Communication and Health Literacy

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GEC of Greater Philadelphia
Health Equity and Literacy Faculty Development Course
May 30, 2008
Kinds of Literacy

**Prose Literacy**
health education pamphlets, consent forms, discharge instructions, magazine articles, contracts, fiction - poetry

**Document Literacy**
food guides, medication charts, graphs, application forms, transportation schedules - maps

**Quantitative Literacy**
thermometers, medication schedules, diabetic exchanges, recipes, food bills, order forms

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National Adult Literacy Survey
Kirsh IS, Jungeblut A et. al
US Dept. of Education, 1993
On Saturday afternoon, if you miss the 2:35 bus leaving Hancock and Buena Ventura going to Flintridge and Academy, how long will you have to wait for the next bus?

<table>
<thead>
<tr>
<th>AM</th>
<th>OUTBOUND (from Terminal)</th>
<th>INBOUND (toward Terminal)</th>
<th>You can transfer from this bus to another needed anywhere else in the city bus system</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Leave 1 Leaves 2 Leaves 3 Leaves 4 Leave 5</td>
<td>Leave 1 Leaves 2 Leaves 3 Leave 4 Leave 5</td>
<td>Leave 1 Leaves 2 Leave 3 Leave 4 Leave 5</td>
</tr>
<tr>
<td>7:20</td>
<td>7:35 7:45 7:50 8:03 8:15</td>
<td>7:15 7:27 7:42 7:47 7:57</td>
<td>8:15 8:45 8:12 8:17 8:27</td>
</tr>
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<td>8:35 8:45 8:50 9:03 9:15</td>
<td>8:15 8:27 8:42 8:47 8:57</td>
<td>9:15 9:45 9:12 9:17 9:27</td>
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</tr>
<tr>
<td>5:20</td>
<td>5:35 5:45 5:50 6:03 6:15</td>
<td>16:15 16:27 16:42 16:47 1:07</td>
<td>17:15 17:45 17:12 17:17 17:27</td>
</tr>
</tbody>
</table>
# Medication Management Chart

Save this chart – then post in a visible location such as the refrigerator or medicine cabinet.

<table>
<thead>
<tr>
<th>DRUG NAME/ PURPOSE RX/OTC</th>
<th>COLOR/ FORM</th>
<th>DIRECTIONS/ CAUTIONS</th>
<th>TIME of DAY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>AM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OVER NIGHT</td>
</tr>
</tbody>
</table>

NOTE: It’s a good idea to make several copies of this blank chart before you list your current medications; that way, you will have a new chart to use if your list of medications changes.
# My Personal Food Diary

**Minimum Daily Guide for Pregnancy and Breastfeeding**

**MONTH** __________ Day of the month: __________

<table>
<thead>
<tr>
<th>PRENATAL VITAMIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take one a day. If you run out of prenatal vitamins, take one multi-vitamin with iron every day.</td>
</tr>
</tbody>
</table>

- ¾ cup orange juice
- ¾ cup grapefruit juice
- 1 medium orange/kiwi
- ½ grapefruit
- ½ cup strawberries
- ¼ cup cabbage
- 12 oz. tomato juice or ½ cup tomatoes

1 cup milk
2 slices (1 oz.) cheese
1 cup macaroni and cheese
1 cup low-fat yogurt
1½ cups cottage cheese
½ cup lite ice milk
1 cup pudding

3 slices lunch meat
2 oz. cooked meat, liver
3 oz. fish/poultry (no skin)
2 eggs
1 cup cooked beans
¼ cup peanut butter
½ cup tuna salad
½ cup nuts/seeds/chick peas

1 slice bread
½ cup hot cereal
¼ cup cold cereal
½ cup rice, noodles or pasta
1 taco shell/tortilla
½ bun or roll
5 crackers

1 cup raw or ½ cup cooked:
- apple
- banana
- melon
- apricots
- grapes
- green beans
- pear
- asparagus
- peach
- green peas
- plum
- corn

1 cup raw or ½ cup cooked:
- spinach
- sweet potatoes
- brussel sprouts
- potatoes
- carrots
- avocado

Directions: Many things affect your baby's healthy development, including what you eat and drink. This chart shows you possible suggestions for each food group; you make your own choices. Place an X in each box after you've made your selection. Check off each serving to make sure you get your minimum daily requirements.

Also, drink 6-8 glasses of water, or juices daily. It's important to eat right to help your baby grow strong, by making sure you get all the nutrients you need during pregnancy and breastfeeding.

Breastfeeding is a nutritious source of food for your infant, especially if you eat right. Eating correctly will help get your baby off to a healthy start, before and after birth.

Get your baby off to a healthy start!

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### Inner Circle
**Grain, Starch & Sugar Group**
- Whole grain cereal, unsweetened: 3/4 cup
- Cooked cereal: 1/2 cup
- Brown rice: 1/3 cup
- Whole wheat pasta: 1/2 cup
- Beans, peas, lentils, lima beans: 1/3 cup
- Corn and sweet peas: 1/2 cup
- Whole wheat bread: 1 slice
- Whole wheat bread, light: 2 slices
- White potato: 1 small (3 oz)
- Mashed potato, no fat: 1/2 cup
- Sweet potato: 1/2 cup (3 oz)

### Middle Circle
**Grain, Starch & Sugar Group**
- Ready-to-eat cereal, unsweetened: 3/4 cup
- Pasta: 1/2 cup
- White rice: 1/3 cup
- White bread: 1 slice
- White bread, light: 2 slices
- Tortilla, 6-inch diameter: 1 item
- English muffin, roll, or bun: 1/2 item
- Saltine-type crackers: 6
- Rice cakes: 2
- Frozen bagel: 1/2 item
- Fresh bagel: 1/4 item

### Outer Circle
**Grain, Starch & Sugar Group**
- Sugar: 5 tsp. 1 starch
- Sweetened cereal: 1/2 cup 1 starch
- Soda, iced tea: 12 oz. 2 starch
- Low-fat cookies: 2 1 starch
- Frozen yogurt: 1/3 cup 1 starch
- Cookies: 2 1 starch 1 fat
- Cake, no icing: 1/2 cake 2 starch 2 fat
- Ice cream: 1/2 cup 1 starch 2 fat
- Chocolate: 1 oz. 1 starch 1-1/2 fat
- French fries: 10 1 starch 1 fat
- Snack chips: 1 oz. 1 starch 1 fat

### Vegetable Group
- All non-starchy vegetables: 1/2 cup
- Vegetable juice: 1/2 cup
- Tomato sauce: 1/3 cup
- Fruit juice: 1/2 cup
- Fruit cocktail, in water or juice: 1/2 cup
- Canned fruit, in water or juice: 1/2 cup

### Protein
- Lean beef (eye round, sirloin): 1 oz.
- Lean veal (most cuts): 1 oz.
- Lean pork (tenderloin, center loin): 1 oz.
- Chicken/turkey (no skin): 1 oz.
- Low-fat cheese: 2 oz.
- Fat-free cheese: 2 oz.
- Low-fat cottage cheese: 1/4 cup
- Low-fat luncheon meat, 95-99% lean: 1 oz.
- Grated parmesan cheese: 2 Tbsp.

### Milk & Yogurt
- 1% milk: 1 cup
- Low-fat plain yogurt: 1 cup
- Soy milk (less than 18 grams sugar and less than 3 grams fat): 1 cup

### Fruit
- Fruit punch: 1/2 cup
- Fruit canned, in syrup: 1/3 cup

### Protein
- Egg: 1 1 proc. 1/2 fat
- Beef, chuck: 1 oz. 1 proc. 1/2 fat
- Lamb, pork, other cuts: 1 oz. 1 proc. 1/2 fat
- Chicken/turkey with skin: 1 oz. 1 proc. 1 fat
- Ribs, sausage: 1 oz. 1 proc. 2 fat
- Luncheon meat: 1 oz. 1 proc. 2 fat
- Hot dog: 1 oz. 1 proc. 2 fat
- Regular cheese: 1 oz. 1 proc. 2 fat

### Milk & Yogurt
- Milk 2%: 1 cup 1 milk 1 fat
- Whole milk: 1 cup 1 milk 1-1/2 fat
- Low-fat fruit yogurt: 1 cup 1 milk 1 fruit, 1 starch
- Whole soy milk: 1 cup 1 milk 1 fat

### Fat
- Margarine, mayo: 1 tsp.
- Diet margarine/mayo: 1 Tbsp.
- Butter: 1 tsp.
- Cream cheese: 1 Tbsp.
- Sour cream: 2 Tbsp.
# Nutrition Facts

Serving Size 1/2 cup (114g)
Servings Per Container 4

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Calories</td>
<td>90</td>
</tr>
<tr>
<td>Calories from Fat</td>
<td></td>
</tr>
<tr>
<td>Total Fat</td>
<td>3g</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>0g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>0mg</td>
</tr>
<tr>
<td>Sodium</td>
<td>300mg</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>13g</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>3g</td>
</tr>
<tr>
<td>Sugars</td>
<td>3g</td>
</tr>
<tr>
<td>Protein</td>
<td>3g</td>
</tr>
</tbody>
</table>

**% Daily Value**

- **Total Fat**: 5%
- **Saturated Fat**: 0%
- **Cholesterol**: 0%
- **Sodium**: 13%
- **Total Carbohydrate**: 4%
- **Dietary Fiber**: 12%
- **Sugars**: 4%
- **Protein**: 4%

Vitamin A 80%
Vitamin C 60%
Calcium 4%
Iron 4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

<table>
<thead>
<tr>
<th>Calories</th>
<th>Total Fat</th>
<th>Sat Fat</th>
<th>Cholesterol</th>
<th>Sodium</th>
<th>Total Carbohydrate</th>
<th>Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,000</td>
<td>Less than</td>
<td>65g</td>
<td>Less than</td>
<td>300mg</td>
<td>300g</td>
<td>30g</td>
</tr>
<tr>
<td>2,500</td>
<td>Less than</td>
<td>80g</td>
<td>Less than</td>
<td>300mg</td>
<td>300g</td>
<td>30g</td>
</tr>
</tbody>
</table>

Calories per gram:
- Fat 9
- Carbohydrate 4
- Protein 4
tuohtiw a llew dengised dna ylreporp detenmelpmi margorp, ruoy stneilec yam eviecer etauqedani noitcetorp fo evitisnes ssenisub secruroser, hcihw thgim tsac na elbarovafnu thgil no eht esabatad ngised ssecorp nihtiw ruoy ynapmoc.
Health Care Yesterday and Today

Asthma

Before
• theophylline pills

Now
• inhalers with spacers
• know the difference between controller and rescue medications
• test your peak flow rates on a daily basis
• take tapering doses of prednisone
• identify and eliminate allergens in your home
The Health Care Experience of Patients With Low Literacy

Problems repeatedly mentioned
- deep sense of shame, reinforced by hospital staff
- difficulty reading signs and locating places
- intimidation of filling forms
- frequency of medication errors

Baker, Parker et al, 1996
Emory University School of Medicine
Harbor - UCLA Medical Center

Arch Fam Med, 1996
Inadequate Functional Health Literacy

ER patients (n=2659)
  - English speaking (n=1892)
  - Spanish speaking (n=767)
Two large urban public hospitals

Test of Functional Health Literacy in Adults (TOFHLA)

Williams, Parker, Baker et al
Emory University School of Medicine
Harbor - UCLA Medical Center
JAMA, 1995
Test of Functional Health Literacy (TOFHLA)

Includes commonly used medical texts:
- upper GI radiographic series
- patient “Rights and Responsibilities”
- consent forms
- prescription labels
- blood glucose test results
- appointment slips
- financial information forms

Williams, Parker, Baker et al
Emory University School of Medicine
Harbor - UCLA Medical Center
JAMA, 1995
# Test of Functional Health Literacy (TOFHLA)

<table>
<thead>
<tr>
<th>Numeracy Test Items</th>
<th>Inadequate</th>
<th>Marginal</th>
<th>Adequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take 4x/day</td>
<td>23.6</td>
<td>9.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Take on empty stomach</td>
<td>66.3</td>
<td>52.1</td>
<td>23.9</td>
</tr>
<tr>
<td>Number of pills to take</td>
<td>69.9</td>
<td>33.7</td>
<td>13.0</td>
</tr>
<tr>
<td>Number of refills</td>
<td>42.0</td>
<td>24.7</td>
<td>9.6</td>
</tr>
<tr>
<td>Next appointment</td>
<td>39.6</td>
<td>12.7</td>
<td>4.7</td>
</tr>
<tr>
<td>Financial eligibility</td>
<td>74.3</td>
<td>49.0</td>
<td>31.5</td>
</tr>
</tbody>
</table>
# Test of Functional Health Literacy (TOFHLA)

<table>
<thead>
<tr>
<th>Prose Literacy Test Items</th>
<th>% Incorrect (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inadequate</td>
</tr>
<tr>
<td>Instructions for GI test</td>
<td>57.2</td>
</tr>
<tr>
<td>Rights and Responsibilities</td>
<td>81.1</td>
</tr>
<tr>
<td>Informed consent</td>
<td>95.1</td>
</tr>
</tbody>
</table>

n=775, n=363, n=1521
Test of Functional Health Literacy (TOFHLA)

1/4 could not correctly describe their medical problem
1/4 could not state directions for a prescribed medication
1/2 did not understand a change in direction
3/4 with new prescriptions could not explain their use
1/2 did not know the purpose of their medicine

Williams, Parker, Baker et al
Emory University School of Medicine
Harbor - UCLA Medical Center
JAMA, 1995
Test of Functional Health Literacy (TOFHLA)

Yet....

9/10 believed they had a good understanding of their treatment

Williams, Parker, Baker et al
Emory University School of Medicine
Harbor - UCLA Medical Center
*JAMA*, 1995
Literacy and Health

Asthma Study

<table>
<thead>
<tr>
<th>ER + Clinic Patients</th>
<th>3rd</th>
<th>4-6</th>
<th>7-8</th>
<th>HS</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=483</td>
<td>65</td>
<td>130</td>
<td>157</td>
<td>131</td>
</tr>
</tbody>
</table>

Best to wait and see whether symptoms go away on their own before taking “as needed” asthma medicine

Doesn’t really matter how an asthmatic uses their puffer. It will still deliver a useful dose.

Asthma medicines have no side effects

Williams and Baker - Chest, 1998