HEALTH LITERACY SKILLS INSTRUMENT (HLSI)

The 25 items that follow comprise the HLSI developed by Dr. Lauren McCormack of RTI International. Ten items comprise the HLSI-S and are designated by this symbol following the question: HLSI-S.

Individuals who want to use the HLSI in research or evaluation should sign a user agreement which can be found at: https://www.rti.org/health-literacy-skills-instrument-user-agreement

Part of the user agreement addresses the stimuli included in this survey. Some items are developed by Healthwise®. RTI International has a Limited License with Healthwise® to allow access to these web-based stimuli for the sole purpose of conducting a health literacy survey. Users cannot use the stimuli for purposes other than conducting a health literacy survey. This content is hosted on Healthwise® servers for the duration of the licensing agreement.

Screen 1:

Thank you for taking the time to complete this survey. This survey includes questions on topics related to health and health care. First, you will read, view, or hear some health-related information. Then you will be asked some questions related to the information. The purpose of this survey is to find out what most people think and understand about some health care issues. If you do not know the answer to a question, then it is okay to check the box that says "Don't know." Some of the questions use names of people who are not real.

Tips for Filling Out the Questionnaire

- All of your answers are kept private.
- Be sure to read all of the answer choices before marking your questions.

Screen 2:

You are one of about X people in the United States who are being asked to take a survey about topics related to health and healthcare. The questions are not meant to be sensitive, but if you feel uncomfortable answering a question you may skip it. The survey will take about 45 minutes to complete. In appreciation for your time, you will receive $XX for completing the survey.

Screen 3:

This survey is being conducted by Research Triangle Institute (RTI), an independent nonprofit research organization. The study is being sponsored by the National Institutes of Health. RTI is working with Knowledge Networks to conduct this survey but is not connected with Knowledge Networks in any way. If you have questions about this survey, please contact Panel Relations at 800-782-7699 and someone will direct your questions to the appropriate researchers at RTI.
Possible Risks or Discomforts
You may refuse to answer any question or you may take a break at any time during the survey. As with any other surveys you receive from Knowledge Networks, the privacy and confidentiality of your information is of the highest importance, and we are committed to maintaining a secure environment for you in which to participate. Every effort will be made to protect your information, but this cannot be guaranteed. Neither your name nor your e-mail address will be associated with your answers or used in any report.

Benefits
Your responses are very important because they will help researchers understand how people perform tasks related to health and healthcare.
If you have any questions about your rights as a survey participant, you may wish to contact the RTI Office of Research Protection. If you contact Panel Relations at 800 782-7699 and indicate that you would like to contact the RTI Office of Research Protection, someone will provide you with the appropriate contact information.

Screen 4:

If you have read the previous screens and agree to participate, please click the Yes button, if not, click the No button.

Select one answer only

- Yes, I agree to participate.
- No, I do not agree to participate.

Screen 5:

Now you will enter the survey
Cholesterol: Know What Your Level Means

What is cholesterol?
Cholesterol is a waxy substance the body uses to protect nerves, make cell tissues and produce certain hormones.

Are there different types of cholesterol?
Yes. Cholesterol travels through the blood in different types of packages, called lipoproteins.

Low-density lipoproteins (LDL) deliver cholesterol to the body. High-density lipoproteins (HDL) remove cholesterol from the bloodstream.

Please answer the following questions based on the information in the text.

If a person is at high risk for heart disease, which of the following levels of low density lipoprotein (LDL) cholesterol is best?
Select one answer only

- 102
- 86
- 129
- 155
- Not sure

Which set of low density lipoprotein (LDL) and high density lipoprotein (HDL) levels is best?
Select one answer only

- LDL of 134 and HDL of 61
- LDL of 98 and HDL of 82
- LDL of 140 and HDL of 50
- LDL of 165 and HDL of 80
- Not sure

Total cholesterol level
- Less than 200 is best.
- 200 to 239 is borderline high.
- 240 or more means a person is at increased risk for heart disease.

LDL cholesterol levels
- Below 100 is ideal for people who have a higher risk of heart disease.
- 100 to 129 is near optimal.
- 130 to 159 is borderline high.
- 160 or more means a person is at a higher risk for heart disease.

HDL cholesterol levels
- Less than 40 means a person is at higher risk for heart disease.
- 60 or higher greatly reduces a person’s risk of heart disease.
Over-the-Counter Drug Label: Antihistamine

Which of the following problems could be caused by this medicine?
Select one answer only

- Trouble breathing
- **Drowsiness**
- Loss of appetite
- Trouble urinating
- Not sure
First-Degree Burns

First-degree burns involve the top layer of skin. Sunburn is a first-degree burn.

Signs:

- Red
- Painful to touch
- Skin will show mild swelling

Treatment:

- Apply cool, wet compresses, or immerse in cool, fresh water. Continue until pain subsides.
- Cover the burn with a sterile, non-adhesive bandage or clean cloth.
- Do not apply ointments or butter to burn; these may cause infection.
- Over-the-counter pain medications may be used to help relieve pain and reduce inflammation.
- First degree burns usually heal without further treatment. However, if a first-degree burn covers a large area of the body, or the victim is an infant or elderly, seek emergency medical attention.

Second-Degree Burns

Second-degree burns involve the first two layers of skin.

Signs:

- Deep reddening of the skin
- Pain
- Blisters
- Glossy appearance from leaking fluid
- Possible loss of some skin

Treatment:

- Immerse in fresh, cool water, or apply cool compresses. Continue for 10 to 15 minutes.
- Dry with clean cloth and cover with sterile gauze. **Do not** break blisters.
- Do not apply ointments or butter to burns; these may cause infection
- Elevate burned arms or legs.
- Take steps to prevent shock: lay the victim flat, elevate the feet about 12 inches, and cover the victim with a coat or blanket. **Do not** place the victim in the shock position if a head, neck, back, or leg injury is suspected, or if it makes the victim uncomfortable.
- Further medical treatment is required. **Do not** attempt to treat serious burns unless you are a trained health professional.
Please answer the following questions based on the information in the text.

Which of the following is probably not a second-degree burn?

Select one answer only

☐ Blistering skin
☐ Painful skin with a lot of swelling
☐ Painful skin when touched with a little swelling
☐ Skin that is leaking fluid
☐ Not sure

Medical Center Information - audio recording

Telephone Menu Recording_032609.WMA

7. Medical Center Information - audio recording

Please listen to the recording below before proceeding to the next screen.

Please answer the following questions based on the information in the audio clip.

Click here if you would like to listen to the recording again.

If a person was worried about his cough, what number should he press? 

Select one answer only

☐ 1
☐ 2
☐ 4
☐ Call 911
☐ Not sure
If a person wanted to check on the date and time of an appointment she already made, what number should she press?

Select one answer only

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ Call 911
- ☐ Not sure
Please answer the following questions based on the information in the map.

If John was visiting someone in room 130 and wanted to go to the cafeteria, which of these places would he pass if he took the shortest route?

Select one answer only

- [ ] Diagnostic imaging
- [ ] Gift shop
- [ ] Cardiac center
- [ ] Emergency services
- [ ] Don't Know

Which of the following entrance is closest to the elevator? HLSI-S

Select one answer only

- [ ] There is no elevator
- [ ] Surgery & Outpatient Center Entrance
- [ ] Rehabilitation Institute Entrance
- [ ] Main Entrance
- [ ] Don't Know
Medicine Record

Please answer the following questions based on the information in the chart.

In the example listed in the first row of the table, when should the medicine be taken? **HLSI-S**

Select one answer only

- Two times a day anytime between 8 a.m. and 8 p.m.
- At 8 a.m. or 8 p.m. each day
- **At 8 a.m. and 8 p.m. each day**
- Don’t Know
Lactose intolerance: Why does milk bother me?
Lactose intolerance means that the body cannot digest foods with lactose in them. Lactose is the sugar found in milk and foods made with milk. Lactose intolerance is not serious. A person should feel better soon if they eat less food with lactose or if they use products that help them digest lactose. They cannot digest lactose because they do not have enough lactase enzyme. The small intestine needs lactase enzyme to break down lactose. If lactose is not digested, it can cause gas and stomach cramps.

![Diagram of human digestive system]

After eating foods with lactose in them, some people may feel sick to their stomach. They may also have

- gas
- diarrhea
- swelling in your stomach

Some illnesses can cause these same problems. A doctor can tell a person if their problems are caused by lactose intolerance.

Please answer the following question based on the information above.

Which of the following is a symptom of lactose intolerance?
Select one answer only

- Constipation
- **Stomach ache**
- Sore throat
- Heartburn
- Don't Know
Calories burned
Please read the questions below, then visit the following website to answer the question. Answer the
questions based on the information in the website.

https://www.cardiosmart.org/healthwise/tx43/94/tx4394

Please answer the following question based on the information in the website.

John weighs 200 pounds and he walked at a medium pace on a firm surface for
30 minutes. How many calories did he burn?
Select one answer only

☐ 159
☐ 115
☐ 150
☐ 173
☐ Don't Know

Kate weighs 150 pounds. Which activity would burn the most calories?
Select one answer only

☐ Walking at a medium pace for 30 minutes
☐ Raking the lawn for 30 minutes
☐ Bowling for 30 minutes
☐ Don't Know
Risk of heart attack calculator
Please read the questions below, then visit the following website to answer the questions. Answer the questions based on the information in the website.

https://www.cardiosmart.org/healthwise/te79/50/te7950

Interactive Tool: Are You at Risk for a Heart Attack?

What does this tool measure?

Click here to find your risk of heart attack.

This interactive tool measures your chance of having a heart attack in the next 10 years. The tool calculates your risk score from the values you enter. The calculation is based on information from the Framingham Heart Study. Since 1948 the Framingham Heart Study has studied the progression of heart disease and its risk factors. The data from this study has been used to make a risk assessment. This risk assessment was created by the U.S. National Cholesterol Education Program (NCEP), part of the National Institutes of Health and the U.S. Department of Health and Human Services.

The values you enter include the most important risk factors for heart disease. They are as follows:

- **Age and gender.** The number of people affected by heart disease increases with age in men after age 45 and in women after age 55.
- **Smoker.** Select "Yes" if you have smoked any cigarettes in the past month. Quitting smoking may be the most important step you can take to reduce your risk.
- **Systolic blood pressure.** Systolic blood pressure is the first number of your blood pressure reading. For example, if your reading is 120/80 (120 over 80), your systolic blood pressure is 120.
- **Blood pressure medicine.** Medicines used to treat high blood pressure include diuretics, angiotensin-converting enzyme (ACE) inhibitors, angiotensin II receptor blockers (ARBs), beta-blockers, calcium channel blockers, and direct renin inhibitors. Enter "Yes" if you take one of these medicines.
- **HDL cholesterol.** HDL, or high-density lipoprotein, is the "good" cholesterol because it helps prevent cholesterol from building up in your arteries. The higher your HDL, the better. An HDL of 60 mg/dL and above protects against heart disease. An HDL of less than 40 mg/dL puts you at major risk of heart attack.
- **Total cholesterol.** Total cholesterol is the sum of all the cholesterol in your blood. The higher your total cholesterol, the greater your risk for heart disease. A total cholesterol of 240 mg/dL and above puts you at twice the risk of heart disease compared with someone whose cholesterol is below 200 mg/dL. Less than 200 mg/dL gives you a lower risk for heart disease.

Please answer the following questions based on the information in the website.

What does this tool do?
Select one answer only

- ☐ Tells a person their chance of having a heart attack today
- ☑ Tells a person’s risk of having a heart attack over the next 10 years
- ☐ Tells a person the best way for a person to reduce their chances of having a heart attack
- ☐ Don't Know
John is 39 years old and smokes. His blood pressure is 130/90 and he’s on blood pressure medicine. His HDL cholesterol is 50 and his total cholesterol is 230. What is his estimated 10 year risk of a heart attack?

Select one answer only

- 20 percent
- 12 percent
- 10 percent
- 2 percent
- Don't Know
Signs of a Stroke

My mother is alive today because a police officer knew the signs of a stroke. You can save a life, too, if you learn these signs.

Mom was on her way to the dentist when a police officer noticed she was driving strangely and started to follow her. She pulled over on the highway. When the officer approached her, she told him she had a blinding headache. But she said that she had to get to her dentist appointment on time.

The officer also noticed that mom just wasn’t acting right. Some of her speech was confused. And she was a little dizzy.

Mom said she felt fine, but that didn’t stop the officer. He quickly called 911. That call saved my mother’s life.

Knowing the signs of a stroke could help you save a life, too. Remember, some people have all of these signs, but my mom only had a few.

If you or someone else has even a few of these signs, get help fast!

Five Signs of a Stroke

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, or loss of balance
- Sudden, severe headache

American Stroke Prevention
Please answer the following question based on the information in the flyer.

Which of the following is NOT a sign of a stroke? **HLSI-S**

Select one answer only

- Shaking chills
- Blurred vision
- Bad headache
- Numbness on one side
- Don’t Know

### Portion Control for Weight Loss

#### Expanding portions

Are you eating a variety of healthy foods, exercising and still struggling with your weight? Some people may need to pay closer attention to portion control — managing the amount of food that they eat — as their total calorie intake determines their weight.

A serving isn't what they happen to put on their plate. It's a specific amount of food defined by common measurements, such as cups, ounces or pieces. The serving sizes represented here are part of the Mayo Clinic Healthy Weight Pyramid — a food pyramid designed to promote weight loss and long-term health. Use these serving sizes in conjunction with a diet based on a variety of healthy foods. Add the right amount of regular physical activity, and a person will be well on their way to enjoying good nutrition and controlling their weight.

#### Vegetables

Until they’re comfortable judging serving sizes, you may need to use measuring cups and spoons. A half a cup of cooked carrots, for example, equals one serving. Here are the recommended serving sizes for other vegetables:

<table>
<thead>
<tr>
<th>Food</th>
<th>Serving size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw leafy vegetables</td>
<td>2 cups</td>
</tr>
<tr>
<td>Raw vegetables, chopped</td>
<td>1 cup</td>
</tr>
<tr>
<td>Chopped, cooked or canned vegetables</td>
<td>1/2 cup</td>
</tr>
</tbody>
</table>

#### Meat and beans
Familiar objects can help a person picture proper portions for meat, poultry, fish and beans. For example, a 3-ounce serving of fish is about the size of a deck of cards. Here are the serving sizes for meat and meat substitutes:

<table>
<thead>
<tr>
<th>Food</th>
<th>Serving size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooked skinless poultry or fish</td>
<td>3 ounces</td>
</tr>
<tr>
<td>Cooked lean meat</td>
<td>1 1/2 ounces</td>
</tr>
<tr>
<td>Cooked legumes or dried beans</td>
<td>1/2 cup or about the size of an ice cream scoop</td>
</tr>
<tr>
<td>Egg</td>
<td>1 medium</td>
</tr>
</tbody>
</table>

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Please answer the following question based on the information in the text and charts.

A person is making a salad and wants to add one serving of chopped, uncooked carrots. How much should she use?

Select one answer only

- ☐ 2 cups
- ☐ 1 cup
- ☐ ½ cup
- ☐ ¼ cup
- ☐ Don’t Know
A person is cooking dinner for himself and he wants to include one serving from the meat and beans group. What should he choose? **HLSI-S**

Select one answer only

- 1 ½ ounces of cooked lean beef
- 1 ½ ounces of cooked fish
- 3 boiled eggs
- 1 cup of cooked kidney beans
- Don’t Know

**Obstructive sleep apnea – what happens?**
Please watch the video then go to the next screen.

Please watch the video then go to the next screen.


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Please answer the following question based on the information in the video clip.

Click here if you would like to watch the video again.

What do the muscles in the throat typically do when a person is sleeping?

Select one answer only

- Keep the throat as open as it is when a person is awake
- Relax slightly and allow the throat to narrow but not close
- Relax completely and allow the throat to close
- Don’t Know

16. Lunge

Please watch the video below before proceeding to the next screen.

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Please answer the following questions based on the information in the video clip.

http://www.mayoclinic.com/health/lunge/MM00723

Click here if you would like to watch the video again.

What parts of the body do lunge exercises work? HLSI-S

Select one answer only

- Arms and shoulders
- Back and abdomen
- Legs and buttock
- Don't Know
Explanation of Benefits
ABC Insurance Company
Plan Member: John Doe
Patient: Jane Doe

<table>
<thead>
<tr>
<th>Dates of service</th>
<th>Type of service</th>
<th>Submitted</th>
<th>Not covered</th>
<th>Covered</th>
<th>Co-pay</th>
<th>Plan liability</th>
<th>Patient responsibility</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/22/09</td>
<td>Physical therapy</td>
<td>140.00</td>
<td>0.00</td>
<td>140.00</td>
<td>140.00</td>
<td>0.00</td>
<td>140.00</td>
<td>A</td>
</tr>
<tr>
<td>7/15/09</td>
<td>Laboratory</td>
<td>170.00</td>
<td>66.00</td>
<td>104.00</td>
<td>30.00</td>
<td>74.00</td>
<td>30.00</td>
<td>B</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>310.00</td>
<td>66.00</td>
<td>244.00</td>
<td>170.00</td>
<td>74.00</td>
<td>170.00</td>
<td></td>
</tr>
</tbody>
</table>

Please answer the following questions based on the information in the chart.

How much will the insurance company pay for the physical therapy received on 7/22/09?

Select one answer only

☐ $140
☐ $100
☐ $40
☐ $0
☐ Not sure

How much does the patient have to pay for the laboratory services received on 7/15/09?

Select one answer only

☐ $104
☐ $74
☐ $66
☐ $30
☐ Not sure
How many grams of fiber are in two servings?
Select one answer only

☐ 2
☐ 3
☐ 4
☐ 5
☐ Not sure
If a person is on a 2,500 calorie diet, what percent of the daily value of saturated fat would he get from one serving? Select one answer only

- 10 percent
- 11 percent
- 12 percent
- 13 percent
- Not sure

Prostate Cancer

Number of Men out of 100 Who Die from Prostate Cancer Versus Other Diseases

Please answer the following question based on the information in the chart.
More men die from prostate cancer than from other causes. Based on the chart above, would you say this is true, false, or are you not sure?

Select one answer only

- True
- False
- Not sure

Based on the chart above, who is more likely to die of prostate cancer?

- White men
- African American men
- Both equally likely
- Neither
- Don’t Know