



## Spring 2000: High Five for Health

### Nutritionist Note:

This session focuses on the benefits of eating vegetables and fruits. The session provides opportunities for participants to evaluate their own intake of vegetables and fruits and identify ways to increase their intake.

## Nutritionist Guidelines

**Time:** 90-120 minutes

**WHILMA:** Enter session in WHILMA as: **6SP**

**Objectives:** In this session, the participant will:

(Key Points)

- Compare their average intake of vegetables and fruits to WHI and national averages.
- Explore the benefits of eating more vegetables and fruits.
- Practice using a variety of methods that might increase their intake of vegetables and fruits.

**Materials:**

- Potential session reminder-pg 14; (electronic copy available)
- Self-monitoring tools
- Optional Overhead:
  - *Vegetables and Fruits (Overhead 1)* – pg.15
- Resources:
  - *Promising Phytochemicals in Vegetables and Fruits* pg. 16
  - Sample menu pg. 17
- Optional Materials for Skill Building Choices:
  - Serving size options (i.e., real foods or NASCO food models designating 1, ½ and ¼ cup-servings); hard to estimate vegetable and fruit servings (e.g., mini carrots, banana, medium piece of fruit)

**Other WHI Resources Related to Session:**

- Year 1 Participant Manual-Resource Section:
  - *Fruits and Vegetables Chart* (pgs. 36-38)
  - *How to Stir-Fry* (pg. 50)
- Participant Maintenance Manuals:
  - Yr. 2 Spring - Balancing Your Food Choices
    - Worksheet 4 - *Tips for Increasing Fruits, Vegetables, and Grains* (pgs. 12-15)
  - Yr. 4 Fall - Unmixing the Mixed Dish
    - Resource - *Recipes: Figuring Fruit/Vegetable and Grain Servings* (pgs. 28-32)
  - Summer 1999 - The Joy of Soy
  - Winter 1999 – Successful Aging: A Work of Art
    - Optional participant worksheet: *My Eating Patterns*

**Optional - Nutritionist Background Reading:**

- Position of the American Dietetic Association: *Phytochemicals and functional foods*, JADA, 1995;95:493-496.
- Thompson B, Demark-Wahnefried W, Taylor G, McClelland JW, Stables G, Havas S, Feng Z, Topor M, Heimendinger J, Reynolds KD, and Cohen N. *Baseline fruit and vegetable intake among adults in seven 5 A Day study centers located in diverse geographic areas*. JADA, 1999; 99:1241-1248.
- Craig WJ. *Phytochemicals: Guardians of our health*. JADA, 1997; 97 (suppl 2): S199-S204.
- Steinmetz KA, and Potter JD. *Vegetables, fruit and cancer prevention: A review*. JADA, 1996, 96: 1027-1039.
- Forum and Workshop on Food, Phytonutrients, and Health. Nutrition Reviews, 1999;57:S1-S52.  
[The proceedings of an USDA-sponsored forum and workshop held in March 1998 on food, phytonutrients, and health.]
- Food, Nutrition and the Prevention of Cancer: a global perspective, 1997 (660 pages).  
[A comprehensive report on cancer prevention, and the first to examine cancer prevention from an international perspective. Includes new recommendations for cancer prevention and public policy recommendations. Copies are available directly from the American Institute for Cancer Research at a special discount price - \$35.00 which includes shipping and handling (1-800-843-8114)].

**Optional - Internet Resources:**

- [www.phytopia.com/PhyGloss.htm](http://www.phytopia.com/PhyGloss.htm) glossary of phytochemicals and terms used in phytochemical research.
- [www.aicr.org](http://www.aicr.org) American Institute for Cancer Research:
  - \* Press Corner: Fit After Fifty Monthly Columns
  - \* Consumer Help: AICR Free Educational Publications – (single copy free of charge)
    - *Taking A Closer Look at Phytochemicals*
    - *Taking A Closer Look at Antioxidants*
- [www.eatright.org](http://www.eatright.org) American Dietetic Association:
  - \* Nutrition Resources – Nutrition Fact Sheets: “Vitamins, Minerals and Functional Foods”
    - *Antioxidant Vitamins for Optimal Health*
    - *Lycopene - an Antioxidant for Good Health*
    - *The Proof is in the Tea Leaves*
- [www.5aday.com](http://www.5aday.com) 5-A-Day:
  - \* Links: provides nutritional information about various fruits and vegetables.
  - \* Recipes: provides recipes and tips for selecting and storing produce.
  - \* Educators: Health Info– provides general statements about fruits and vegetables in relation to health.

**Peer Group Ideas:**

A list of suggested peer group topics and ideas for Spring 2000 follow-up are provided on page 13.

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Below is a list of the maintenance sessions planned for 2000. This information will help Nutritionists plan ahead when responding to participant requests for ‘additional information’.

**Upcoming Maintenance Session Topics:**

- **6SU** - Summer 2000 Evaluating Dishes Prepared Away from Home
- **7F** - Fall 2000 Progress in WHI and Preparing for the Holidays
- **7W** - Winter 2000 Wholesome Grains and Pasta
- **7SP** - Spring 2001 Women and Heart Disease

## Spring 2000: High Five for Health (Facilitation Outline)

	<b>GROUP SHARING/NEXT STEPS FOLLOW-UP (20-30 minutes)</b>
(20-30 minutes)	<p><b>Objective:</b> Participants share experiences and feelings with other group members about how WHI has helped them age more successfully.</p> <p><b>Purpose:</b> Build group cohesion and self-efficacy.</p> <p><b>A. Group Sharing/Next Steps Follow-up:</b> (Potential topics &amp; questions, select one topic for group sharing, or develop your own idea):</p> <p><u>Age-Related Topic:</u> During our last session, we talked about some strategies for successful aging. The White House Conference on Aging showed that: meaningful involvement, positive mental outlook and relationships with others can add life to your years.</p> <p><u>Q/A</u> ☛ What examples do you have in your own life that years to your life? (such as provide meaningful involvements, improve your mental outlook or increase your relationships with others)</p> <p><u>Fruits, Vegetables in the News Topic:</u> <u>Q/A</u> ☛ What have you heard in the news, or seen on TV about the benefits of eating vegetables and fruits?</p> <p><b>B. Ice Breaker Suggestion:</b> Ask participants to share information about the vegetables and fruits they like and eat. Keep a list of the vegetables and fruits mentioned on a flip chart or blackboard.</p> <p><u>Q/A:</u> Use either (or both) of the questions below, or develop your own.</p> <p>☛ Think about the vegetables and fruits you like and eat:</p> <ul style="list-style-type: none"> <li>- Name of one fruit AND one vegetable that you <u>frequently eat</u> and one or two reasons WHY.</li> <li>- Name of one fruit and one vegetable that <u>you really like, but seldom eat</u> and one or two reasons WHY.</li> </ul>

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**Peer Group Sharing** (If peer groups):

Purpose: Provide support and recognition of peer group activities and to promote interest:

**Q/A**

- ☛ What peer group activities did your group have during the past 3 months?
- ☛ How did these activities help you stay interested and motivated in WHI?



*Notes*

	<b>NEW MATERIAL (50-60 minutes)</b>
(2 minutes)	<p><b>1. Overview/Introduction</b></p> <p>A. Point out that most people have heard the message “Eat your fruits and vegetables.” However, until recently, few people, including scientists, have understood the real benefits of these foods. Now, thanks to the advancement of science, we are discovering that vegetables and fruits have additional benefits beyond the vitamins, minerals and dietary fiber they contain. They also have compounds called <i>phytochemicals</i>.</p> <p>B. Mention that this session will provide a chance for participants to look at their own intake of vegetables and fruits and discover how these foods play an important role in people’s health.</p>
(10-15 minutes) Worksheet Spring1	<p><b>2. What is Your Intake of Vegetables and Fruits?</b></p> <p><u>Objective:</u> Participants compare their average intake of vegetables and fruits to WHI and national averages.</p> <p><u>Purpose:</u> Self-assessment</p> <p>A. Complete <b>Worksheet Spring 1</b>.</p> <ul style="list-style-type: none"> <li>Have participants evaluate their current intake of vegetables and fruits. Use the <b>Worksheet Spring 1 – What’s My Intake of Vegetables and Fruits</b> or other clinic option (e.g., <i>My Eating Patterns</i>- Winter ’99 session materials). Allow about 5 minutes for participants to complete the questions.</li> </ul> <p>B. Discuss <b>Worksheet Spring 1</b>.</p> <ul style="list-style-type: none"> <li>Ask participants to share information.</li> </ul> <p><u>Q/A:</u> Use any of the questions below (or develop your own).</p> <ul style="list-style-type: none"> <li>☛ In a typical day, how many meals and snacks usually include a ½ cup serving of vegetables or fruits?</li> <li>☛ What is your typical serving size of vegetables? What about fruits?</li> </ul> <p>C. Provide Brief Overview of Fruit/Vegetable Intakes.</p> <ul style="list-style-type: none"> <li>Point out that an average U.S. adult eats about 4 servings of fruits and vegetables per day (based on the results of the 1994-96 Continuing Survey of Food Intakes by Individuals).</li> <li>Mention that this is comparable to the fruit and vegetable intakes reported by women in the WHI Dietary Study when they entered the program.</li> </ul>

- Point out that currently women in the Dietary Change Group have increased their intakes to 5 servings per day, while women in the Comparison group have not changed.
- Remind participants that the WHI fruit/vegetable is at least 5 servings per day and while 5-a-day is a reasonable goal, more is definitely better.

D. Discuss Fruit/Vegetable Intake Data.

- Ask a few volunteers to share their thoughts. Use the questions below (or develop your own).

**Q/A:**

- How do you think your usual vegetable and fruit intake compares to other adults in the U.S. or other women in the WHI Dietary Study?
- How has your intake changed since joining WHI?

E. Discuss Variety.

- Use information from the **Worksheet Spring 1** and the group's list of 'frequently eaten vegetables and fruits' (Ice breaker activity) to have participants talk about the variety.

**Q/A:** Use any of the questions below (or develop your own).

- Why is it important to eat a wide variety of vegetables and fruits?
- How many different kinds of vegetables and fruits do you eat in a typical week?
- Why is it important to eat dark green, deep yellow and citrus fruits and vegetables?
- Compare Commonly Purchased Vegetables and Fruits (optional).
  - Point out that sometimes the vegetables and fruits people buy are not necessarily the highest in nutrient content (i.e., potatoes and apples).
  - Use **Spring Overhead 1 Vegetables and Fruits** on page 15 to show a list of the ten most frequently purchased vegetables and fruits and a list of the ten most nutrient-rich vegetables and fruits (based on vitamin C, A, folate and dietary fiber content).

Spring  
Overhead 1  
(optional) –  
pg. 15



Notes

(15-20  
minutes)

### 3. Benefits of Vegetables and Fruits

Objective: Explore the benefits of eating more vegetables and fruits.

Purpose: To motivate participants to think about eating more vegetables and fruits.

#### A. Discuss Benefits.

- Ask participants to share what they already know (or have heard) about the reasons to eat vegetables and fruits. (Note: If participants mentioned news reports about vegetables and fruits earlier in the group-sharing component, be sure to bring up participant questions and comments here).

Q/A: Use the questions below (or develop your own).

- What have you heard in the news, or seen on TV about the benefits of eating vegetables and fruits?
- What benefits have you experienced?

#### B. Reinforce Positive Benefits.

- Reinforce the positive benefits that participants mention. If participants don't have many ideas, ask them if they would like to hear about some of the potential benefits. Use the ideas below to provide information that you think would be important for your population:
  - **May prevent cancer** - some of the vitamins, minerals and phytochemicals in plants act as antioxidants, such as Vitamins C and E, selenium, and beta carotene. Other phytochemicals are believed to stimulate enzymes that detoxify cancer-causing substances.
  - **May prevent heart disease** – eating more F/Vs helps people eat less meat, which lowers the fat in their diets; F/Vs also contain folate, a vitamin that helps lower blood levels of homocysteine (another risk factor for heart disease). In addition, phytochemicals in F/Vs may help prevent fatty deposits from forming in the blood vessels and the soluble dietary fiber in F/Vs appears to help lower blood cholesterol.
  - **May prevent stroke** – researchers believe that potassium, as well as antioxidants (Vit C, E) and phytochemicals may help prevent strokes.
  - **Helps reduce blood pressure** – researchers believe that the potassium and magnesium in F/Vs may possibly have a role in reducing blood pressure.
  - **Helps eyesight** – scientists think that the antioxidants and carotenoids in F/Vs could help protect against cataracts and macular degeneration.



Participant  
Resource:  
*Promising  
Phyto-  
chemicals in  
Vegetables  
and Fruits*

- **Helps maintain weight** – if vegetables are cooked without fat or eaten raw, they are very low in calories. In addition, vegetables are high in water and dietary fiber which helps people feel full with fewer calories. Finally, F/Vs are also low-calorie substitutes for cakes, pastries and high-fat snacks. For example: one cup of vegetables, one small cookie, and 5 potato chips all contain about 50 calories.

**Q/A:** Ask participants if they have heard the term *phytochemicals*:

☛ When you hear the word *phytochemical*, what comes to mind?

C. Define and Explain Phytochemicals.

- Point out that the term *phytochemicals* may sound a little threatening, but these compounds are very natural. They are the substances in plants that give flowers, autumn leaves and various vegetables and fruits their distinctive colors and aroma. Plants (vegetables, fruits, legumes and whole grains) naturally produce *phytochemicals* to protect themselves against viruses, bacteria and fungi in nature.
- Mention that *phytochemicals* include hundreds of different substances, some of which the participants may already recognize, such as Vitamin C, carotenoids, and isoflavones (Summer '99 session on soyfoods).
- Let participants know that researchers have just begun to understand how phytochemicals might contribute to health. Scientists believe that phytochemicals help by:
  - Serving as antioxidants.
  - Controlling certain enzymes that promote disease.
  - Interfering or blocking certain substances that may promote disease.
  - Whisking away substances in the cell that may harm the body.

D. Briefly Discuss Specific Phytochemicals.

- Use the Participant Resource - *Promising Phytochemicals in Vegetables and Fruits* (copy available on pg. 16 of these materials). Make the following points:
  - Phytochemicals are plentiful in many of the foods people already eat – especially vegetables and fruits. They are also found in soyfoods, whole grains, and herbs and spices like parsley, chives, garlic, and ginger.
  - Sometimes media reports can mislead people to think that specific foods such as broccoli, blueberries, or tomatoes are magic phytochemical powerhouses; this is not true. No single food is a magic bullet.
  - Different plant foods supply different types of phytochemicals. Therefore, the wider the variety of foods people eat, the broader the range of disease-fighting phytochemicals they will receive.

E. Discuss Phytochemical Supplements.

- Mention that eating vegetables and fruits is better than taking a phytochemical supplement. Currently, there is not enough research available to supply answers to key questions such as:
  - Do phytochemicals in supplements act the same way in the body as they do in whole foods?
  - Does the amount provided in the supplement actually offer any benefit?
  - Do the supplements contain the right active phytochemical(s)?

F. Set Up Skill Building Activity.

- If possible, give participants a choice of areas that you are prepared to focus on during the skill building activity. Ask them to select the area where they would like to focus.
  - For ideas, see the delivery ideas in the skill building component on page 11 and/or develop your own ideas.



Notes

(30-40  
minutes)

#### 4. Skill Building: Expanding Vegetable and Fruit Intake

Objective: Practice using a variety of methods that might increase intake of vegetables and fruits.

Purpose: Promote self-management and self-efficacy by exploring different methods of increasing vegetable and fruit intakes.

A. Delivery Ideas: (Use any of these ideas or develop your own).

1. Five is Easier Than You Think

- Set up stations to help women evaluate F/V serving sizes.
  - Pieces of fruit or vegetables that would equal a serving (carrot sticks, banana, small, medium large piece of fruit, etc.)
  - Half-cup serving of vegetables and/or fruit.
- Participant Resource: *Sample Meal* (example of WHI menu with 5+ F/V servings). Copy available – pg. 17 G. Nutritionist session.

2. Creating Healthy Opportunities:

- Teams or large group - identify creative ways to add vegetables and fruits to their meals and snacks.
  - Small groups could use a Mind mapping technique.
  - Large group: let group brainstorm ideas, then use the 'tennis match' technique to get the group to identify their top ideas.
- Participant Resource: *Ideas to Increase the Variety of Vegetables and Fruits You Eat*.

3. Colorful and Quick: Broaden vegetable and/or fruit choices

- Explore and taste quick and easy methods for preparing vegetables and fruit dishes: raw, microwave, steaming, etc.


4. Managing Your Weight with Vegetables and Fruits

- Set up stations or a demo that compares the calorie/nutrient difference between the calories in vegetables and fruits as compared to high-fat snacks and desserts.

5. Tour a supermarket produce department: what's in season, how to select fresh produce.



Notes

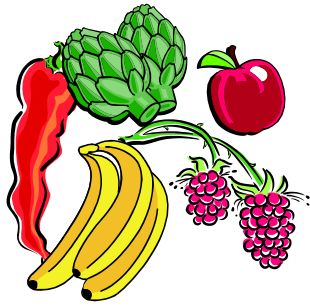
	<b>NEXT STEPS (15 minutes)</b>
(15 minutes)	<p><b>Objective:</b> Identify possible choices that would help to increase intake of vegetables and/or fruit.</p> <p><b>Purpose:</b> Increase likelihood that participants will consider making changes.</p> <p>A. Brief Summary.</p> <ul style="list-style-type: none"> <li>• Point out that there are many different approaches people can use to increase their intake of vegetables and fruits.</li> <li>• In summary, mention that vegetables and fruits are a wonderful way to add flavor to your meals and help increase your health.</li> </ul> <p>B. Ask Participants to Share.</p> <ul style="list-style-type: none"> <li>• Ask participants to think about what they heard and did in today's session and then share information about any of the following:</li> </ul> <p><b>Q/A:</b> Potential Questions: (Use any of the following, or develop your own.)</p> <ul style="list-style-type: none"> <li>☛ What would need to be different in your life for you to consider increasing your intake of vegetables (or fruits)?</li> <li>☛ Imagine that you decided to add another serving of vegetables or fruits to your meals or snacks.             <ol style="list-style-type: none"> <li>a. What would it be like? OR</li> <li>b. What would you want to do?</li> </ol> </li> <li>☛ Based on what you heard today, what ideas were most appealing to you?</li> </ul> <p>(See page 13 for a list of ideas for peer groups who want to follow-up on the Spring 2000 session).</p>
 <i>Notes</i>	

Follow-up for Spring 2000 Session: Ideas for Peer Groups

The following is a list of ideas that could be used by Dietary Change participants who are meeting in small groups between the quarterly maintenance session.

- *Eating of the Green*: Arrange a low-fat, high-vegetable and fruit salad buffet.
- *Kitchen Gardening*: Learn how to set up a small herb garden and share vegetable or fruit recipes that use fresh herbs.
- *Dressed-Down Salads*: Identify and share low-fat dressing ideas for salads.
- *Soy Update*: Share soy ideas you like, identify new soy products in the store.
- *Guest Speaker*: Invite a speaker from the Cooperative Extension or local nursery to come and talk about setting up a vegetable garden.
- *Field Trip*: Tour of local supermarket produce department: what's in season, how to select fresh produce (vegetables and fruits).

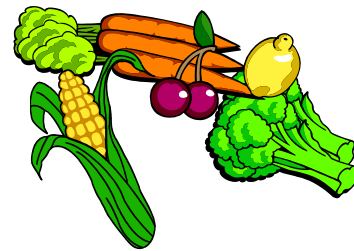
Spring, 2000 Reminder  
(electronic copy available)



## High Five for Health

What if you could add a supplement to your meals that could reduce your risk of cancer, heart attack and stroke? Would you take it? What if it also could help you manage your weight? Ready to run to the store? Well, there is such a supplement and many people are surprised to learn this. What is the supplement? **VEGETABLES and FRUITS.**

The WHI Spring 2000 session will give you an opportunity to look at your own intake of vegetables and fruits and look at how these foods play an important role in our health. Bring your questions and a favorite low-fat vegetable or fruit recipe to share. We look forward to seeing you!



# Vegetables and Fruits

## Most Frequently Purchased:

### Top Ten Vegetables:

Potato
Iceberg lettuce
Tomato
Onion
Carrot
Celery
Sweet corn
Broccoli
Cabbage
Cucumber

### Top Ten Fruits:

Banana
Apple
Watermelon
Orange
Cantaloupe
Grapes
Grapefruit
Strawberries
Peach
Pear

## Most Nutrient-Rich:

(vitamins A, C, folate, and dietary fiber)

### Top Ten Vegetables:

Broccoli
Brussels sprouts
Cooked greens
Artichoke
Sweet potato
Parsnips
Winter squash
Spinach
Kale
Tomato

### Top Ten Fruits:

Orange
Mango
Tangerine
Kiwifruit
Papaya
Mandarin oranges
Cantaloupe
Raspberries
Grapefruit
Strawberries

## Promising Phytochemicals in Vegetables and Fruits

Major Food Sources	Phytochemical Group	Potential Benefits
Allium vegetables: onions, garlic, scallions, leeks, chives	Allium compounds	<ul style="list-style-type: none"> <li>Increases production of anti-cancer enzymes</li> <li>Reduces blood pressure and cholesterol</li> <li>May enhance immune system</li> </ul>
Orange fruits and vegetables and dark greens: carrots, sweet potatoes, winter squash, pumpkin, mango, spinach, collards, bok choy	Beta carotenes	<ul style="list-style-type: none"> <li>Antioxidant</li> </ul>
Beans, legumes, soybeans, Soy foods: tofu, soy milk, soy flour, veggie burgers	Isolflavones Saponins	<ul style="list-style-type: none"> <li>May prevent cancer cells from multiplying</li> </ul>
Tomatoes, watermelon	Lycopene	<ul style="list-style-type: none"> <li>Antioxidant</li> </ul>
Fruits, vegetables, wine, tea soybeans, soy foods, cayenne, onions, apples, red grapes, artichokes	Flavonoids (such as: catechins, isoflavones, quercetin)	<ul style="list-style-type: none"> <li>Antioxidant</li> <li>May prevent cancer cells from multiplying</li> </ul>
Cruciferous vegetables: broccoli, cauliflower, Brussels sprouts, kohlrabi, cabbage, bok choy, kale, mustard greens, rutabaga, turnips, turnip greens	Isothiocyanates (such as: sulforaphane)  Indoles	<ul style="list-style-type: none"> <li>Increases production of anti-cancer enzymes</li> <li>Lowers cholesterol</li> </ul>
Grapes, berries, whole grains, parsley, carrots, citrus fruits, tomatoes, nuts, vanilla beans, cloves	Phenolic acids (such as: coumarins, ellagic acid)	<ul style="list-style-type: none"> <li>May block the action of cancer-causing agents</li> <li>Delays cholesterol formation</li> </ul>
Citrus fruits, cherries, spearmint, dill, mint	Terpenes (such as: limonene, monoterpenes)	<ul style="list-style-type: none"> <li>Increases production of anti-cancer enzymes</li> </ul>

Resources: *Vegetables, fruit and cancer prevention.* JADA. 1996; 96:1027-1039 and *Phytochemicals.* JADA. 1997; 97 (suppl 2):s199-s204.



## Sample Menu

This menu provides an example of meals that meet the WHI nutrition goals and provide 5 or more servings of phytochemical-packed fruits, vegetables and whole grains.

<b>Breakfast:</b>	Fat (gm)	Fruit	Vegetable	Grain
Cold cereal (1 cup), topped with blueberries, ½ cup	1	x		x
Orange juice, ¾ cup	0	x		
Toast, 1 slice	1			x
Margarine, 1tsp	4			
<b>Mid-morning snack:</b>				
V-8 juice, (6 oz. can)	0		x	
<b>Lunch:</b>				
Turkey sandwich: 2 slices bread, 2 oz. white turkey meat, no skin with mustard and 2 slices tomato, 4 slices, cucumbers, and 1 slice onion	4  0		  x	  xx
Homemade vegetable soup (½ cup vegetables plus broth) OR Spinach salad, 1 cup with flavored vinegar dressing (no added fat)	0		x	
Skim milk, 1 cup (8 oz.)	0			
<b>Afternoon snack:</b>				
Fresh fruit, 1 med. (orange, apple, etc.)	0	x		
Whole wheat crackers, 5-6	1			x
<b>Dinner:</b>				
Chicken stir-fry: ½ cup white meat chicken, no skin and ½ cup vegetables (red and yellow peppers, broccoli, snow peas, carrots)	8		x	
Brown rice, 1/2 cup	1			x
Pineapple slices, ½ cup	0	x		
Skim milk, 1 cup (8 oz.)	0			
<b>Evening snack:</b>				
Fresh berries, ½ cup topped with 2TB of fat-free yogurt (lemon or vanilla)	0	x		
<b>Totals</b>	<b>20</b>	<b>5</b>	<b>4</b>	<b>6</b>