

Test of Functional Health Literacy in Adults

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Short Test of Functional Health Literacy in Adults (STOFHLA)

# STOFHLA

## Directions for Administration, Scoring & Technical Data

STOFHLA - English & STOFHLA - Spanish



# Directions For Administration & Scoring

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## I. Introduction

### A. Background

A review of existing literacy assessment instruments shows that most concentrate on word recognition or narrative text comprehension skills. To answer the need for a more comprehensive evaluation of literacy, and a different conceptual framework for understanding the impact of low literacy on health status and/or health care delivery, the Literacy in Health Care Project developed the Test of Functional Health Literacy in Adults (TOFHLA). TOFHLA is a functional literacy assessment tool designed to evaluate adult literacy in the health care setting. The instrument measures functional literacy on the assumption that more than classroom reading ability is necessary to understand and negotiate the health care system adequately. TOFHLA is especially directed toward capturing numeracy and reading comprehension skills in the middle to low levels of literacy ability.

### B. Short TOFHLA

Initial use of the TOFHLA indicated that healthcare professionals found a need for a shorter version for screening patient literacy in clinical and educational settings. While the full TOFHLA provides a more complete estimate of patients' functional health literacy, the Short TOFHLA is a quicker, more efficient way of determining patient functional health literacy. It measures understanding of functional health literacy tests, a more effective measure of literacy than simple word recognition. It decreases administration time to 7 minutes (from 22 minutes for the full TOFHLA) and eliminates the need for visual acuity screening. Administration is also simplified as the tasks involve no manipulatives and may be given as a group test.

### C. Special Considerations for Testing Low Literate Patients

An important part of health literacy features personal ability. Those with few or reduced skills often feel vulnerable when literacy inability is brought to their attention or to the attention of those around them. The force of this vulnerability is heightened by peer and social pressure. Consequently, low literate persons employ sophisticated mechanisms to conceal their literacy skill level and to prevent subsequent discovery or embarrassment, not to mention outright anger.

You very likely will encounter some of these low literacy behaviors:

- pointing to the text with a finger, while reading
- lifting the text closer to be read
- claiming "the light's not good"

- complaining about “having trouble seeing”
- expressing fatigue
- explaining that they don’t have time
- stating that they don’t think the material is interesting

When you encounter low literacy, soften the impact of unmasking by stating compassionately, “I am not here to embarrass you, frustrate you, or make you feel uncomfortable. I am willing to stop if you want to, but the information you can give me is very special and valued highly by all of us here. (PAUSE) May I continue?” Honor the dignity to which every human is entitled.

## II. Preliminary Procedures

### A. Informed Consent

Your hospital or health-care setting may require you to obtain a signed Informed Consent from the patient before testing may begin. Your institution may have a standard form and/or a procedure for developing one. The informed consent must be read orally verbatim. Paraphrasing is allowed, but not as a substitute for verbatim reading. When the respondent signs the consent, in effect he/she gives you permission to ask them questions, but they do not commit themselves to answering the questions. It is normal, however, for the respondent to answer all questions asked. Typically, the informed consent provides the respondent with information about procedures, risks and discomforts, expected benefits, withdrawal of consent, confidentiality and project disclaimer of financial reliability in the event of injury. Manage the consent procedure with the same diligence you use to administer a data collection tool.

### B. Visual Acuity

Routinely, low literate persons will mask reading problems by saying that they cannot see the materials they are given. This test is printed in 14 point font (large print) appropriate for persons with visual acuity at least 20/50. If the respondent wears glasses, ask them to put them on for this test.

### C. Language Preference

If the patient’s dominant language is Spanish, administer the Spanish-version of Short TOFHLA (STOFHLA-Spanish). However, it is important to remember this gives information on the patient’s literacy in Spanish, not English. The health care facility needs to provide written material in Spanish as well as English for these patients.

### III. STOFHLA: Reading Comprehension

#### A. Description

STOFHLA (Reading Comprehension) tests a patient's ability to read passages using real materials from the health care setting. The test of 36 items uses a modified Cloze procedure. Passages are selected from instructions for preparation for an upper GI series and the patient rights and responsibilities section of a Medicaid application form. Readability levels on the Gunning Fog index are grades 4.3 and 10.4 respectively. The passages are ordered by increasing difficulty.

#### B. Directions for Administration

It is important to present the reading comprehension section verbatim from the scripted introduction. Once introduced, fold the preceding pages back so that the respondent sees only the text passages. Turn one or two pages to show the respondent what you mean, and turn them in a way that only shows the text passages. If the respondent asks about the score columns, tell them that the boxes are for use in the office. Do not tell the respondent that they are score columns. This is a timed test and should be stopped at the end of 7 minutes. Do not inform the respondent in advance that the test is timed. When 7 minutes have elapsed, tell the respondent that "That should give us what we are looking for. Thank you for your cooperation." and remove the test materials.

#### C. Directions for Scoring STOFHLA: Reading Comprehension

Score the results immediately on the spot, after the respondent has left. You will need to do six things to confirm and transcribe respondent data to appropriate boxes in the column of boxes appearing on the page opposite the text:

1. For each blank, circle the letter in the box corresponding to the letter selected by the respondent.
2. Compare the answers by page and variable name to the appropriate scoring key provided below.
3. In the score box, circle "1" for correct or "0" for incorrect for each blank.
4. Sum correct answers for each page, and record total at bottom of page.
5. Sum the subtotals for all pages and record total on the last scoring column page as the Reading Comprehension Raw Score. Record in the appropriate box on the back cover of the test booklet (STOFHLA Total Score).

STOFHLA: Reading Comprehension Score Key  
English: 14 Point Font

Passage A	Passage A	Passage A	Passage B	Passage B	Passage B
A1 a	A6 a	A12 c	B17 c	B24 d	B33 d
A2 b	A7 c	A13 b	B18 a	B25 b	B34 c
A3 d	A8 b	A14 c	B19 d	B26 c	B35 b
A4 a	A9 d	A15 d	B20 b	B27 d	B36 b
A5 c	A10 b	A16 a	B21 d	B28 d	
	A11 c		B22 c	B29 a	
			B23 a	B30 c	
				B31 b	
				B32 a	

STOFHLA: Reading Comprehension Score Key  
Spanish: 14 Point Font

Passage A	Passage A	Passage B	Passage B	Passage B
A1 b	A10 c	B17 a	B24 a	B34 a
A2 a	A11 a	B18 b	B25 c	B35 d
A3 c	A12 c	B19 a	B26 b	B36 b
A4 c	A13 a	B20 b	B27 c	
A5 a	A14 b	B21 a	B28 b	
A6 d	A15 a	B22 d	B29 b	
A7 c	A16 a	B23 c	B30 a	
A8 c			B31 a	
A9 b			B32 d	
			B33 c	

#### IV. STOFHLA: Functional Health Literacy Level

##### A. Functional Health Literacy Level

Look up the Total STOFHLA Score on the table below. Record the patient's Functional Health Literacy Level on the back cover of the test booklet.

TOFHLA Functional Health Literacy Levels

Level	TOFHLA Score	Functional Health Literacy Description
Inadequate Functional Health Literacy	0-16	Unable to read and interpret health texts.
Marginal Functional Health Literacy	17-22	Has difficulty reading and interpreting health texts.
Adequate Functional Health Literacy	23-36	Can read and interpret most health texts.

##### B. Functional Interpretation of STOFHLA Scores

1. Patients who have **Adequate Functional Health Literacy** should be able to read, understand, and interpret most health texts.
2. Patients who have **Marginal** or **Inadequate Functional Health Literacy** will have difficulty reading, understanding, and interpreting most health materials. They are not going to be able to read and understand directions for their health care. They are likely to take their medications incorrectly or to fail to follow prescribed diets or treatment regimens. Modifications must be made in the health care setting in order to accommodate these persons. Recommendations include the following:
  - Suggest the person bring someone along with them to read and interpret health texts.
  - Suggest the person use someone at home to read and interpret health texts.
  - Rewrite health materials, including prescription bottle labels at a lower literacy level (below 5th grade readability level).
  - Use pictures, graphic directions, symbols to indicate directions, information, and procedures.

- Have staff available to assist patients whose functional health literacy level is low.
- Provide important information on audio-tape and/or video-tape.

Remember that persons with low functional health literacy often are ashamed of their literacy status. They will be unlikely to volunteer that they can not read or to ask for assistance. Low literacy does not mean low intelligence. Treat them with dignity and respect, offering literacy help but not talking down to them.

## V. STOFHLA: Technical Report

The STOFHLA (English & Spanish) consists of two functional health reading comprehension passages. In a group of 211 patients given the STOFHLA at the Urgent Care Center and Medical Clinic at Grady Memorial Hospital in Atlanta, Chronbach's Alpha (internal consistency) was 0.97 (0.94 for passage A & 0.97 for Passage B). The correlation (Spearman) with the REALM was 0.81 and with the full TOFHLA 0.91. For further information on the development of the Short TOFHLA, see Baker, Williams, Parker, Gazmarian, & Nurss, 1998.

When Should You Use:

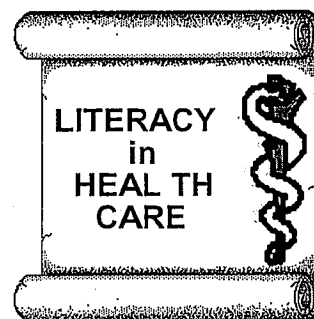
### Short TOFHLA

- Screening patients in a medical clinic.
- Determining literacy level for a health variable in education program.
- Including literacy level as a descriptive variable.

### Full TOFHLA

- Including literacy as a dependent or independent research.





Test of Functional Health Literacy in Adults

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Short Test of Functional Health Literacy in Adults (STOFHLA)

STOFHLA

Large Print Version

English, 14 point font



Short Test of Functional Literacy in Adults  
STOFHLA  
READING COMPREHENSION

HAND PATIENT THE READING COMPREHENSION PASSAGES TO BE COMPLETED. FOLD BACK THE PAGE OPPOSITE THE TEXT SO THAT THE PATIENT SEES ONLY THE TEXT.

PREFACE THE READING COMPREHENSION EXERCISE WITH:

“Here are some other medical instructions that you or anybody might see around the hospital. These instructions are in sentences that have some of the words missing. Where a word is missing, a blank line is drawn, and 4 possible words that could go in the blank appear just below it. I want you to figure out which of those 4 words should go in the blank, which word makes the sentence make sense. When you think you know which one it is, circle the letter in front of that word, and go on to the next one. When you finish the page, turn the page and keep going until you finish all the pages.”

STOP AT THE END OF 7 MINUTES

PASSAGE A: X-RAY PREPARATION

PASSAGE B: MEDICAID RIGHTS AND RESPONSIBILITIES

PASSAGE A

A1	(1)	(0)
a.		
b.		
c.		
d.		

A2	(1)	(0)	A3	(1)	(0)
a.			a.		
b.			b.		
c.			c.		
d.			d.		

A4	(1)	(0)	A5	(1)	(0)
a.			a.		
b.			b.		
c.			c.		
d.			d.		

Sub-Total
-----------

PASSAGE A

Your doctor has sent you to have a \_\_\_\_\_ X-ray.

- a. stomach
- b. diabetes
- c. stitches
- d. germs

You must have an \_\_\_\_\_ stomach when you come for \_\_\_\_\_.

- |           |        |
|-----------|--------|
| a. asthma | a. is. |
| b. empty  | b. am. |
| c. incest | c. if. |
| d. anemia | d. it. |

The X-ray will \_\_\_\_\_ from 1 to 3 \_\_\_\_\_ to do.

- |         |           |
|---------|-----------|
| a. take | a. beds   |
| b. view | b. brains |
| c. talk | c. hours  |
| d. look | d. diets  |

A6 (1) (0)	A7 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

A8 (1) (0)	A9 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

A10 (1) (0)	A11 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

Sub-Total
-----------

## THE DAY BEFORE THE X-RAY.

For supper have only a \_\_\_\_\_ snack of fruit, \_\_\_\_\_ and jelly,

- |           |           |
|-----------|-----------|
| a. little | a. toes   |
| b. broth  | b. throat |
| c. attack | c. toast  |
| d. nausea | d. thigh  |

with coffee or tea.

After \_\_\_\_\_, you must not \_\_\_\_\_ or drink

- |              |          |
|--------------|----------|
| a. minute,   | a. easy  |
| b. midnight, | b. ate   |
| c. during,   | c. drank |
| d. before,   | d. eat   |

anything at \_\_\_\_\_ until after you have \_\_\_\_\_ the X-ray.

- |         |        |
|---------|--------|
| a. ill  | a. are |
| b. all  | b. has |
| c. each | c. had |
| d. any  | d. was |

A12	(1)	(0)
a.		
b.		
c.		
d.		

A13	(1)	(0)	A14	(1)	(0)
a.			a.		
b.			b.		
c.			c.		
d.			d.		

A15	(1)	(0)	A16	(1)	(0)
a.			a.		
b.			b.		
c.			c.		
d.			d.		

Sub-Total
-----------



## THE DAY OF THE X-RAY.

Do not eat \_\_\_\_\_.

- a. appointment.
- b. walk-in.
- c. breakfast.
- d. clinic.

Do not \_\_\_\_\_, even \_\_\_\_\_.

- |           |            |
|-----------|------------|
| a. drive, | a. heart.  |
| b. drink, | b. breath. |
| c. dress, | c. water.  |
| d. dose,  | d. cancer. |

If you have any \_\_\_\_\_, call the X-ray \_\_\_\_\_ at 616-4500.

- |               |               |
|---------------|---------------|
| a. answers,   | a. Department |
| b. exercises, | b. Sprain     |
| c. tracts,    | c. Pharmacy   |
| d. questions, | d. Toothache  |

B17 (1) (0)
a.
b.
c.
d.

B18 (1) (0)	B19 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

B20 (1) (0)
a.
b.
c.
d.

B21 (1) (0)	B22 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

B23 (1) (0)
a.
b.
c.
d.

Sub-Total
-----------

PASSAGE B

I agree to give correct information to \_\_\_\_\_ if I can receive Medicaid.

- a. hair
- b. salt
- c. see
- d. ache

I \_\_\_\_\_ to provide the county information to \_\_\_\_\_ any

- |          |              |
|----------|--------------|
| a. agree | a. hide      |
| b. probe | b. risk      |
| c. send  | c. discharge |
| d. gain  | d. prove     |

statements given in this \_\_\_\_\_ and hereby give permission to

- a. emphysema
- b. application
- c. gallbladder
- d. relationship

the \_\_\_\_\_ to get such proof. I \_\_\_\_\_ that for

- |                 |                |
|-----------------|----------------|
| a. inflammation | a. investigate |
| b. religion     | b. entertain   |
| c. iron         | c. understand  |
| d. county       | d. establish   |

Medicaid I must report any \_\_\_\_\_ in my circumstances

- a. changes
- b. hormones
- c. antacids
- d. charges

B24 (1) (0)	B25 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

B26 (1) (0)	B27 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

B28 (1) (0)	B29 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

B30 (1) (0)
a.
b.
c.
d.

B31 (1) (0)	B32 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

Sub-Total
-----------

within \_\_\_\_\_ (10) days of becoming \_\_\_\_\_ of the change.

- a. three
- b. one
- c. five
- d. ten

- a. award
- b. aware
- c. away
- d. await

I understand \_\_\_\_\_ if I DO NOT like the \_\_\_\_\_ made on my

- a. thus
- b. this
- c. that
- d. than

- a. marital
- b. occupation
- c. adult
- d. decision

case, I have the \_\_\_\_\_ to a fair hearing. I can \_\_\_\_\_ a

- a. bright
- b. left
- c. wrong
- d. right

- a. request
- b. refuse
- c. fail
- d. mend

hearing by writing or \_\_\_\_\_ the county where I applied.

- a. counting
- b. reading
- c. calling
- d. smelling

If you \_\_\_\_\_ TANF for any family \_\_\_\_\_, you will have to

- a. wash
- b. want
- c. cover
- d. tape

- a. member,
- b. history,
- c. weight,
- d. seatbelt,

B33 (1) (0)	B34 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

B35 (1) (0)	B36 (1) (0)
a.	a.
b.	b.
c.	c.
d.	d.

READING COMPREHENSION  
RAW SCORE

Sub-Total
-----------

\_\_\_\_\_ a different application form. \_\_\_\_\_, we will use

- a. relax
- b. break
- c. inhale
- d. sign

- a. Since,
- b. Whether,
- c. However,
- d. Because,

the \_\_\_\_\_ on this form to determine your \_\_\_\_\_.

- a. lung
- b. date
- c. meal
- d. pelvic

- a. hypoglycemia.
- b. eligibility.
- c. osteoporosis.
- d. schizophrenia.

*Short Test of Functional Health Literacy in Adults (STOFHLA)*

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TOFHLA is a measure of the patient's ability to read and understand health care information, their functional health literacy. TOFHLA Numeracy assesses their understanding of prescription labels, appointment slips, and glucose monitoring. TOFHLA Reading Comprehension assesses their understanding of health care texts such as preparation for a diagnostic procedure and Medicare Rights & Responsibilities.

Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Name \_\_\_\_\_ M \_\_\_\_ F

Birthdate \_\_\_\_/\_\_\_\_/\_\_\_\_ Age \_\_\_\_ SSN or ID# \_\_\_\_\_

Hospital or Health-care-Setting \_\_\_\_\_

City, State \_\_\_\_\_

Short Form Administered: \_\_\_\_English \_\_\_\_Spanish

STOFHLA - Score

TOFHLA Total Score:  
Reading Comprehension Raw Score (0-36)

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Functional Health Literacy Level:

0 - 16 -- Inadequate Functional Health Literacy

17 - 22 -- Marginal Functional Health Literacy

23 - 36 -- Adequate Functional Health Literacy


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STOFHLA: Reading Comprehension  
Scoring Key

14 Point Font

Passage A	Passage A	Passage A	Passage B	Passage B	Passage B
A1 a	A6 a	A12 c	B17 c	B24 d	B33 d
A2 b	A7 c	A13 b	B18 a	B25 b	B34 c
A3 d	A8 b	A14 c	B19 d	B26 c	B35 b
A4 a	A9 d	A15 d	B20 b	B27 d	B36 b
A5 c	A10 b	A16 a	B21 d	B28 d	
	A11 c		B22 c	B29 a	
			B23 a	B30 c	
				B31 b	
				B32 a	

