Food & Fitness Fair Manual
INTRODUCTION TO THE WELLNESS INITIATIVE

The San Francisco Wellness Initiative is a collaborative effort to support student health and well-being. Established in response to the needs identified by a wide-scale youth survey, the initiative links students to a comprehensive array of physical and behavioral health services through both on-campus programming and community-based partnerships.

With leadership from the Department of Children, Youth and Their Families (DCYF), Department of Public Health (DPH) and the San Francisco Unified School District (SFUSD), the initiative is building on existing resources to improve the way government agencies, the school district and community-based organizations work together to address student health needs.

In collaboration with school site administrators, the initiative manages Wellness Programs in fifteen public high schools. In addition, the programs bring community-based organizations onto campuses, provide referrals to public and private health providers, and educate youth about resources and services available both on and off campus.

This comprehensive approach to addressing student needs is proving successful. Since the programs began in 2000, there have been measurable improvements in individual academic achievements, as well as overall campus environments. According to research conducted by ETR Associates, students enrolled in high schools with Wellness Programs reported fewer health risk factors compared to students attending other schools.
"Wellness services are an essential tool for improving student achievement. The stressors facing students will inevitably spill into the classroom, but with the Wellness Program, we have the means to proactively address them."

RON PANG - PRINCIPAL, LINCOLN HIGH SCHOOL

The core staff at the Wellness Programs includes a site coordinator, school nurse, part-time mental health and substance abuse counselors and student and professional outreach workers. This team works to identify student health concerns that might otherwise go unnoticed, undiagnosed or untreated. In 2003, more than 50% of the students receiving ongoing mental health and substance abuse treatment through the Wellness Programs reported they would not have received these services if their school did not have a Wellness Program.

Contact Us

http://www.sfwellness.org/

For more information about the Wellness Initiative, contact:

Stacey Blankenbaker, Initiative Manager
sblankenbaker@dcyf.org
INTRODUCTION to the FOOD & FITNESS FAIR

ABSTRACT: The Food and Fitness Fair is a strategy to inform high school students about better nutritional and physical activity options. This strategy is based on the Youth Development and the Train the Trainer Models and is highly interactive. Nurses train Youth Outreach Workers to train students in the student body about nutrition and physical activity, meanwhile providing taste testings of fruits and vegetables. These Fairs cost $200-$600, based on the size of the student body. The produce vendor assists the school to select the quantity of food to order. Vendors may be able to bring produce to the school site for the Fair. The vendor for SFUSD Student Nutrition Department may assist. Paper food trays can be purchased from the cafeteria manager at an extremely low cost.

Overweight and obesity in children and adolescents has reached epidemic proportions, and is even more evident in low income, children of color and urban residents (Conner, 2003; Goran, Reynolds, & Lindquist, 1999; Gordon-Larsen, Adair, & Popkin, 2002; and Sallis, Prochaska, & Taylor, 2000). Recently the University of California, San Francisco (UCSF) Department of Family Health Care Nursing (DFHCN) surveyed San Francisco families related to the Healthy People 2010 pediatric leading health indicators. Results indicated that only one-fifth of teenagers were consuming the recommended daily servings of vegetables, and 43% were consuming fewer than two servings of fruit per day. Two-thirds of adolescents did not consistently engage in vigorous exercise, and 67% reported over two hours of television viewing or video/video game participation daily. These habits were reflected in increased body mass indices, and approximately one-third of school-aged children and teenagers had a body mass index at or above the 95th percentile. These rates are twice the rate for California adolescents as a whole (Holby, et al, 2006), higher than national averages (Forum on Child & Family Statistics, 2006) and reflect increasing disparity for African American (Cossrow & Falkner, 2004) and medically underserved populations in general (Oberg & Rinaldi, 2006).

The Superintendent of San Francisco Unified School District, Richard Carranza, is promoting a strategic plan that places equity, student achievement and accountability at the forefront. The ideas and actions described in the plan are focused on one main idea: every child has the right to be well-educated. This includes education in nutrition and physical activity, particularly given that the research cited above indicates that there is an increasing disparity for African American and medically underserved populations.

The Food and Fitness Fair is a health promotion event that is based on the Youth Development and the Train the Trainer models. The Youth Development Model emphasizes identifying, recognizing, and then building upon youth strengths. It includes programs, policies, and funding that support young people in becoming healthy, contributing adults. The Train the Trainer Model is based on adult learning theory, which states that people who train others remember 90% of the material they teach, and diffusion of innovation theory, which states that people adopt new information through their trusted social networks. Thus the Food and Fitness Fairs utilize students (YOWs and Peer Resource Students and JrROTC students, etc.) to develop a cadre of skilled school-based trainers, who in turn train others in their school community how to develop improved nutritional and exercise habits.

HISTORY. The Food and Fitness Fairs have been in place at Lowell High School in San Francisco since 2003. Under the direction of Maryann Rainey, PNP and SFUSD credentialed School Nurse, this fair allows
secondary students to participate in interactive exhibits related to healthy food choices, learn about metabolism, consistent with the high school biology curriculum and integrate physical activity into daily life. Coordination and planning of the single-day fair has been achieved with the help of established SFUSD programs, including peer resource students, student nutrition committee, and Youth Outreach Workers (YOWs) hired by the school’s Wellness Center. These student-led resource groups promoted the fair via advertising, assisting with event set-up, actively participating in displays, and distributing fresh fruit and vegetable samples. Their participation enhanced the social-acceptability (or marketing) of a healthy food options among student peers, as well. Additional SFUSD resources included the Student Nutrition Service and Physical Education department faculty, who provided lean body mass measurements and equipment for physical activity, such as jump ropes and hula-hoops. Community organizations such as the YMCA and the Golden Gate National Parks Conservancy, also have provided information, music and dance, and raffle items. Goals of the program include: promoting consumption of 5-9 daily servings of fruits and vegetables; encouraging consumption of whole grains; promoting consumption of unsaturated and polyunsaturated fats; encouraging consumption of locally grown and organically produced foods; and, promoting integration of daily exercise. Tabletop displays are used by students to teach their peers about the prevention of type 2 diabetes and the reversal of prediabetes. Specifically, the SFUSD students were encouraged to a) taste fresh fruit and vegetables, b) identify examples of healthy snacks, c) develop a personal plan to reduce consumption of sugared beverages, d) state two positive health outcomes of a diet low in saturated fats, e) identify a strategy to increase consumption of fruits and vegetables, and f) develop a personal plan to increase physical activity. As evidence of the successful integration of the fair into the SFUSD approximately 800 Lowell students, representing approximately 30% of the student body, participated in this event in past years.

TRAINING THE YOUTH TRAINERS. The school district nurse provides education to the Youth Outreach Works and Peer Resource Students, JrROTC or other student leaders about the purpose of the fair, developing and implementing a timeline for necessary preparations (e.g., food preparation, advertisements, division of labor at the event, etc.) and promoting principles of good hygiene that will be used at the fair. At minimum, two lessons should be taught to the youth trainers in advance of the fair. These lessons are to teach and discuss the goals and objectives of the fair and the implementation of the activity booths. These same student resources will facilitate school-wide dissemination of information about the fair, participate directly in the preparation of food items, and assist with set-up and clean-up of tables and booths. Total cost for a Fair at a high school ranges from $200 for a small campus to $600 for a large campus, including produce from vendors, paper products and prizes. Sources of funds for a Fair have been grants from the PTSA of a school campus and a grant from the UCSF Institute, in 2008-9. (As an example, for a student body of 2,600 students the order for produce was: twenty-five pounds each of jicama, celery and carrot sticks; four cases of cherry tomatoes and strawberries; two cases of red and green apples, and mushrooms; and one case of kiwi fruit all obtained from SFUSD Student Nutrition Service produce vendors.)

Each Food and Fitness Fairs should be evaluated promptly. Participating SFUSD students should be asked to complete a questionnaire assessing their retention of knowledge of display booth information. Upon submission of a completed questionnaire they will be eligible for participation prizes such as cookbooks. The student resource students and adult participants also should be evaluated. The resulting evaluations should be used for planning for the following annual fair.
Create your own Food & Fitness Fair!

TABLE OF CONTENTS

Introduction to the Wellness Initiative 2
Introduction to the Food & Fitness Fair 4

1. Timeline and Worksheet – For High School Food & Fitness Fair in March 8

2. Goals and Objectives of the Fair 10

3. Training the Youth to Teach Food and Fitness Messages at the Fair 12

4. Produce Vendors and Sample Produce Pricing – for Taste Test 13

5. Activities / Booths at the Fair 15
   a. Taste Testing of Fruits and Vegetables (free samples)
   b. Game Wheel Booth with Questions and Answers 17
   c. Sugar Content in Beverages Booth 20
   d. Diabetes Table Top Display 24
      1. Table Top #1: Maintain a Healthy Blood Sugar Display
      2. Table Top #2: Which Blood Vessel and Nerves Do You Want? 27
      3. Table Top #3: How to Be Good to Your Pancreas 30
   e. Sugar, Fat and Salt Vials Booth 33
   f. PlaySafe Booth 35
   g. Physical Endurance and Strengthening Booth 36
   h. Volunteer at Work Parties to Restore Nature 37

6. Posters to Display During the Fair 38

7. Prizes for the Fair 40

8. Community Based Organizations (Invitees to the Fair) 41

9. Roles of Adults for the Fair 46
   a. Obtaining Grant Money
   b. Overview of Adult Roles in the Food & Fitness Fair 47
   c. CBO Letter Templates 49
      1. Invitation
      2. Confirmation
      3. Thank you

10. Resources 52
   a. Websites, Books, and Student Volunteer Opportunities
11. Evaluation of the Food & Fitness Fair and “I want to make a change” Cards
   a. Student Participants
   b. Student YOW and Other Volunteers
   c. Adult Staff
   d. “I want to make a change” Cards

Appendix
   a. Sample Food & Fitness Fair Brochure
   b. Salt, Sugar, Fat Brochures
   c. Assess Your Fitness Knowledge
1. TIMELINE AND WORKSHEET  
For Food & Fitness Fair in March

<table>
<thead>
<tr>
<th>Item</th>
<th>Month</th>
<th>By Whom</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>September</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select a Date for the Fair – Fairs in March fit into the high school Health Promotion Calendar. If food is to be stored for the following day, the cafeteria manager needs to agree to keep produce overnight in the cooler, away from vermin. (Check the calendar for STAR testing in March which results in special schedules.)</td>
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<td></td>
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<tr>
<td>B</td>
<td>September</td>
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</table>
| Apply for grant money. ($200 is adequate for a small campus; $600 for a larger campus.)  
- SFUSD Student Support Services Nutrition Education Project / Mark Elkin may have food grant money  
- PTSA may have grant money for food  
- The cost can be lowered if local grocery stores agree to make a donation for fresh fruits and vegetables. |         |         |
<p>| C    | Fall Semester |         |        |
| Through the assistant principal for facilities, request delivery of (free) tables from the warehouse (20 tables for an event on a large campus) |         |         |
| D    | Fall Semester |         |        |
| Recruit adult assistants, using ‘Adult roles in the fair’ (e.g., School District Nurse, Wellness Coordinator, CHOW, Health Promotion Committee members, After School Coordinators and Staff). |         |         |
| E    | December |         |        |
| Send out invitations to CBOs to ‘table.’ CBOs should be informed that tabling booths need to be interactive in order to have successful student participation. Contact the UCSF School of Nursing, and request that MEPN and graduate students prepare a booth for the fair and be included in the training of the youth prior to the fair. |         |         |
| F    | January |         |        |
| Contact vendor and order food. Be prepared with an approximate number of student attendees at the fair. (Anticipate that 30 – 50% of the student body will want taste tests of fruits and vegetables: ‘Youth want free food, attractively displayed and offered.) Communicate with cafeteria manager who will accept delivery of produce, in exchange for the check that she will give the driver. Provide the check (payment) to the manager days before the day of delivery. |         |         |</p>
<table>
<thead>
<tr>
<th>Item</th>
<th>Month</th>
<th>By Whom</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>G Recruit students to set up and break down tables on the day of the event! (Request JrROTC, Red Cross Club, Student Nutrition Committee or comparable student volunteer group to set up and break down tables on the day of the event.)</td>
<td>February</td>
<td></td>
<td></td>
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<tr>
<td>H Make a brochure that can be used to encapsulate the details of the fair; the date, time and location, the goals and objectives, questions and answers for a nutrition jeopardy and acknowledgement for CBO participants.</td>
<td>February</td>
<td></td>
<td></td>
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<tr>
<td>I Create lists of healthy snack foods for clubs. Create lists of healthy foods for classroom parties (for teachers). See CANFIT, a website.</td>
<td>February</td>
<td></td>
<td></td>
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<tr>
<td>J Design / plan fun physical games (jump rope / Hula Hoops / relay race) with student resources.</td>
<td>February</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K Advertise! Youth make and post flyers throughout school that invite students to fair, giving the date and goals of the fair. Notify student newspaper so a reporter will interview student resources about the pending fair. Post a notice in the student bulletin in the weeks before the fair to advertise.</td>
<td>February</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L Complete In-House Field Trip Forms for students who will be tabling, if they will miss their usual classes.</td>
<td>February</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M Recruit volunteer to photograph students and booths. (Post photos on bulletin board afterwards to continue promoting food and fitness messages.)</td>
<td>February</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| N The day of the Fair:  
  - Set up tables and chairs  
  - Bring lunch to tabling presenters  
  - Break down tables and chairs | March | | |
| O Send ‘thank you’ notes to CBOs, including brochure. | March | | |
2. GOALS AND OBJECTIVES OF THE FAIR

Goals of the Food & Fitness Fair

The purpose of the Food & Fitness Fair is to:
- Promote eating 5-9 servings of fruits and vegetables daily
- Encourage eating whole grains
- Minimize the consumption of highly processed foods (packaged foods)
- Promote consumption of unsaturated and polyunsaturated oils (vegetable oils); minimize consumption of saturated fats (animal fats)
- Promote eating locally grown, organically produced foods
- Promote drinking tap water, minimize drinking sweetened drinks and minimize container trash
- Promote cooking and sharing of meals; knowing your ingredients
- Promote outdoors activities that connect youth to environmental stewardship
- Promote fitness, both endurance training and strength training
- Promote strategies for stress reduction
- Promote the prevention of type 2 diabetes in students and reverse pre-diabetes
- Promote attention to maintaining a healthy blood sugar in order to maintain health, prevent and reverse type 2 diabetes in students

Objectives of the Food and Fitness Fair

1) Youth taste fresh fruit and vegetables during the Fair
2) Youth will be able to name two examples of healthy snacks
3) Youth will be able to say why drinking water is a healthier choice than sugared sodas and fruit juices
4) Youth will be able to name two health reasons why polyunsaturated fats (oils) are healthier than saturated fats.
5) Promote fitness, including vigorous exercise for 30 minutes or more daily
6) Youth will name a strategy to make fresh fruits and vegetables available in all SF neighborhoods
7) Youth will meet representatives of organizations, recreational areas and volunteer opportunities in natural spaces; having the option to sign up for summer jobs and activities
8) Youth are able to name two strategies to prevent and reverse the development of type 2 diabetes
9) Youth will be able to state that including fresh fruits and vegetables (foods that include fiber) in the diet promotes normal metabolism. The fiber in the diet leads to a slow rise in blood glucose, therefore a slow rise in insulin which results in better metabolic health. Therefore there is a relationship between eating whole foods with fiber and a better blood glucose.
10) Youth will be able to state two complications of type 2 diabetes that can be avoided with diet and exercise

11) Youth will be able to state that “muscle matters”. That exercising 150 minutes vigorously per week makes liver and muscle cells “insulin sensitive” (healthier), the opposite of insulin resistant (less healthy). Using muscles in exercise directly and immediately improves metabolism, a benefit lasting for two days.

12) Youth will complete “I want to make a change” card detailing their interest in participating in a youth health group, 1:1 counseling about food and fitness, and/or listing one or more lifestyle changes for better health.

**Objectives Specific to YOWs**

- All YOWS will be able to state the goals of the fair and the purpose of each booth/ table top display.
- Ensure that students who attend the fair can look up and see the goals of the Food & Fitness Fair clearly. (e.g. Goals can be displayed on large poster)
3. TRAINING THE YOUTH TO TEACH FOOD AND FITNESS MESSAGES AT THE FAIR

The School District Nurse trains the trainer. This means that the school district nurse teaches YOWs, Peer Resource Students, Campus Student Nutrition Committee, JrROTC or others in the goals and objectives of the Fair. These students then teach the students who attend the Fair.

- The School District Nurse will meet with students at least twice before the Fair to teach the goals and objectives of the Fair. (It would be a failure if students asked YOWs, “Why is there free food?” and the reply was, “I don’t know.”)
- YOWs will be assigned to do research about the goals of the Fair before the first meeting. See below for a list of potential topics.
  - “Of the recommended goals of the Fair, which do you think is most important? Why?”
  - “What is the size of a portion of fruit or vegetables, and where can you find information about portion sizes?”
  - “Why is eating whole grains (whole wheat, brown rice) important? What is the problem with eating only highly processed foods?”
  - “What is the problem with transfat? What is the problem with eating too much animal or saturated fats? What foods have the recommended polyunsaturated fats?”
  - “Why do we care if our fruits and vegetables are grown far away or close to home?”
  - “Why should we care if the farmers of fruits and vegetables don’t receive government assistance, but the farmers of sugars are subsidized?”
  - “Did you know that food in the lunch line at the cafeteria needs to be low in saturated fat?”
  - “Do you think that there is more marketing of sweetened drinks and of fast foods than there is marketing of fruits and vegetables? Do you think that this has any effect upon food choices of your friends, on your little brothers and sisters?”
  - “Do you have cook books at home?”

- Students will create large posters on flip chart paper that states the goals of the Fair. This will be posted the day of the Fair in plain sight. Student will create flyers, to be posted in the two weeks prior to the Fair that describe the goals of the Fair, the date, time and location of the Fair. Students will be trained to ‘table’ at the various activity / booths of the Fair and will make pertinent posters (e.g., students will articulate the lessons learned from examining the vials of fat, sugar and salt).
  - During the Fair while students are providing taste tests of fruits and vegetables, adults will prompt students to say the purpose of the Fair by asking, “Why are you providing free fruits and vegetables? What is the message that you want to get across?”
4. PRODUCE VENDORS AND SAMPLE PRODUCE PRICING

The quantity of produce to be ordered will be made with the help of the produce vendor (Jan Burkett at Fresh Point). Fresh Point will deliver produce for orders of $250 or more. These fruits and vegetables can be prepared by the vendor; apples can be sliced, jicama can be cut into sticks.

- Call her with the number of students who will participate and the duration of the Fair. Selection of produce can be made in advance.

The price of the produce will be firm two weeks before delivery.

- Obtain money for the Fair in advance and put it into a designated account, with the assistance of the high school accountant.
- Two weeks before the Fair, finalize the produce order and pricing with vendor.
- Ask the high school accountant to write a check in the amount of the produce order.
- Give the check for the produce to the cafeteria manager days before delivery. Arrange for the cafeteria to secure the produce until the start of the Fair and to take the invoice.
- Take and keep the invoice and produce.

Jan Burkett  
School Food Service Specialist  
Jan Burkett (jan.burkett@freshpoint.com)  
Cell: 209-606-8343 (Use cell phone)

Margarita Guardado  
SFUSD Student Nutrition Services  
(415) 749-3604 x3001
## Sample Pricing for Produce

<table>
<thead>
<tr>
<th>High School Fairs in Spring 2009</th>
<th>Student body population</th>
<th>Price of produce March 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission High School</td>
<td>900</td>
<td>$200</td>
</tr>
<tr>
<td>Lincoln High School</td>
<td>2,500</td>
<td>$400</td>
</tr>
<tr>
<td>Lowell High School</td>
<td>2,600</td>
<td>$509</td>
</tr>
<tr>
<td>Burton High School</td>
<td>1,300</td>
<td>$250</td>
</tr>
<tr>
<td>O’Connell High School</td>
<td>700</td>
<td>$240</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Produce order for O’Connell</th>
<th>DELIVERY DATE</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitness Fair 2/25/09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JICAMA STICKS (190-200 pcs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CELERY STICKS (120-130 pcs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CARROTS STICKS (105-115 pcs)</td>
<td></td>
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</tr>
<tr>
<td>CHERRY TOMATOES (apx 15-18 tomatoes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RED APPLES (SLICED IN TRAY)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GREEN APPLES (SLICED IN TRAY)</td>
<td></td>
<td></td>
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<tr>
<td>STRAWBERRIES</td>
<td></td>
<td></td>
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<tr>
<td>PEARS (WHOLE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CUCUMBER SLICED (140 - 150 pcs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORANGES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TANGERINES</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$ 240.95</strong></td>
</tr>
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</table>
**Activities/Booths at the Fair**

5a. TASTE TESTING OF FRUITS AND VEGETABLES

**Goal:** To promote eating fresh fruits and vegetables in a food safe manner.

**Objectives:**
- YOWs will practice sanitary practices of food safety handling (e.g., YOWs will wash hands and will use disposable gloves before putting produce on plates).
- YOWs will understand and be able to state clearly the goals of the Fair (e.g., YOWs will frequently say out loud, the goal of the Fair is to promote eating 5-9 servings of fruits and vegetables a day, or 2 ½ cups of fruits and vegetables a day).

**Materials needed:**
- Fruits and vegetables ordered in advance from vendor
- Plates “food trays” ordered from cafeteria manager in advance
- Gloves
- Long handled spoons, borrowed from cafeteria manager
- Metal trays, borrowed from cafeteria manager
- Paper to cover tables and tape used to secure table. (Exam table paper is not costly.)
- Chopping boards (borrowed from someone)
- Paring knives, to quarter oranges and kiwi (borrowed from someone)

**Adult supervision needed? YES.**
- See ‘Role of adult at Taste Testing Booth’
- Monitor hand washing. (Prevent the spread of illness.)
Activities/Booths at the Fair
5b. GAME WHEEL Booth WITH QUESTIONS AND ANSWERS

Goal: Highlight nutrition information in an interactive manner

Objective: YOW will ask questions from prepared list of Q&A, after student spins the wheel.

Materials needed:
- Game wheel
- Game Wheel Questions and Answers (See next 2 pages)

Adult supervision needed? NO

Prizes:
- The fun is in the participation, no prizes needed.
- Tickets for a raffle prize can be awarded.
- Possible prizes include giving away a business card that includes health messages or one “Trader Joe’s” cookie from a tub of cookies.
Game Wheel Q&A

1. What percentage of calories from fat does an average fast food meal contain?  
   a) 25%  b) 50%  c) 75%  
   Answer: b) 50%

2. What are the main fat sources found in fast food?  
   Answer: Saturated fat and trans fat

3. What food group does tofu belong to?  
   Answer: Meat and Alternatives group

4. What two food groups are good sources of fiber?  
   Answer: Vegetables & Fruit, and Grains

5. What plant does refined sugar come from?  
   Answer: Sugar cane

6. What is the primary food for your brain?  
   Answer: Glucose

7. Which of the following types of cheese is lowest in calories per cup: Sharp cheddar cheese, cottage cheese or Swiss cheese?  
   Answer: Cottage cheese

8. Which mineral found in milk helps prevent osteoporosis?  
   Answer: Calcium

9. What is a non-food source of vitamin D?  
   Answer: Sunlight

10. Which class of nutrient is a valuable transport medium and helps to regulate body temperature?  
    Answer: Water

11. What organic compounds are needed by the body in small quantities to maintain health?  
    Answer: Vitamins

12. Which class of nutrient should be your main source of energy?  
    Answer: Carbohydrates

13. Which vitamin is only found in animal products?  
    Answer: Vitamin B₁₂

14. True or false: Your body makes cholesterol.  
    Answer: True

15. True or false: Gatorade and other sports drinks are much healthier choices than soda.  
    Answer: False (Gatorade contains much sugar!)

16. Name one vitamin or mineral deficiency that vegetarians may be at risk for because they do not eat any animal products.  
    Answer: Iron, Vitamin B₁₂

17. What do turnip greens, dried beans, milk and milk products, sardines and kale all have in common?  
    Answer: They are all good sources of calcium.

18. Which vitamin aids in the absorption of iron?  
    Answer: Vitamin C

19. Which mineral is hard to excrete once it is in the body?  
    Answer: Iron
20. True or False: You can reduce your risk of Type II Diabetes. \textit{Answer: True}

21. True or False: Diabetes can damage your eyesight. \textit{Answer: True}

22. True or False: Obesity increases your risk of getting diabetes. \textit{Answer: True}

23. True or False: Diabetes is contagious. \textit{Answer: False}

24. True or False: Type II diabetes occurs when your body does not produce any insulin. \textit{Answer: False}

25. True or False: High blood glucose damages the nerves in your feet. \textit{Answer: True}

26. What is another name for high blood sugar? \textit{Answer: Hyperglycemia}

27. What is another name for low blood sugar? \textit{Answer: Hypoglycemia}

28. What is another name for Type II diabetes? \textit{Answer: Insulin Resistant Diabetes}

29. What does insulin do? \textit{Answer: Insulin helps glucose enter cells}

30. What is fructose? \textit{Answer: Natural sugar from fruits}

31. True or False: Pre-diabetes is when blood glucose is higher than normal, but not high enough to diagnose as diabetes. \textit{Answer: True}

32. What is a normal fasting blood glucose level? \textit{Answer: < 100mg/dl}

33. True or False: More children are being diagnosed with Type II diabetes than 20 years ago. \textit{Answer: True}

34. What is the difference between soluble and insoluble fiber? \textit{Answer: Soluble fiber dissolves in water}

35. True or False: Soluble fiber is not digested by the human body? \textit{Answer: True}

36. What is the suggested daily fiber intake for the average American? \textit{Answer: 25-30g}

37. Name at least 2 foods that are a good source of fiber. \textit{Answer: oats, barley, flax seeds, oranges, apples, nuts (most fruits, veggies, & whole grains)}

38. True or False: Fiber can help lower blood sugar levels. \textit{Answer: True}

39. True or False: Exercise can improve blood glucose levels. \textit{Answer: True}
Activities/Booths at the Fair

5c. SUGAR CONTENT IN BEVERAGES BOOTH

Collect beverages and demonstrate using baggies or cups full of sugar cubes with the equivalent amount of sugar in drinks.

Food & Fitness table top display with sugar cubes
1 level tsp = 4 grams = 15 cal

Beverages

- Arizona Iced Tea - 72 grams, 18 cubes
- Red Bull - 27 grams, 7 cubes
- Gatorade - 56 grams, 14 cubes
- Vita Water, 20 oz. container - 32.5 grams, 8 cubes
- Jamba Juice - 83 grams, 21 cubes
- Coca-Cola - 65 grams, 16 cubes
- Starbucks, hot drink - 43 grams, 11 cubes
- Starbucks Frappuccino - 67 grams, 17 cubes
- Orange Soda - 2 quart container, 264 grams, 66 cubes

Cereals

- Fruit Loops - 1 serving = 1 cup = 12 grams = 3 cubes
- Frosted Flakes - 1 cup (usual serving size) = 15 grams = 4 cubes
Insulin

Beta cells in the pancreas produce a hormone to control the amount of sugar (glucose) in the blood. This hormone, insulin, serves as a gatekeeper, allowing glucose to enter the body's cells and be used as energy. All humans—and animals—need insulin to survive.

Elevated blood sugar results when insulin does not work well, as in type 2 diabetes. Excess blood sugar can spill into the urine and cause many health problems.

Exercise improves the ability of insulin to enter cells, so it lowers the risk of diabetes.

A diet that includes fresh fruits and vegetables (sources of fiber) aide digestion and help prevent type 2 diabetes. Highly processed foods can lead to type 2 diabetes. (sweetened drinks, juices, packaged cookies...)

Insulin was discovered in 1921 and quickly became indispensable in treating people with type 1 diabetes, who have lost the ability to make their own insulin. People with type 2 diabetes may also require insulin therapy when their own beta cells don't produce enough of the hormone. Insulin must be administered by injection or through an insulin pump because, if taken orally, it would be destroyed by the digestive system.
Activities/Booths at the Fair
5d-1. DIABETES TABLE TOP DISPLAY #1
Maintain a Healthy Blood Sugar Display

BLOOD SUGAR LEVELS; Normal, Pre-Diabetes and Type 2 Diabetes

Student Support Services

Goal: Promote attention to maintaining a normal blood sugar.

Activity: Tabling based on American Diabetic Association materials
  - Illustrate the complications of years of high blood sugar (Type 2 Diabetes), pre-diabetes and normal blood sugar.

Materials:
  - Tabletop display with illustrations of persons with:
    - amputations (illustrating years of blood sugar over 130)
    - jumbo glasses of sugared drinks (illustrating the habits of pre-diabetes, blood sugar over 100 and under 130)
    - normal (blood sugar under 100)
  - Maintain a Healthy Blood Sugar Questions and Answers (See next 2 pages)
  - For further information go to the American Diabetes website
# Maintain a Healthy Blood Sugar Questions and Answers

<table>
<thead>
<tr>
<th>Overview</th>
<th>What is a blood glucose level?</th>
<th>A blood glucose level is a measurement of the glucose in your blood stream. A healthy blood glucose level ranges from 70 – 100 mg/dl after a night fast, and may raise to 140 mg/dl after a meal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>What is a “fasting” blood glucose level and what is normal?</td>
<td>“Fasting” means that you have not eaten for eight hours, such as not eating between bedtime and the time of the blood draw in the morning. Normal fasting blood glucose levels are between 70 and 100 mg/dl; normal post-meal glucose levels are less than 140.</td>
</tr>
<tr>
<td>Pre-diabetes</td>
<td>What is the meaning of a pre-diabetes blood glucose level?</td>
<td>Pre-diabetes blood glucose level means that your blood glucose is between 100 -125 mg/dl; it is too high. This is a sign that your diet, exercise and the community that you are living in need improvements in order for you to be healthy. (You cannot change your genetics, but you can change your lifestyle.) Your blood sugar level needs to come down!</td>
</tr>
</tbody>
</table>
| Pre-diabetes        | What actions do I need to take to bring my blood sugar down?                                  | With pre-diabetes I need to  
  - Lose weight (most, but not all people with type 2 diabetes are overweight.)  
  - Eat well, eat fresh fruits and vegetables avoid saturated fats and limit cheese. Avoid sweetened drinks and limit alcohol.  
  - Exercise every day for 30 minutes to increase heart rate.  
  - Take medicines prescribed by my health care provider |
### Did President Bill Clinton have pre-diabetes?

It is likely that President Bill Clinton had pre-diabetes because he ate highly processed foods and fatty meats and cheese and he had such bad blood flow in his heart that he had heart surgery to improve the blood supply to his heart. His health would have been much worse if he did not exercise so much, remember that he would go jogging every day?

### What is the blood sugar level that indicates diabetes?

A fasting blood sugar over 126mg/dl means that you don’t have enough insulin in your body or that your insulin is not working well. Exercise helps insulin work better and brings down your blood sugar level.

### Does a person who spends hours of screen time every day, and does not exercise put their health at risk?

Yes, lack of exercise is not good for your metabolism. Without exercise your muscle cells become “insulin insensitive”, an unhealthy condition.

### How does exercise affect the prevention of diabetes?

Exercise causes your muscle cells to become “insulin sensitive”, a good situation that leads to a better blood glucose level. Exercise helps your insulin work well and is good for your mental health. What kind of exercise do you want to put into your daily life?

### Does person who sleeps 8 hours a night have better metabolic health than the person who doesn’t sleep enough?

Getting sufficient sleep is good for your metabolic health!

Maybe if you get enough sleep you are also less likely to snack when you really are tired and should go to sleep!

---

See additional pages from the American Heart Association, the informational library topic, on Metabolic Syndrome and on Modifiable Risk Factors.
Activities/Booths at the Fair
5d-2. DIABETES TABLE TOP DISPLAY #2
Which Blood Vessels and Nerves Do You Want?

“High Blood Glucose damages tiny nerves and vessels.”

Student Support Services

Goal: Promote attention to maintaining a normal blood glucose to prevent nerve, blood vessel and organ damage.

Activity: Tabling based on knowledge of the organ damage that occurs with elevated blood glucose.

Materials:
- Tabletop display with illustrations of organs (eyes, kidneys, genitalia, feet and the heart) either healthy or not. The difference is normal blood glucose or an elevate blood glucose.
- Which Blood Vessels and Nerves Do You Want Questions and Answers. (See next 2 pages)
### Which Blood Vessels and Nerves Do You Want Question and Answer

<table>
<thead>
<tr>
<th>Normal Fasting blood glucose level 70-100 mg/dl</th>
<th>Does a normal blood sugar level promote good health of the <strong>eyes</strong>?</th>
<th>Yes, a normal blood sugar causes the blood vessels in your eyes to be strong, and your vision to be clear. High blood sugar leads to growing many frail and fragile blood vessels that leak and cause vision problems.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>What does a healthy <strong>kidney</strong> do when the blood sugar is normal?</td>
<td>A healthy kidney cleanses one quarter of your blood volume every minute. It keeps nutrients in your body and gets rid of excess water and waste.</td>
</tr>
<tr>
<td>High blood sugar level</td>
<td>What happens when a <strong>kidney</strong> is damaged by high blood sugar?</td>
<td>When the kidney is damaged by high blood sugar, a person becomes puffy, feels weak, loses his/her appetite, is nauseated and hiccoughs a lot.</td>
</tr>
<tr>
<td>Normal blood sugar level</td>
<td>What is the benefit of having normal blood sugar level when it comes to <strong>nerves</strong>?</td>
<td>With a normal blood sugar level and normal nerves, you can feel your feet when you run. You are able to keep your balance, even on an uneven surface.</td>
</tr>
<tr>
<td>Elevated blood sugar level</td>
<td>What happens to the <strong>nerves</strong> when damaged by elevated blood sugar?</td>
<td>High blood sugar causes blood vessels to become clogged and for nerves to become damaged. This can cause foot pain that feels like burning, or feet that feel numb.</td>
</tr>
<tr>
<td>Normal blood sugar level</td>
<td>Is <strong>sexual</strong> health and normal blood sugar related?</td>
<td>Better blood sugar and better sexual sensation go together.</td>
</tr>
<tr>
<td>Elevated blood sugar level</td>
<td>Does elevated blood sugar affect <strong>sexual</strong> feeling or function?</td>
<td>Elevated blood sugar, over time, damages the small blood vessels that are a part of sexual feelings and function in your genital area. Not good!</td>
</tr>
<tr>
<td>Normal blood sugar level</td>
<td>How does normal blood sugar affect the heart?</td>
<td>The heart is healthier with a normal blood sugar level, and exercise helps keep the blood sugar at a good level! Good blood flow enables vigorous exercise without heart pain.</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>High blood sugar level</td>
<td>Does a high blood sugar cause temporary visual problems?</td>
<td>Your eyes can lose focus with elevated blood sugar.</td>
</tr>
<tr>
<td>Elevated blood sugar level</td>
<td>What does an elevated blood sugar do to your heart?</td>
<td>Elevated blood sugar leads to heart attacks! The vessels that feed the heart become clogged up. Remember that President Bill Clinton had heart surgery? His exercise routine (he jogged daily) helped his metabolism, or it would have been worse. Remember that he ate only fast food in the past, before his heart surgery? Remember Robert F. Chew, the actor in “The Wire”? He died of a heart attack at the age of 52!</td>
</tr>
</tbody>
</table>
Student Support Services

**Goal:** Promote attention to maintaining a healthy pancreas.

**Activity:** Youth teaching youth about the prevention of type 2 diabetes and the reversal of pre-diabetes

**Materials:**
- Pancreas model
- How To Be Good To Your Pancreas Questions and Answers. (See next 2 pages)
# How to Be Good to Your Pancreas Questions and Answers

<table>
<thead>
<tr>
<th>Anatomy question</th>
<th>Where is your pancreas located in your body?</th>
<th>The pancreas is located behind my stomach.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy question</td>
<td>How big is your pancreas?</td>
<td>My pancreas is about 8 inches long.</td>
</tr>
<tr>
<td>Normal Physiology question</td>
<td>What two substances does your pancreas make?</td>
<td>My pancreas makes hormones, one hormone is insulin. Its job is to move glucose from the blood stream into cells. When insulin is working well, the blood glucose level is normal. In type 2 Diabetes, when insulin is not working well, the body becomes insulin-resistant and the organs in the body become unhealthy, organs such as the eyes, the liver and the heart. My pancreas also makes digestive enzymes, such as the bile that digests my food and that comes up green when I throw up.</td>
</tr>
<tr>
<td>Lifestyle question</td>
<td>Does my lifestyle affect the health of my pancreas?</td>
<td>Yes. A healthy diet with fibers from fresh fruits and vegetables and minimal highly processed foods, makes it easy for your pancreas to make the right amount of insulin. However, with a sedentary lifestyle and a diet composed of highly processed foods and lack of sufficient exercise, over time the pancreas can wear out, and can loose the ability to make insulin. Your inherited genes also have a big influence. African Americans, Hispanics and indigenous people are at greater risk than people with European ancestry.</td>
</tr>
<tr>
<td>Lifestyle question</td>
<td>Does a bad diet of highly processed foods make my pancreas sick?</td>
<td>Yes, a bad diet of highly processed foods makes a pancreas sick and unable to make enough insulin. A highly processed diet makes the pancreas strain to make huge amounts of insulin. Over time, the pancreas can wear out and loose the ability to make insulin.</td>
</tr>
</tbody>
</table>
**Lifestyle question** | Does exercise affect the health of my pancreas? | Yes, exercise helps the body’s insulin work well and prevents straining the pancreas to make too much insulin or to wear out.

**Physiology question** | Is there a normal blood sugar level that leads to a healthy pancreas | A normal blood sugar level that is under 100 is good for your pancreas. (After eating, a blood sugar of under 140 is normal.)

**‘Did you know?’ fact** | Poor control of blood sugar leads to a liver problem called ‘fatty liver’.
Activities/Booths at the Fair
5e. SUGAR, FAT AND SALT VIALS BOOTH

Goals:
- Students recognize the sugar, fat and salt content of popular foods using vials.
- Students compare sugar content in various foods.

Objective:
Highlight facts that are found in attached brochures, such as “Sugar is the most popular food additive in the U.S.”

Adult supervision needed? NO

Purchasing or Borrowing Vials of Salt, Sugar and Fat Teaching Aids

Purchase from Mercy Hospital, 570 Chautauqua Blvd, Valley City, ND 58072
(701) 845-6456; Fax (701) 845-6413
www.healthyheartprogram.com

(sample)
- How Much Fat, part 2, item 0003 $31.95
- How Much Salt, item #0007 $31.95
- How Much Sugar, item 0008 $36.95
- Shipping and Handling $10.09

Total (Sept. 2009) $110.95

Borrowing vials from SFUSD Student Support Services, 1515 Quintara Blvd
Contact Wendy Tran to borrow vials, beverage containers and cereal boxes. tranH2@sfusd.edu

** See Appendix B for the Salt, Sugar and Fat Brochures **
Food & Fitness Fair

Fat, Sugar and Salt Displays
Activities/Booths at the Fair
5f. PLAYSAFE BOOTH

Community Based Organization: PlaySafe

Goal: Promote physical fitness and prevention of injury

Activity: Tabling
- Demonstrate athletic injury assessment, management, treatment, and rehabilitation. This includes wrapping of ankles and wrists.
- Illustrate healthy eating and drinking.

Materials to Prepare:
- PlaySafe coaches and student trainees will bring materials

*Smoothie/Energy Generator*
Activities/Booths at the Fair
5g. Physical Endurance and Strengthening Booth

Goal: Promote physical fitness and clarify the value of both endurance and strengthening

Activity: P.E. Teachers or designated students will organize the following and keep a log.

Materials to prepare:
- Mats
- Jump rope
- Stop watch
- Hula Hoops
- Logs

Youth will be challenged to:
- Sit and reach
- Jump rope for a certain length of time
- Do sit-ups for a certain amount of time
- Do push-ups for a certain amount of time

Adult supervision required? YES

Prizes
Activities/Booths at the Fair
5h. Volunteer at Work Parties to Restore Nature

**CBO:** San Francisco Parks Alliance and Golden Gate Parks Conservancy have Volunteer Programs to build trails and restore native vegetation.

**Goals:**
- To promote getting out of the house, not watching TV, and develop a love of Nature
- To inform students about local nature areas and nature areas on the bus routes that students are familiar with
- To inform students about conservancy practices that require physical activity and are fun (trail building, birdwatching, plant conservation)

**Activity: Tabling**
- A game wheel with Q&A of the locations, activities and features of local parks and natural areas
- Sign up students who want to intern over the summer – collect student names and emails

**Materials to prepare:**
- Maps of natural sites that include points of interest and Muni transportation to sites
- Maps of dog walking paths and rules of dog walk areas
- See Resources for Outdoors Volunteer Opportunities
6. POSTERS TO DISPLAY DURING THE FAIR

Goals of the Fair: YOWs should make posters that spell out the goals of the Fair.

MyPyramid: Packet of five posters (available through Mark Elkin at 1515 Quintara):
- How Much Do You Eat / Use these everyday items to estimate the amount you eat.
- ChooseMyPlate.gov Steps to a healthier you
- READ IT before you Eat It!
- Food for a Day / Putting it All Together (Pictures of plates with food)
- MOVE IT! Choose your FUN!
Drinking Water posters:
7. PRIZES FOR THE FAIR

Raffle tickets can be given at booths, collected when students exit the Fair, and be chances to win a grand prize, such as a pair of gym memberships or a pair of tickets to Mission Cliffs lessons.

- The YMCA or another gym may donate memberships.
- Mission Cliffs donated free memberships when grant money was used to purchase eight memberships for Fairs in 2009.
- Frisbees
- Jump Ropes
- Raffle for cookbooks
8. COMMUNITY BASED ORGANIZATIONS – INVITEES TO THE FAIR

American Heart Association
Nutrition Booth
Carol Chin, MPH
Health Educator
mobile: 415-218-1095
toll free: 866-826-1096
carolchin@cal.berkeley.edu
Volunteers can provide a booth demonstrating sugar in beverages and healthy food choices. This can include healthier fast food selections

Golden Gate National Parks Conservancy
“The nonprofit partner for the Golden Gate National Parks”
“Parks For All Forever”
Physical Activity Booth
Galena Seeger
Volunteer Coordinator
Trails Forever
tel: 415-561-3068
gseeger@parksconservancy.org

Tori Kuwahara
Volunteer Coordinator
Golden Gate National Parks Conservancy
Building 201 Fort Mason
San Francisco, CA 94123
tel: 415-561-3044
fax: 415-561-3010
www.parksconservancy.org

Galena Seeger and Tori Kuwahara can staff a booth and promote volunteering for community service hours on school holidays and weekends.
Physical Education Department of each campus

Fitness Booth
Department Head of campus
- Can provide hula hoops and jump ropes
- Can provide fitness education
- Can provide measurements of lean muscle mass
- Can provide demonstrations of strength training vs. endurance training

PlaySafe

Fitness Booth
Jason Miyamoto MS ATC
Program Coordinator
PlaySafe Sports Medicine
University of California, SF
MiyamotoJ@orthosurg.ucsf.edu

Jason Miyamoto or other coaches and students trained by coaches are prepared to teach prevention of injury.

The mission of the UCSF PlaySafe Sports Medicine Program is to provide a safe and positive environment for athletic pursuits, to facilitate access to the highest quality sports medicine care, and to encourage physical and mental growth by empowering student athletes to lead balanced, physically active lifestyles.

San Francisco Public Utilities Commission

Nutrition Booth
Sometimes is able to participate at fairs. Can provide drinking water (tap) information given by use of a game wheel. Also may provide a limited number of free stainless steel water bottles.

SFUSD Student Support Services

Nutrition Booth
Mark Elkin
elkinm@sfusd.edu

Mark Elkin, Nutrition Education Project Coordinator, may educate YOWs about how to use food models to provide information at tabling booth. Models may be borrowed with pre-arrangement (sugar, fat and salt models, sweetened beverage models).

UCSF Eating Disorders Clinic

Nutrition Booth
Dr. Sara Buckelew, MD, MPH
Assistant Clinical Professor
Director, Eating Disorder Program, University of California, SF
BuckelewS@peds.ucsf.edu
tel: 415-502-1649
UCSF, School of Nursing
Nutrition Booth
Angel Chen
angel.chen@nursing.ucsf.edu
Graduate students can have a booth at the Fair, and might even participate in the training of the YOWs prior to the Fair. May provide games and information at the Diabetes, High Blood Pressure, and Fats and Oil Booths.

YMCA, Stonestown Branch
Fitness Booth
Becky Hanvey
bhanvey@ymcasf.org
Ms. Hanvey may send someone to the Fair with exercise balls and music to lead physical activity; may provide a pair of free memberships for raffle.

Photos of Previous Community Benefit Organizations:

UCSF Eating Disorders Clinic
Golden Gate National Parks Conservancy

San Francisco Public Utilities Commission
Lowell’s Gardening Club
Food & Fitness Fair

Roles of Adults in the Fair

9a. OBTAINING GRANT MONEY

Goal of writing grant to obtain money:

- $ for Fair based on projected attendance (produce and paper products)
- $ for grand prize (Or, perhaps the YMCA can donate two memberships per high school, if asked)

Contact produce vendor with projected attendance and make preliminary order. (Final price of food will not be available until two weeks before the Fair.)

Invite CBO
Roles of Adults in the Fair

9b. OVERVIEW OF ADULT ROLES IN THE FOOD AND FITNESS FAIR
(Fair manager to highlight assigned role/task)

Attending Campus ___________________________ Date ________________
Time of Fair: From _______________ to _______________

Set Up for Fair

At _______________ (AM or PM), meet ___________________________ (Wellness Staff) in room ____________, or as directed.
- With the assistance of student volunteers, set up tables for booths, put crates of fruits and vegetables, plates and napkins on tables.
- Prior to the arrival of students, Youth Outreach Workers (YOWs) will pre-fill plates with taste test food samples. This allows the students to quickly take a plate of food and go on to enjoy the booths. (Recommendation: set up a table behind the YOWs with boxes of produce and the table in front for plates of produce). Count the plates to help quantify the number of attending students.
- Put up posters with the goals of the Fair and nutritional information.
- Hula Hoops and Jump ropes are made available for physical activity. (Borrow from P.E. Dept)
- Assign tables for each CBO, booth display, and one table for evaluations. The evaluation can also be used for collecting ‘I want to make a change’ forms and raffle tickets.

Assist During Fair

Time ____________ (AM or PM): Students come to the Fair to participate in the informational booths and sampling of fruit and vegetables.
- Students will receive a raffle ticket for participating in the booths of the Fair. The ticket(s) will be collected before they leave the area. This raffle ticket serves as a chance to win a prize such as tickets to Mission Cliffs, a popular rock climbing business. In addition, students will receive a cookbook or an additional raffle ticket when a completed “Student Evaluation of the Food and Fitness Fair” is submitted.
- Adult Roles:
  - Watch and enforce safe hygiene in food distribution. (YOWs and adults will wash hands, use gloves, use long handled spoons and pay attention to hygiene before distributing food for the Fair.)
  - Assist students at the informational table.
  - A Wellness Staff person should be at the “I want to make a Change” booth to interact with students, to discuss the desired change. This way the Wellness Center knows the responses and needs of students. Perhaps, if a walking or other fitness group is soliciting members,
students can sign up at this time. Interact with students, collect the evaluations and I want to make a change” forms, in exchange provide a cookbook or raffle ticket depending on the student’s preference.
  o Assign a person to take photos of all booths.
  o Please complete an Adult Evaluation of the Food and Fitness Fair and include it with student evaluations.

Break Down After Fair

- Return borrowed supplies to cafeteria manager.
- Ensure that all tables are put away by pre-assigned student volunteers. (JrROTC, the Red Cross Club or others are sources of such assistance).
- Take down posters.
- Custodian will remove compost and trash containers.
Roles of Adults in the Fair

9c-1. CBO INVITATION LETTER TEMPLATE

Dear __________________:

[Name of School] would like to invite you to take part in our upcoming Food and Fitness fair. The goals of the event are to [list some of your goals]. The individuals participating will be our students. As an exhibitor/vendor, we would like your agency/company to (list what services you want them to provide, including educational/informational fliers/brochures).

For your information, the event details are provided below.

Date of Fair: ____________________________

Time of Fair: From __________ AM/PM to __________ AM/PM

Suggest time of arrival for booth set up: __________ (AM or PM)

Campus Location: ____________________________

Parking location: __________________________ Bus access: __________________________

Contact person/ Phone: ________________

Estimated number of attendees: _________

Indoors/Outdoors: __________________________

Thank you for consideration and I look forward to hearing from you!

Sincerely,

Contact information of Wellness Center
Dear ______________________:

Thank you for accepting our invitation to provide an informative booth at our Food and Fitness Fair!

Date of Fair: ______________________
Time of Fair: From _____________ AM/PM to _____________ AM/PM
Attending Campus ______________________
Parking location: ______________________ Bus access: ______________________

Goals of a Fitness Booth – Provide an interactive, informative booth that:
  ▪ [List desired goals of booth]

Please arrive at this time: _____________ (AM or PM)
Meet ______________________ (Wellness Staff) in room _____________, or as directed.

Possible Materials:
  ▪ [List desired materials such as brochure, models and/or exercise equipment]

Possible activities for the booth:
  ▪ [List possible activities such as game wheel, self assessment and/or exercise activities]

You are welcome to bring prizes for participation, however, raffle tickets will be provided for you as prizes. Tickets will be collected before students leave the Fair and they will be entered for a chance to win a grand prize. (Please do not bring candy prizes.)

At the conclusion of the Fair please complete an “Adult Evaluation of the Food and Fitness Fair.”

Thank you for your participation!

Contact information of Wellness Center
Dear ________________:

On behalf of [Name of School], I want to thank [CBO Name] for your generous support at our [Year] Food & Fitness Fair. With your assistance, we were able to provide health and fitness education to [Number of attendees] participants this year and each of them left with a great deal of new knowledge and skills for [Goal of the Health Booth].

[OPTIONAL: USE NEXT PARAGRAPH TO HIGHLIGHT THE IMPACT OF THE EVENT, SPECIFIC ACCOMPLISHMENTS, SUCH AS NUMBER OF VOLUNTEERS, NUMBER OF HOURS WORKED, ETC.]

Thank you again for your participation and we look forward to working with you in the future!

Sincerely,

Contact information of Wellness Center
RESOURCES FOR FOOD AND FITNESS

Websites

- From the Adolescent Health Working Group: www.ahwg.net
- CanFIT suggestions for food for clubs.
- Center for Science in the Public Interest (Nutrition Action Newsletter): www.cspinet.org/
- USDA Choose my Plate: www.choosemyplate.gov/
- California Project Lean: www.californiaprojectlean.org/
- Centers for Disease Control: www.cdc.gov/
- The SFUSD Wellness Policy www.sfusdfood.org/
  o Vending
  o Lunch line / USDA
  o ‘Beanery’
  o Competitive sales
- SFUSD Student Support Services www.healthiersf.org/
  o YRBS and CHKS
- Harvest of the Month: http://www.harvestofthemoth.cdph.ca.gov/program-overview.asp

Books / Education

- What to Eat by Marion Nestle
- The Omnivore’s Dilemma by Michael Pollen
- The End of Overeating by David Kessler, 2009

Cooking Techniques & Know Your Ingredients

- KQED
- Free cook books in English, Spanish and possibly, Chinese, from Mark Elkin, Nutrition Education Project Coordinator
- Harvest of the month

Policy Resource

- The Center for Weight and Health: http://cwh.berkeley.edu/
Student Outdoors Volunteer Opportunities

- Map of Parks in the City:
  http://sfrecpark.org/parks-open-spaces/find-a-destination/
  **SF park finder is an interactive mapping tool which you can use to locate parks or facilities within your area. With the ability to highlight facilities, select by park name, or search by neighborhood.**

- San Francisco Parks and Alliance Volunteer Program:
  http://www.sfparksalliance.org/support/volunteer
  **The mission of the San Francisco Parks Alliance (SFPA) is to inspire and promote civic engagement and philanthropy to protect, sustain, and enrich San Francisco parks, recreation, and green open spaces.**

- Golden Gate National Park Conservancy Volunteer Events:
  http://www.parksconservancy.org/get-involved/volunteer/
  **The mission of the Parks Conservancy is to preserve the Golden Gate National Parks, enhance the park visitor experience, and build a community dedicated to conserving the parks for the future.**

- Sutro Stewards:
  http://sutrostewards.org
  **The Sutro Stewards was formed to address a unique need in San Francisco, fostering positive relationships between habitat conservation needs and the recreational needs of a dense urban population. We are currently the largest organized independent volunteer pool in San Francisco, equipped for habitat conservation and trail restoration activities on city, state or privately owned properties.**

- The Presidio Volunteer Program:
  http://www.presidio.gov/volunteer/Pages/default.aspx
  **Love the park? Then share your time and talent! Volunteers sustain and transform the Presidio by planting seeds, maintaining trails, leading tours, and so much more. Care for the Presidio while meeting people, learning new skills, and establishing a special connection to the park. Become a Presidio volunteer today!**

- Friends of the Urban Forest:
  http://www.fuf.net/get-involved/volunteer/
  **Friends of the Urban Forest’s mission is to promote a larger, healthier urban forest as part of San Francisco’s green infrastructure through community planting, tree care, education, and advocacy. (No previous experience is necessary).**
Student Evaluation of the Food and Fitness Fair  
**INSERT Name of School**  
**INSERT Date**

- I liked the Fair and I plan to make at least one change in my food choices.  
  ▪ What is that change?  
- I plan to make at least one change in my fitness activities.  
  ▪ What is that change?  
- I recommend that the Wellness Center puts on a Food and Fitness Fair next year.  
  ▪ Why?  

- Please write your recommendation to improve the Food and Fitness Fair:

- I wish that my friends or family could attend a Fair like this.  
  ▪ Y N

Return to Wellness Center Staff
(Fill out an evaluation, get a free cookbook.)

**Student (YOW and other Student Volunteer)**
**Evaluation of the Food and Fitness Fair**

*INSERT Name of School*
*INSERT Date*

○ I liked the Fair and I plan to make at least one change in my food choices.  Y  N
  ▪ What is that change?

○ I plan to make at least one change in my fitness activities.  Y  N
  ▪ What is that change?

○ I recommend that the Wellness Center puts on a Food and Fitness Fair next year.  Y  N
  ▪ Why?

○ Please write your recommendation to improve the Food and Fitness Fair:

○ I wish that my friends or family could attend a Fair like this.  Y  N

Return to Wellness Center Staff
Evaluation of the Food and Fitness Fair
by Wellness Adult Staff

INSERT Name of School

INSERT Date

Name of Wellness Staff ___________________________ Position ___________________________

○ Food was distributed with adequate attention to hygiene to prevent the spread of illness. Y N
  Comments:

○ How many students participated in the Fair (perhaps count the number of plates that were
  used as an approximate equivalent)?

○ Students enjoyed taste testing fruits and vegetables. Y N
  Comments:

○ During the Fair the goals of the Fair were:
  ▪ clearly written and visible Y N
  ▪ stated clearly by students who were distributing food Y N
  ▪ stated clearly by students who were at the informational tables Y N

○ I believe that the goals of the Fair were appropriate. Y N

○ Students appeared to be interested in the activities that were promoted in the Fair. Y N

○ Related to preparation for the Fair:
  ▪ It took reasonable amount of effort to prepare. Y N
  ▪ I received the tools and assistance that I needed to have a successful Fair at my school. Y N

○ Related to the fruits and vegetables at the Fair:
  ▪ The quantity of produce was correct. Y N
  ▪ The quality of produce was good. Y N
  ▪ Comments:

○ I recommend that the Wellness Center puts on a Food and Fitness Fair next year Y N
  ▪ Why?

○ Please write your recommendations to improve the Food and Fitness Fair.

○ What was the best part of the Fair?

○ What was the worst part of the Fair?

○ I wish that more youth could attend a Fair like this. Y N

Return to ______________________________
“I want to make a change”

Name ____________________________
Homeroom/Reg ____________________
Email address ______________________

(Circle your preference and complete the last sentence.)

- I want to participate in a youth health group

- I want 1:1 counseling about food and fitness

- I am now promising myself to make one or more lifestyle changes for better health. I plan to make the following change(s):
  ____________________________.

“I want to make a change”

Name ____________________________
Homeroom/Reg ____________________
Email address ______________________

(Circle your preference and complete the last sentence.)

- I want to participate in a youth health group

- I want 1:1 counseling about food and fitness

- I am now promising myself to make one or more lifestyle changes for better health. I plan to make the following change(s):
  ____________________________.
Steps to a Healthier You:

**One size doesn’t fit all.** MyPyramid plan can help you choose foods and amounts that are right for you. For a quick estimate of what and how much you need to eat, enter your age, sex, and activity level in the MyPyramid Plan box.

Use the advice “Inside MyPyramid” to help you:

- Make smart choices from every food group.
- Find your balance between food and physical activity.
- Get the most nutrition out of your calories.

We thank those who contributed to our fair:

YMCA:
(415) 242-7101
[http://www.ymca.net](http://www.ymca.net)

UCSF
[www.ucsf.edu](http://www.ucsf.edu)

Nature in the City
[www.natureinthecity.org](http://www.natureinthecity.org)

& Mr. Prutz, Adee Horn, Youth Outreach Worker, JrROTC and Peer Resource Students

For more information about nutrition and fitness you may contact the Wellness Center or drop by T-14 or 129 for more resources.
The purpose of the Food & Fitness Fair is to provide taste tests of fresh fruits and vegetables and to promote:

- eating 5-9 servings of fruits and vegetables daily,
- drinking water and avoiding sweetened beverages,
- eating whole grains,
- consuming polyunsaturated (olive) oils, minimize saturated (animal) fats and avoid trans fats,
- purchasing locally grown foods,
- eating in the school lunch lines, particularly those with salad bars,
- cooking and sharing your meals; knowing your ingredients and
- vigorous exercise for 30 minutes or more daily.

Presenters:

- UCSF
- YMCA
- P. E. Department: Lean Muscle Calculations
- Displays by YOWs & Peer Resource Students:
  Vials of Fats & Oils
  Food Pyramid
  Game Wheel
  Healthy Snacks
  Fat & Sugar Vials
  Rethink your Drink display
  Diabetes displays

Q: What are some things the new food pyramid emphasizes?
A: The new food pyramid stresses the importance of controlling weight, of physical activity, of lowering the intake of trans fats to zero, of limiting saturated fats and limiting sugar intake. It also promotes the benefits of whole grains.

Q: How many servings of fruits and vegetables should you have a day?
A: 5-9 servings. Eat a variety.

Q: Is a tomato a fruit or vegetable?
A: A fruit, because it has seeds. However, the tomato is still transported as a vegetable.

Q: What is a simple way to identify vegetables high in Vitamin A?
A: Colorful orange and yellow vegetables are high in Vitamin A. (Think butternut squash and carrots.)

Q: Why are trans fats harmful?
A: They boost bad blood cholesterol and depress the good kind.

Q: Will vegetarians get the nutrients they need to stay healthy?
A: A well planned vegetarian diet can be as nutritious and delicious as a non vegetarian meal. Beans, nuts and legumes are needed for protein.

Q: What kind of fat is completely artificial, is made by changing the chemical structure of oils, and that contributes to the accumulation of (bad) plaque in the arteries of your heart and brain?
A: Transfat

Define Fitness.
Fitness is the ability to endure and be resilient to the stresses of life and to have enough energy left over for recreational time with those we love.

Ways to get fit:
Get a good amount of sleep (at least 8 hours)
Get 30 minutes of exercise every day, or more
Eat nutritious food
Drink a lot of water
Walk stairs instead of using the elevator
Learn your BMI and aim for a healthy weight

Opportunities to Become Fit Include:

☆ Yoga / Dance
☆ Walk home / Bike to School
☆ Do cartwheels on grass
☆ Run / Walk around Lake Merced
☆ Team Sports
☆ Bird watching and nature hikes
☆ Volunteer to build trails
☆ Talk to the Wellness Center about more ideas!

Q: What are some things the new food pyramid emphasizes?
A: The new food pyramid stresses the importance of controlling weight, of physical activity, of lowering the intake of trans fats to zero, of limiting saturated fats and limiting sugar intake. It also promotes the benefits of whole grains.

Q: How many servings of fruits and vegetables should you have a day?
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A: Transfat
APPENDIX B

Make Wiser Choices

1. Do not add salt while preparing meals.
2. Use less salt at the table.
3. Substitute herbs, spices and lemon juice for salt.
4. Read labels. Choose foods low in salt. (eg. reduced sodium crackers).
5. Choose fresh meats, vegetables and fruits more.
6. Choose processed foods less.

An Easy Way to Think About Sodium

- Sodium Free .................. Less than 5 mg
- Very Low Sodium .............. 35 mg. or less
  Fruits, Vegetables, Plain Popcorn,
  Macaroni, Spaghetti, Noodles
- Low Sodium Foods ............. 140 mg or less
  Bread, Meat, Chicken, Fish, Milk,
  Margarine
- High Sodium Foods ............ Over 140 mg
  Cheese, Luncheon Meats, Hot Dogs,
  Bacon, Catsup, Mustard, Soy Sauce, Many
  Frozen Entrees, Canned Soups, Canned
  Entrees, Hamburger Helper, Many Snack
  Crackers, Most Chips and Pizza
- Reduced Sodium ................ At least 25%
  less sodium

Food Values
Of Foods Displayed in Test Tubes

<table>
<thead>
<tr>
<th>Food</th>
<th>mg. of sodium</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 medium potato</td>
<td>5</td>
</tr>
<tr>
<td>2 oz. potato or tortilla chips (12-48 chips)</td>
<td>335</td>
</tr>
<tr>
<td>8 oz. homemade soup, no added salt</td>
<td>25</td>
</tr>
<tr>
<td>8 oz. canned chicken noodle soup</td>
<td>918</td>
</tr>
<tr>
<td>3 oz. pork chops</td>
<td>54</td>
</tr>
<tr>
<td>3 oz. ham</td>
<td>1100</td>
</tr>
<tr>
<td>1 cup canned chow mein</td>
<td>1045</td>
</tr>
<tr>
<td>1 fast food Quarter pound</td>
<td>1312</td>
</tr>
<tr>
<td>Cheesburger, no condiments</td>
<td></td>
</tr>
<tr>
<td>Picnic Meal</td>
<td>1470</td>
</tr>
<tr>
<td>1 hot dog</td>
<td></td>
</tr>
<tr>
<td>1 bun</td>
<td></td>
</tr>
<tr>
<td>1 Tb ketchup</td>
<td></td>
</tr>
<tr>
<td>1 tsp mustard</td>
<td></td>
</tr>
<tr>
<td>1 oz. chips</td>
<td></td>
</tr>
<tr>
<td>1/2 c canned baked beans</td>
<td></td>
</tr>
</tbody>
</table>

Consider the amount of salt the average American eats.
Consider how to eat less.
Choose Wisely!!

Sources:
2. FDA, 2003 - www.heartscreen.com
5. Food Labels and Restaurant Information, 2003
6. American Family Physician, August 1997

How Much Salt?
Heart Health Teaching Aids

Sharon E. Buhr, MPH, RD
Public Health Nutritionist
Young People's Healthy Heart Program

Mercy Hospital
570 Chautauqua Blvd. • Valley City, ND 58072
(701) 845-6456 • Fax: (701) 845-6413
www.healthyheartprogram.com
High Blood Pressure Facts

- Blood pressure shows how much pressure the blood is putting on the walls of the veins and arteries as the heart beats. A normal blood pressure for an adult is 120/80 or less. For children there are specific guidelines for age and sex. It is recommended that adults and children have their blood pressure checked yearly.

- Twenty-four percent of Americans have high blood pressure and are at risk of suffering a stroke, a heart attack, congestive heart failure and of developing atherosclerosis.

- 50 million Americans or 1 in 4 adults have "essential hypertension" which means that their high blood pressure is not related to some other specific disease. Hypertension is usually painless and is often called the silent killer.

- Studies indicate that a diet high in sodium can increase blood pressure. All individuals may not be equally susceptible to the effects of sodium. We have no method, however, to determine who is sodium-sensitive. Therefore, it is wise for all Americans, children and adults, to reduce their sodium intake.

- The National High Blood Pressure Education Program (2002 Report) and the National Research Council (1989 Report) both recommend that Americans should consume no more than 2400 mg of sodium or one teaspoon of salt per day.

What Is Sodium?

Sodium is an essential mineral. It is found in:
1. food (especially processed food)
2. softened water
3. some medications

Sodium is essential for maintaining the proper fluid balance in the body. We all need some sodium. Most Americans eat too much.

Salt (sodium chloride) is approximately 40% sodium and 60% chloride. Salt is our number one source of sodium. Normally the body needs less than 500 mg. of sodium per day. This is less than 1/2 teaspoon of salt.

The average American eats from 2,300-7,000 mg sodium each day. This is 1-3 teaspoons of salt. This is far in excess of the physiologic need for salt.

Read the Label

Salt is used primarily to add flavor and occasionally as a preservative in food. Sodium is combined with a variety of other substances which then provides various functions in foods. For example, sodium bicarbonate is baking soda, a leavening agent; sodium citrate is an antioxidant.

Read food labels carefully to identify which products contain sodium.

<table>
<thead>
<tr>
<th>Salt</th>
<th>Sodium Chloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium</td>
<td>Sodium Saccharin</td>
</tr>
<tr>
<td>Brine</td>
<td>Sodium Propionate</td>
</tr>
<tr>
<td>Sodium Alginate</td>
<td>Sodium Hydroxide</td>
</tr>
<tr>
<td>Sodium Sulfite</td>
<td>Sodium Benzoate</td>
</tr>
<tr>
<td>Sodium Caseinate</td>
<td>NaCl</td>
</tr>
<tr>
<td>Di-sodium phosphate</td>
<td>(chemical initial for salt)</td>
</tr>
<tr>
<td>Monosodium glutamate (MSG)</td>
<td></td>
</tr>
</tbody>
</table>

Ideas for Using "How Much Salt?"

Salt has been used in these test tubes instead of sodium because consumers are familiar with it. Note that 2400 mg. of sodium is found in 6000 mg. of salt or one teaspoon of salt.

- Compare the following test tubes:
  - homemade soup and canned soup
  - pork chop and ham
  - 1 medium potato and 12-48 potato chips

- Compare 14 teaspoon of salt (the body needs slightly less than this amount each day) with the following foods:
  - 1 cup canned chow mein
  - the Picnic Meal (1 hot dog in a bun, 1 Tb. ketchup, 1 tsp. mustard, 1 oz. chips, ½ cup baked beans)
  - 1 Fast Food Deluxe Burger

- Point out where the average American consumes sodium:
  - 11% from the salt shaker
  - 12% occurs naturally in food
  - 77% from processed foods

- The following information should be used as guide when using the salt test tubes:
  - 500 mg. sodium = the maximum amount of salt needed for one day
  - 2400 mg. sodium = the maximum amount of salt recommended
  - 4500 mg. sodium = the amount of salt the average American consumes daily
Ideas for Using How Much Fat? Part II

1. Compare the Quarter Pound Cheeseburger (three tubes of fat from the original Fat Set) with the fraction of fat in the McDonald’s McGrilled Chicken Deluxe Sandwich. The McDonald’s McGrilled Chicken Sandwich is an excellent low fat fast food choice.

2. Discuss how many pieces of pizza a person might eat. Cut paper to describe the size of one piece. A medium pizza from Pizza Hut is 12 inches in diameter and is cut into 8 pieces.

3. Compare a baked potato (0.2 grams of fat with the fries (11 grams).

4. Suggest that adults and children may both want to eat a fruit BEFORE going out for a fast food meal. It will add vitamins and minerals and curb the desire to overeat.

5. Compare the regular with the reduced fat chips. Discuss substituting another crunchy food such as celery or pretzels for chips to dramatically decrease the fat or choose very low fat tortilla chips (1 gram of fat per ounce) or fat free potato chips.

6. Discuss use of dips and cheese spreads. If using a dip, skip the chips totally and use vegetables.

7. Ice Cream: Point out that the premium ice creams (e.g. Haagen-Dazs) contain 11-26 grams of fat per half cup. Compare to the regular ice cream with 7.3 grams of fat. Note also that nonfat frozen yogurt contains no fat.

8. Have students and adults do a survey of at least 10 candy bars to identify the amount of fat they contain. Note that a 1.55 oz. Hershey bar contains more fat than will fit in one tube ... 13 grams with 9 grams of saturated fat.

Food Values of Foods Displayed in Test Tubes

<table>
<thead>
<tr>
<th>Fat</th>
<th>Sat.</th>
<th>Chol.</th>
<th>Cal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>McDonald’s French Fries</td>
<td>11.0</td>
<td>2.0</td>
<td>0</td>
</tr>
<tr>
<td>2.6 oz.-Small Size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McDonald’s McGrilled Chicken Deluxe Sandwich (without mayo)</td>
<td>4.5</td>
<td>1.0</td>
<td>60</td>
</tr>
<tr>
<td>1 slice Thin Crust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/8 Pizza</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pizza Hut, Medium Size</td>
<td>10.0</td>
<td>4.5</td>
<td>25</td>
</tr>
<tr>
<td>Pepperoni Pizza</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vanilla Ice Cream 1/2 cup</td>
<td>7.3</td>
<td>4.6</td>
<td>30</td>
</tr>
<tr>
<td>Dairy Queen Soft Serve 1/2 cup</td>
<td>4.5</td>
<td>3.0</td>
<td>15</td>
</tr>
<tr>
<td>Milky Way Candy Bar 2.05 ounces</td>
<td>10.0</td>
<td>5.0</td>
<td>5</td>
</tr>
<tr>
<td>Regular Potato Chips 12-20 chips - 1 oz. (Average of Ruffles, Pringles, Lays)</td>
<td>10.0</td>
<td>3.0</td>
<td>0</td>
</tr>
<tr>
<td>Reduced Fat Potato Chips 16 chips - 1 oz. (Average of Ruffles and Pringles)</td>
<td>6.5</td>
<td>1.5</td>
<td>0</td>
</tr>
<tr>
<td>10 Ritz Crackers - 1 oz. 4 Squares Grahams or 10 Town House or 10 Salkine Crackers</td>
<td>8.5</td>
<td>2.0</td>
<td>0</td>
</tr>
<tr>
<td>3.3</td>
<td>0.8</td>
<td>0</td>
<td>125</td>
</tr>
</tbody>
</table>

Sources:
1. Information on Food Packages, October, 2004
2. Food Values, 18th edition, © 2004
3. Restaurant Brochure or Company Data
4. Dietary Guidelines for Americans, USDA, 2000
5. IFIC Review, May 2004
6. “Food Politics”, Marion Nestle, © 2002
7. USA Today, April 30, 2001 Article
A High Fat Diet and Disease

The link between heart disease and a diet high in saturated fat has been proven. For at least three-fourths of Americans, eating this type of diet will increase their blood cholesterol. The higher the blood cholesterol the more likely the arteries will become clogged, possibly resulting in a heart attack.

About one-third of all cancer deaths are associated with diet. A high fat consumption correlates with an increased risk of developing breast, colon and other cancers.

Fast! Faster! Fastest!

Americans are demanding foods faster than ever before. They want to have meals they can prepare in 10 minutes and they even complain that fast food restaurants are too slow.

Fast food restaurants have grown rapidly in the past 30 years and continue to grow. The prime example is McDonald’s, who in 1960 had 250 restaurants in the U.S. Today it has over 30,000 sprinkled all over the world.

Because of the popularity of fast foods, consumers and health professionals alike have expressed concern over the nutritional quality. Fast foods tend to be high in fat, cholesterol, calories and sodium while being lower in dietary fiber, vitamin C and calcium.

Fast food chains have responded to consumer demands by offering healthier food choices and using vegetable shortening for all frying. While at the same time, many have discontinued their small sizes and are now offering supersize products.

The fact remains that consumers still need to beware when selecting fast foods.

Wise Snacks

Snacking is very popular. In fact, about a quarter of a teenager’s calories come from snacks with 50% of their daily calories coming from added fat and sugar! The problem is that, along with fast foods, snacks have taken the high fat route.

Potato chips contain 10 grams of fat per ounce, but who can eat just one? Manufacturers are now marketing a two ounce snack size instead of the old one ounce package, giving us even more fat. Potato chips, America’s number one snack food, account for 41% of all snack foods sold.

Despite low fat choices, the production of higher fat premium ice cream is on the rise. One cup of ice cream has about 10g of saturated fat. A 2000 calorie diet allows for 22g of saturated fat in a day. One cup of ice cream would provide almost half of the day’s saturated fat! A lower fat dessert such as frozen yogurt or light ice cream with about 0-4g of saturated fat per cup would be a much wiser choice.

Habits are easiest started when young. Parents of toddlers need to initiate healthy snacking habits.

Healthy snacks can include raisin toast, apples or bananas with peanut butter, low fat crackers such as saltines and pretzels, fresh fruit, baby carrots, toast and jelly (skip the margarine), and popcorn (little to no added fat). And look for snacks with fiber!

When snacking on higher fat, sugary foods, consider...

- how often do I eat them?
- could I eat smaller portions?
- should I choose only one high fat food instead of many for a snack (e.g. saltines & cheese and fruit instead of Ritz crackers & cheese and a candy bar)?

Dietary Guidelines

The USDA and a variety of organizations have issued similar recommendations concerning fat — choose a diet low in fat, saturated fat and cholesterol.

<table>
<thead>
<tr>
<th>Calories From</th>
<th>Goals</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat</td>
<td>30%</td>
<td>34%</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>10%</td>
<td>12%</td>
</tr>
</tbody>
</table>

The top contributors of saturated fat in the American diet are hamburgers, cheeseburgers, meatloaf, whole and 2% milk, whole milk beverages and cheese. Both saturated and trans-saturated fat have been shown to raise blood cholesterol levels. Trans fat is found in some crackers, cookies, snack foods, baked goods, and in other foods where hydrogenated oils are used.
Ideas for using
How Much Sugar?

1. Have children compare the amount of sugar in sugar coated cereal (3 1/2 teaspoons) with the one teaspoon they may add to unsweetened cereal. Note that children may eat MORE of the sweetened cereals, possibly promoting weight gain.

2. Demonstrate how much food would provide about 13 teaspoons of sugar a day (10% of 2000 calorie food plan), a sensible amount. For example: 12 oz. can of cola plus one brownie = 14 1/2 teaspoons.

3. Discuss whether soda pop or other sweetened beverages should be used to quench thirst.

4. Have adults or students measure how much syrup they usually put on their pancakes or waffles. Calculate the amount of sugar in that amount.

5. Activity for parents: Offer your child a sweetened cereal for breakfast or bedtime snack. Observe how many bowls your child eats. On another day, offer your child unsweetened cereal with no sugar added or only 1 teaspoon added. Observe the number of bowls your child eats.

6. Encourage individuals to plan ahead as to what sweets they may want to eat. The goal is to decrease sweets, not omit them totally.

Keep sugar in perspective.
Know your health situation.
Don't prohibit sweets totally; eat them sensibly!

Food Values
of Foods Displayed in Test Tubes

4 Grams = 1 teaspoon

<table>
<thead>
<tr>
<th>Food</th>
<th>Teaspoons of Sugar</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 oz. soda pop*</td>
<td>11</td>
<td>161</td>
</tr>
<tr>
<td>1/2 cup Jello</td>
<td>4 1/4</td>
<td>80</td>
</tr>
<tr>
<td>2 inch square Brownie, unfrosted (1 oz.)**</td>
<td>3 1/4</td>
<td>162</td>
</tr>
<tr>
<td>3 inch Chocolate Chip Cookie (1 oz.)**</td>
<td>2 1/4</td>
<td>155</td>
</tr>
<tr>
<td>2 tablespoons Pancake Syrup</td>
<td>4 1/2</td>
<td>107</td>
</tr>
<tr>
<td>(average of pancake syrups)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.55 oz. Hershey Candy Bar</td>
<td>5 1/2</td>
<td>230</td>
</tr>
<tr>
<td>1 Pop Tart (1.9 oz.)</td>
<td>4 1/4</td>
<td>208</td>
</tr>
<tr>
<td>1/8 of a nine inch Apple Pie**</td>
<td>4 1/4</td>
<td>298</td>
</tr>
<tr>
<td>1 cup Vanilla Ice Cream</td>
<td>6</td>
<td>260</td>
</tr>
<tr>
<td>1 cup Froot Loops or 1 cup Lucky Charms</td>
<td>3 1/2</td>
<td>134</td>
</tr>
</tbody>
</table>

* An average of 10 major brands.

** An average of purchased and homemade products.

Sources:
1. Bowen and Church’s Food Values, 18th edition, 2005
2. Information on food packages, February 2008
3. World Health Organization
4. United States Department of Agriculture

Heart Health Teaching Aids

How Much Sugar?

Sharon E. Buhr, MPH, RD
Public Health Nutritionist
Young People’s Healthy Heart Program

Mercy Hospital
570 Chautauqua Blvd. ♡ Valley City, ND 58072
(701) 845-6456 ♡ Fax: (701) 845-6413
Email: info@healthyheartprogram.com
www.healthyheartprogram.com
Sugar

Sugar is the most popular food additive in the U.S. It's obviously found in cakes, cookies, candy and other sweets. Check also, the list of ingredients on processed foods — ketchup, crackers, bread, soups, cereals, peanut butter, cured meats and salad dressings. Most will contain sugar.

Two hundred years ago the average American ate only 2 pounds of sugar a year. In 1970, we are 123 pounds of sugar per year. Today the average man, woman and child consumes 152 pounds of added sugar in one year. This is equal to almost 1 cup of sugar per day.

Sugars and many of the foods that contain sugar in large amounts supply calories but are limited in nutrients. If an individual eats too many high sugar foods the person may not be getting enough of the vitamins, minerals and fiber needed.

The World Health Organization (WHO) and the USDA recommend we consume no more than 10% of our calories in added sugar. For a person eating 2000 calories a day, the goal would be to consume only 200 calories in added sugar or 13 teaspoons of sugar per day. The present average is over 42 teaspoons per day which provides 680 calories.

One teaspoon of white sugar has 15 calories and 1 teaspoon of corn syrup has 19 calories.

Soft drinks contribute more sugar to the average American diet than any other food. One can of pop contains 11 teaspoons of sugar. The average daily intake of pop is 20 ounces which has 18 teaspoons of sugar.

Other Names for Sugar

Sugar comes in many different forms and with a variety of names. All of the following sweeteners will provide the body with energy (calories) and all have little or no additional nutritional value, hence the term "empty calories."

<table>
<thead>
<tr>
<th>SUGAR</th>
<th>DEXTROSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SORGHUM SYRUP</td>
<td>MALTOSE</td>
</tr>
<tr>
<td>FRUCTOSE</td>
<td>CORN SWEETENER</td>
</tr>
<tr>
<td>GLUCOSE</td>
<td>CORN SYRUP</td>
</tr>
<tr>
<td>SUCROSE</td>
<td>FRUIT JUICE CONCEN</td>
</tr>
<tr>
<td>HONEY</td>
<td>HIGH-FRUCTOSE CORN SYRUP</td>
</tr>
<tr>
<td>SYRUP</td>
<td>SORBITOL</td>
</tr>
<tr>
<td>MOLASSES</td>
<td>BROWN SUGAR</td>
</tr>
<tr>
<td>LACTOSE</td>
<td></td>
</tr>
</tbody>
</table>

Sorbitol, mannitol and xylitol are alcohols of sugar. They are "sugar-free" only to the teeth and do contain calories.

Reasons to Eat Less Sugar

- **Tooth Decay:** The most ubiquitous health problem is tooth decay. Studies show that the amount of tooth decay is related to the frequency of sugar consumption. Sticky and dry foods (e.g., cookies) that stick on and between the teeth are the biggest problem. Therefore, it is important that children and adults brush after meals and snacks. If this is not possible, eat fewer sweet snacks and rinse the mouth well with water after eating snacks.

- **High Triglycerides:** In certain individuals sugar may promote hypertriglyceridemia. Restricting sugar and sweets is part of the treatment if triglycerides are high, along with weight control, increased physical activity, alcohol restriction, and fat and cholesterol restriction.

- **Diabetes:** Research has proven that sugar does not raise blood sugar any more than other carbohydrates. Hence a person with diabetes may eat sugar, but it must be exchanged for an equal amount of carbohydrate in the meal plan.

- **Hypoglycemia:** A sugar restricted diet is part of the food plan for the treatment of hypoglycemia. Although sugar technically does not cause the problem, the disturbing symptoms of hypoglycemia can often be avoided by not eating sugar.

- **Overweight:** Eating more calories than the body can use will add body fat and weight. Foods containing sugar are often very tempting so a person may overeat.

- **Sweets Displace Nutrient-Dense, Fiber-Rich Foods:** A 1.55 ounce chocolate bar (the candy bar displayed in the tubes) has about the same calories as two medium bananas that weigh a pound. The bananas are low in fat, high in vitamins and minerals and are fiber-rich. The candy can only claim to be high in calories, sugar and fat!
**SNACK COOKIES**

**Nutrition Facts**

<table>
<thead>
<tr>
<th>Serving Size 1 cookie (38g)</th>
<th>Servings Per Container 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amount Per Serving</strong></td>
<td></td>
</tr>
<tr>
<td>Calories 130</td>
<td>Calories from Fat 20</td>
</tr>
<tr>
<td>130 Calories</td>
<td>170 Calories from Fat 20</td>
</tr>
<tr>
<td>% Daily Values*</td>
<td></td>
</tr>
<tr>
<td>Total Fat 2.5g</td>
<td>4%</td>
</tr>
<tr>
<td>Saturated Fat 0.5g</td>
<td>3%</td>
</tr>
<tr>
<td>Cholesterol 0mg</td>
<td>0%</td>
</tr>
<tr>
<td>Sodium 180mg</td>
<td>7%</td>
</tr>
<tr>
<td>Total Carbohydrate 29g</td>
<td>10%</td>
</tr>
<tr>
<td>Dietary Fiber &lt;1g</td>
<td>3%</td>
</tr>
<tr>
<td>Sugars 16g</td>
<td>6%</td>
</tr>
<tr>
<td>Protein 2g</td>
<td>1%</td>
</tr>
<tr>
<td>Vitamin A 0%</td>
<td>Vitamin C 0%</td>
</tr>
<tr>
<td>Calcium 0%</td>
<td>Iron 6%</td>
</tr>
</tbody>
</table>

**INGREDIENTS:** ENRICHED BLEACHED FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID), SUGAR, CORN SYRUP, WATER, OATS, DEXTROSE, VEGETABLE SHORTENING (PARTIALLY HYDROGENATED SOYBEAN AND COTTONSEED OILS), MOLASSES, RAISINS, POLYDEXTROSE, LEAVENING (BAKING SODA, AMMONIUM BICARBONATE, SODIUM ALUMINUM PHOSPHATE), MODIFIED WHEAT STARCH, SALT, SUGAR, EGG WHITES, MODIFIED CORN STARCH, COCOA, SOY LECITHIN, CORN STARCH, COLORS (CARAMEL COLOR, RED 40), CARRAGEenan, NATURAL AND ARTIFICIAL FLAVORS, EGGS, SORBIC ACID (TO RETAIN FRESHNESS).

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**SUGAR FACTS**

Sugar can satisfy a sweet tooth and add an unmistakably sweet taste to many foods. Some foods, such as fruit and dairy products, are natural sources of sugar and are considered healthy choices because they offer needed nutrients. Unfortunately, most sugar-laden foods provide "empty" calories—they are high in sugar and calories but low in nutritional value. For example, a single can of soda contains ten teaspoons of sugar. Drinking three or four sodas each day would amount to 30-40 teaspoons of sugar, or about 500 calories! Being aware of foods' sugar content can help us reduce the amount of sugar we consume.

<table>
<thead>
<tr>
<th>FOOD</th>
<th>AMOUNT</th>
<th>SUGAR (grams)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk chocolate candy bar</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Cola</td>
<td>1 can</td>
<td>41</td>
</tr>
<tr>
<td>Animal crackers</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Ice cream</td>
<td>1/2 cup</td>
<td>19</td>
</tr>
<tr>
<td>Fruit drink/punch</td>
<td>12 oz</td>
<td>47</td>
</tr>
<tr>
<td>Peach</td>
<td>1 sm</td>
<td>14</td>
</tr>
<tr>
<td>Fruit &amp; grain bar</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Chocolate sandwich cookies</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Presweetened cereal</td>
<td>1 cup</td>
<td>15</td>
</tr>
</tbody>
</table>

Test tube measurements are shown in actual grams.

Please note: This test tube set includes nine tubes representing the sugar content in nine different foods. The tenth tube contains 25g of sugar, which should be used in combination with the cola and fruit drink/punch tubes to show the total amount of sugar contained in those foods.
Sugar Facts

What is sugar?
Sugar is a carbohydrate food. It is considered a “simple sugar” because it consists of small sugar units linked together (fructose, sucrose, etc.). One gram of sugar is equal to about four calories. Sugar contains no beneficial nutrients other than providing carbohydrates and calories. While some sweetened foods may contain nutrients such as vitamins, minerals, protein, or fiber, most offer few or no nutrients. Also, sugary foods often contain large amounts of fat, which further increases the caloric content.

Do we need sugar in our diet?
There is actually no physiological reason we should eat sugar. We can get carbohydrates and calories in other foods that provide more of the nutrients we need. However, for many people, sugar adds pleasure to eating.

What’s the difference between natural sugar and added sugar?
Natural sugars are those found in foods like fruit and dairy products. Cookies, cakes, candy, soft drinks, and ice cream contain sugar that has been added during the manufacturing process; these foods are usually very high in sugar content and low in nutrients. The difference between natural and added sugar is not as important as the difference between the foods themselves. In general, foods with added sugar are likely sources of empty calories. Fruit and dairy products package their sugars with vitamins, minerals, protein, and fiber, making them an important part of our daily eating plan.

Remember to use caution when reading nutrition labels, which do not distinguish between added and natural sugars.

Where does sugar fit in the Food Guide Pyramid?
Sugar can be found in any group of the Food Guide Pyramid, but it is mostly found in fruits, dairy products, and fats and sweets. Although sugars contained in fruit and in dairy products are usually natural, we should remember to follow the recommended serving amounts of the Food Guide Pyramid—too much of any type of sugar can lead to more calories and weight gain.

Sugar and Our Health

How does sugar affect our health?
In general, people eat too much sugar, choosing soft drinks, candy, and sugary snacks instead of healthy foods. The result is often unhealthy weight gain, which can cause or contribute to a number of serious health conditions. While dairy and fruit products have sugar and can lead to excess calories, they seldom contribute to weight gain.

Also, sugar affects our dental health by promoting tooth decay. This is especially true in young children. Eating less sugar and brushing and flossing daily can decrease the risks of tooth decay.

How much sugar is too much?
There is no daily requirement for sugar intake; however, health professionals agree that keeping added sugar to a minimum is essential. The recommended maximum amount of sugar is 10% of total daily calories. For a 2,000-calorie diet, this equals about 50 grams of added sugar daily. While this may seem like a lot of sugar, it is only slightly more than the amount of sugar in a 12-oz soft drink. It is estimated that the average American consumes 65 pounds of added sugar each year. This is more than twice the recommended amount.

Tips for reducing added sugar:
- Compare labels and choose lower-sugar desserts and snacks.
- Choose fresh fruit more often.
- Reduce the amount of sugar called for when cooking or baking.
- Use spices and flavorings to add taste when reducing sugar.
- Use sugar substitutes (aspartame, saccharin, asulfame k, sucralose).
Assess your fitness knowledge and learn how much you really know about getting into shape.

http://www.diabetes.org/

1. You only have to exercise if you need to lose weight.

   TRUE   FALSE

FALSE: Everyone benefits from exercise. The benefits of physical activity include:

   • Maintaining or losing weight
   • Improving your mood
   • Reducing the risk of many chronic diseases, such as type 2 diabetes, high blood pressure, osteoporosis, and certain types of cancer
   • Strengthening your heart and lungs
   • Helping you sleep better
   • Enhancing your sex life

2. To get healthy you must exercise at least 60 minutes every day.

   TRUE   FALSE

FALSE: Getting healthy doesn’t require 60 minutes every day, although more is better. Try to set aside time for exercise:

   • Aim for at least 30 minutes of moderate-intensity aerobic exercise five days a week, such as walking briskly or riding your bike.
   • At a minimum, exercise at least 20 minutes, 3 days a week, along with strength training exercises twice a week
   • If your schedule is tight, sneak in three, 10-minute activity periods during the day

3. Unless you join a health club, you cannot really get in shape.

   TRUE   FALSE

FALSE: There’s lots of ways to get in shape without joining a gym:

   • Find a walking partner and walk during part of your lunch hour
   • Take the stairs instead of the elevator
   • See if your local library has exercise videos to check out
   • Take the dog for a walk
   • Go for a brisk walk around the mall
   • Park at the far end of the shopping center parking lot
   • Use the track at the nearest school
   • Run outside
   • There are also fitness videos online and television shows that you can do in your own home
4. If you exercise, you can eat anything you want.

  TRUE           FALSE

FALSE: When you exercise regularly, you burn calories. However, to maintain a healthy weight, you must achieve a balance. To keep your weight in check, keep in mind not just what you eat—but how much. (link to portion control)

5. Regular exercise may reduce your need to take certain medicines.

   TRUE           FALSE

TRUE: Exercise offers an added benefit to people with type 2 diabetes and high blood pressure. Regular activity can help control blood glucose levels and lower blood pressure—and may reduce the need for medicines.

6. You only need to exercise until age 55.

   TRUE           FALSE

FALSE: Exercise is important for all people. A natural part of the aging process is a loss of muscle mass. Regular activity is the only way to replace that muscle mass. If you do not exercise and do not replace the muscle mass, your body fat percentage increases. Physical activity also helps maintain mental and physical stamina.

7. Regular activity is necessary to maintain the benefits of exercise.

   TRUE           FALSE

TRUE: The key to maintaining good physical and mental health is regular activity. If you stop exercising, you may notice a quick decline in your fitness level. After a break in your exercise plan, restart slowly and gradually rebuild your stamina. If a health problem forces you to stop exercising, check with your doctor before restarting your routine.

8. Aerobic exercises increase your rate of breathing.

   TRUE           FALSE

TRUE: To get the benefits of aerobic exercise, you should notice an increase in your rate of breathing, but not to the point of gasping for air—you should still be able to carry on a conversation.

9. When you lift weights, you should exhale as you are lifting.

   TRUE           FALSE
TRUE: Most weight-training exercises require you to exhale as you are lifting. Inhaling may make the exercise more difficult. Holding your breath may raise your blood pressure—and even cause fainting.

10. The best fitness plan includes a combination of cardiovascular fitness, strength training, and stretching.

TRUE FALSE

TRUE: To ensure you meet all of your body’s fitness needs, choose a fitness plan that will:

- Strengthens your cardiovascular system (like aerobics classes or brisk walking)
- Strengthens your muscles (like weight lifting or resistance training)
- Increases your flexibility (like stretching exercises or yoga)
Information about Exercise

Exercise burns lots of calories.

“People have the mistaken idea that exercise is a fabulous way to lose weight,” says William Evans of the University of Arkansas for Medical Sciences. “But exercising doesn’t burn a lot of calories.”

Walking or running a mile burns about 100 calories. But sitting still for the same time burns about 50 or 60 calories. “So the extra you expend isn’t huge and people get discouraged at their slow rate of weight loss.”

Another misconception: You keep burning considerably more calories for a long time after you stop exercising. “Calorie expenditure is elevated for the first minute or two, but by five or six minutes the extra expenditure is pretty small, and by 40 minutes post-exercise, it’s back to where you started,” says Evans.

That doesn’t mean dieters should give up on exercise. The more you exercise, the more fit you’ll get. That means you’ll burn more calories because you can walk briskly or run for five miles instead of one. So instead of burning 100 calories, you burn 500 (that’s 250 more than if you had stayed on the couch). What’s more, says Evans, “the better-conditioned you are, the more fat you burn for energy, because your muscles adapt to using an enzyme that oxidizes fat. People who are less-trained burn more carbohydrate instead.” Dieters who exercise also lose less lean body mass — that is, less muscle — than dieters who just cut calories. And physical activity can help with the toughest problem: keeping weight off.

Says Evans: “Studies show that after people lose weight, the best predictor of maintaining the weight loss is whether they exercise regularly.” “Exercise improves the ability of insulin to enter cells, so it lowers the risk of diabetes,” says Haskell. “It also lowers the risk of heart disease by improving blood clotting mechanisms, lowering triglycerides, and raising HDL [‘good’] cholesterol.”