelope, the sheet of paper, and the pencil in front of the subject.
If the subject forgets part of the subtest, or is having difficulty, the tester must repeat the instruction for the component of the subtest on which the subject is having difficulty. For example, if the subject stops after folding the paper and putting it into the envelope, the tester should give one reminder on the next component: “Now seal the envelope.” If the subject cannot do this part, move on and give one reminder for the next component: “Now address the letter to yourself.” Only one additional reminder may be given for each component of the subtest. If the subject performs a step incorrectly after prompting, the tester must not correct the error or assist in any way.
Have the subject place an “X” on the envelope to indicate where the stamp goes. If the subject merely points to where the stamp goes, the tester should write the “X” on the envelope.

SCORING:
Check each component of the subtest correctly completed on the right facing page and indicate the total number correct and the total number incorrect. Any address which would enable a postal worker to deliver the envelope is considered correct.
If the subtest is completed as intended, then the total number correct plus the total number incorrect must equal 5. Enter a “-1” in both the # correct and the # incorrect boxes if the subtest is not completed by the subject.
6. IDEATIONAL PRAXIS

“I want you to pretend you have written yourself a letter. Take this piece of paper, fold it so that it will fit into the envelope, and then put it into the envelope. Then, seal the envelope, address the envelope to yourself, and show me where the stamp goes.”

<table>
<thead>
<tr>
<th>Task</th>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fold a letter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Put letter in envelope</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seal envelope</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address envelope</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Place stamp on the envelope</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL # CORRECT:  
TOTAL # INCORRECT:
Orientation:

General Guidelines

MATERIALS:
None.

ADMINISTRATION:

Ask the subject each question on the next page one at a time. One restatement of each question is allowed (e.g., if subject confuses day and date). Make sure no watches, clocks, calendars, etc. are visible to the subject.

For the question pertaining to location, do not provide a clue about the location with questions such as: “What’s the name of this hospital?”

On the facing page, record the response given by the patient in the space provided next to the corresponding question.

SCORING:

Check each item answered correctly on the right facing page. Guidelines regarding the range of appropriate correct responses and information about the seasons are provided below.

<table>
<thead>
<tr>
<th>Full Name:</th>
<th>Must be exact (only first and last names are needed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month:</td>
<td>Must be exact</td>
</tr>
<tr>
<td>Date:</td>
<td>± 1 day</td>
</tr>
<tr>
<td>Year:</td>
<td>Must be exact</td>
</tr>
<tr>
<td>Day of week:</td>
<td>Must be exact</td>
</tr>
<tr>
<td>Season:</td>
<td>Within one week prior to onset or within two weeks of termination</td>
</tr>
<tr>
<td>Time:</td>
<td>± 1 hour</td>
</tr>
<tr>
<td>Place:</td>
<td>Partial name acceptable (e.g., name of hospital, clinic or professional building), but generic terms are not acceptable (e.g., “hospital,” or “doctor’s office”).</td>
</tr>
</tbody>
</table>

Indicate the total number correct and the total number incorrect. If the subtest is completed as intended, then the total number correct plus the total number incorrect must equal 8. Enter a “-1” in both the # correct and the # incorrect boxes if the subtest is not completed by the subject.
## ALZHEIMER’S DISEASE ASSESSMENT SCALE – COGNITIVE (CONTINUED)

### 7. Orientation

The tester asks the following questions, word for word, in this order:

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>QUESTION</th>
<th>CORRECT</th>
<th>INCORRECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Person</td>
<td>“Can you tell me your full name?”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Day of the Week</td>
<td>“Can you tell me what day of the week it is?”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Date</td>
<td>“What is today’s date?”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Month</td>
<td>“What month are we in?”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Year</td>
<td>“What year are we in?”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Season</td>
<td>“What season of the year is it?”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Time of Day</td>
<td>“Without looking at your watch, can you tell me what time it is?”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Place</td>
<td>“What is the name of the place where we are now?”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total # Correct:**

**Total # Incorrect:**

---

I confirm this information is accurate.  
Staff Initials:  
Date:
Word Recognition:

General Guidelines

MATERIALS:

Use the appropriate Word Recognition list for each visit as indicated on the study worksheet (next page).

ADMINISTRATION:

This subtest is presented sequentially in two parts, with the Learning Trial coming first and the Recognition Trial coming second. In the Learning Trial, the subject is given one trial to learn a list of 12 words. In the Recognition Trial, the 12 words presented in the Learning Trial are mixed with 12 new words and the subject is asked to decide, for each word, whether or not it was one of the 12 original words.

In case of errors in reading, or no response on the Learning Trial, the tester reads the word for the subject and has them repeat it afterwards. The subject should look at each word card while repeating it.

On the Recognition Trial, the subject must be given the full reminder for the first two words that are presented.

Note: The presentation of each word is not timed.

After the first two words, if the subject does not remember the subtest instructions (e.g., reads the word rather than responding yes or no), the tester should repeat or rephrase the entire question and check “Reminder” indicating that the subject had to be reminded of the subtest instructions.

Likewise, if the subject appears to have fallen into a response set (i.e., saying “Yes” to every word or saying “No” to every word), the subtest instructions should be repeated. Place a checkmark in the “Reminder” column at each point when a reminder is given.

SCORING:

The tester should check the “yes” or “no” response made by the subject for each of the target and distractor items.

The number correct is equal to the number of checked, unshaded boxes in the ‘Yes’ column plus the number of checked, unshaded boxes in the ‘No’ column. The number incorrect is equal to the number of checked, shaded boxes in the ‘Yes’ column plus the number of checked, shaded boxes in the ‘No’ column.

The maximum number correct is 24 and the maximum number incorrect is also 24. If this subtest is completed as intended, then the total number correct plus the total number incorrect must equal 24.

Add the total number of checkmarks in the ‘Reminder Given’ column and record this number in the ‘Reminders’ box. The first two reminders are mandatory and should not be counted towards the total. If the Word Recognition subtest was not completed or not attempted, then this item must not be scored. Instead, enter a “-1” in both the # correct and the # incorrect boxes if the subtest is not completed by the subject.
# Alzheimer’s Disease Assessment Scale – Cognitive (Continued)

## 8. Word Recognition (List-1)

At the start of the learning portion of the subtest, the tester gives the following instructions:

> “I am going to show you some words printed on these white cards. I want you to read each word out loud and try to remember it, because later I will ask you to try to remember all of the words I have shown you... Ready, read the word and try to remember it.”

The tester can prompt, as necessary, with:

> “Read it out loud and try to remember it.”

In the recognition portion of this subtest, the tester should say:

> “Now I’m going to show you another set of words. Some of the words were on the list I just showed you and others are new. For each word I want you to tell me whether it is one of the words I just showed you.”

The tester shows the first word and says either:

> “Is this one of the words I showed you before, yes or no?”

or:

> “Did I show you this word before?”

The same instruction is given before the second subtest word. For the remaining subtest words the tester should say:

> “How about this one?”

If the subject indicates they are not sure, they may be encouraged with:

> “Just take your best guess.”

### Word Recognition (List-1)

<table>
<thead>
<tr>
<th>Nurse</th>
<th>Magazine</th>
<th>Wizard</th>
<th>Van</th>
<th>Leopard</th>
<th>Sale</th>
<th>Sea</th>
<th>Train</th>
<th>Coin</th>
<th>Ship</th>
<th>Institution</th>
<th>Map</th>
<th>Axe</th>
<th>Board</th>
<th>Carrot</th>
<th>Milk</th>
<th>Volume</th>
<th>Forest</th>
<th>Anchor</th>
<th>Gem</th>
<th>Cat</th>
<th>Fund</th>
<th>Edge</th>
<th>Cake</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>NO</td>
<td>REMINDER GIVEN</td>
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<td></td>
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</tbody>
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<td></td>
</tr>
</tbody>
</table>

### Total # CORRECT

### Total # INCORRECT

### Total # REMINDERS

I confirm this information is accurate.  
Staff Initials:  
Date:
Remembering Word Recognition Subtest Instructions:

General Guidelines

ADMINISTRATION:
For this study, “Remembering Word Recognition Subtest Instructions” will be calculated automatically from the number of reminders given from the previous item. No action on the part of the tester is required.
### ALZHEIMER’S DISEASE ASSESSMENT SCALE – COGNITIVE (CONTINUED)

9. **Remembering Word Recognition Subtest Instructions – NO ACTION REQUIRED**

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Spoken Language Ability:

General Guidelines

ADMINISTRATION / SCORING:

This item is a global rating of the quality of the subject's speech and their ability to communicate verbally (i.e., clarity, ability to make oneself understood).

- In rating this item, the tester should consider all of the speech produced by the subject during the test session, including the opening conversation.

- Quantity of speech and word-finding difficulty are not considered in the scoring of this item (i.e., circumlocutions would not be rated/evaluated on this item).

- Ratings of “Moderately Severe” and “Severe” are reserved for subjects whose expressive language abilities are impaired to an extent that they seldom communicate without difficulty.
<table>
<thead>
<tr>
<th>10. SPOKEN LANGUAGE ABILITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No impairment</strong> – no instance of lack of understandability</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Very mild</strong> – one instance of lack of understandability</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Mild</strong> – subject has difficulty less than 25% of the time</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Moderate</strong> – subject has difficulty 25-50% of the time</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Moderately severe</strong> – subject has difficulty more than 50% of the time</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Severe</strong> – one or two word utterances; fluent, but empty speech; mute</td>
<td>☐</td>
</tr>
</tbody>
</table>
Word-Finding Difficulty:

General Guidelines

ADMINISTRATION / SCORING:

This item rates impairment in expressive speech, but it refers to word finding difficulty only. In contrast, the Spoken Language Ability item is more of a global rating of the subject's ability to communicate verbally.

- The tester rates the level of difficulty the subject had in finding desired words in spontaneous speech during the opening conversation and the test session (but it does NOT include the subject's responses on the formal Naming Objects and Fingers tests).
- Note: the subject may attempt to mask word finding difficulty by circumlocution (i.e., giving explanatory phrases or nearly satisfactory synonyms).
- Instances when the tester has to infer the intended word from context should be rated here.
ALZHEIMER’S DISEASE ASSESSMENT SCALE – COGNITIVE (CONTINUED)

11. WORD FINDING DIFFICULTY

- **No impairment** in finding desired word in spontaneous speech
- **Very mild** – 1 or 2 instances, not clinically significant
- **Mild** – noticeable circumlocution or synonym substitution
- **Moderate** – loss of words without compensation on occasion
- **Moderately severe** – frequent loss of words without compensation
- **Severe** – nearly total loss of content words; speech sounds empty; 1-2 word utterances

I confirm this information is accurate. | Staff Initials: | Date:
Comprehension of Spoken Language:

General Guidelines

ADMINISTRATION / SCORING:
This item evaluates the subject’s ability to understand speech.

- To rate this item, the tester should consider how well the subject was able to understand the tester’s speech during the opening discussion and throughout the test session.

- DO NOT include the subject’s responses on the Commands test in making this evaluation.

- The tester should consider how frequently they had to repeat or rephrase communications to the subject in order for the subject to comprehend what the tester had communicated.

- Repetitions or reminders due to memory problems should not be considered in the scoring of this test.
**ALZHEIMER’S DISEASE ASSESSMENT SCALE – COGNITIVE (CONTINUED)**

12. **COMPREHENSION OF SPOKEN LANGUAGE**

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>No impairment – subject understands speech</td>
<td>☐</td>
</tr>
<tr>
<td>Very mild – 1 or 2 instances of misunderstanding</td>
<td>☐</td>
</tr>
<tr>
<td>Mild – 3-5 instances of misunderstanding</td>
<td>☐</td>
</tr>
<tr>
<td>Moderate – requires several repetitions and rephrasing</td>
<td>☐</td>
</tr>
<tr>
<td>Moderately severe – subject only occasionally responds correctly, i.e., to yes-no questions</td>
<td>☐</td>
</tr>
<tr>
<td>Severe – subject rarely responds to questions appropriately; not due to poverty of speech</td>
<td>☐</td>
</tr>
</tbody>
</table>

Training
NUMBER CANCELLATION

Instructions for Example:

Place the practice form face up in front of the subject. Say, “On the top of this page are two numbers. On this page you will find these numbers mixed in with other numbers. I’d like you to begin here...” (point to the beginning of the line) “...and going across the line, cross off each number that matches either of the two numbers at the top of the page. Please work as quickly as you can.” Discontinue the example after 30 seconds.

Instructions for Task:

Place the form face up in front of the subject and say: “On the top of this page are two numbers. Throughout this page you will find these numbers mixed in with other numbers. I’d like you to begin here...” (point to the beginning of the first line), “...and going across line by line, cross off the numbers that match the numbers at the top of the page. Please work as quickly as you can.”

If the first cancellation done by the subject is incorrect, say: “These are the correct numbers to cross out,” and point to the target numbers at the top of the page. If the subject becomes confused or stops while doing the test, repeat the standard instructions as needed. Discontinue the test after 45 seconds.
Example for use with versions A, B, and C

“6” and “1”
“4” and “9”
“2” and “9”

Example for use with version D
### NUMBER CANCELLATION

Specify completion date: ________________  
DD-Mon-YYYY

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Date Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of targets hit</td>
<td>____________</td>
</tr>
<tr>
<td></td>
<td>(total of correct numbers crossed off)</td>
</tr>
<tr>
<td>Number of errors</td>
<td>____________</td>
</tr>
<tr>
<td></td>
<td>(total of incorrect numbers crossed off)</td>
</tr>
<tr>
<td>Number of times reminded of task</td>
<td>____________</td>
</tr>
</tbody>
</table>

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"USED WITH PERMISSION FROM THE NIA ALZHEIMER'S DISEASE COOPERATIVE STUDY (NIA GRANT AG10483)"


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