Teaching Idea

Using Fast Food Nutrition Facts to Make Healthier Menu Selections

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ABSTRACT

Objectives: *This teaching idea enables students to (1) access and analyze fast food nutrition facts information (Calorie, total fat, saturated fat, trans fat, cholesterol, sugar, and sodium content); (2) decipher unhealthy and healthier food choices from fast food restaurant menus for better meal and diet planning to reduce obesity and minimize disease risk; and (3) discuss consumer tips, challenges, perceptions, and needs regarding fast foods.* ***Target Audience:*** *Junior high, high school, or college students, with appropriate levels of difficulty included in this paper.*

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INTRODUCTION

Obesity is a national and worldwide concern.[1,2] In the United States, childhood, adolescent, and adult obesity has steadily increased. In 2007, about two-thirds (67%) of all Americans were either overweight or obese.[3] Further, more children are currently in higher overweight percentile rankings, including above the 85th percentile.[4]

Overweight children and adolescents have a much higher chance of becoming obese adults, and, the earlier overweight or obesity occurs, the more severe it can be in adulthood.[1] What used to be considered adult health problems, such as heart disease, high blood pressure (hypertension), high cholesterol, and type 2 diabetes, now occurs in obese children and adolescents.[1,5]

Many public health dietary and lifestyle recommendations are published on a regular basis, the intent of which is to guide all Americans to make healthier food choices to promote health and prevent disease. Table 1 provides a summary of the most current overarching goals of the Dietary Guidelines for Americans 2005, which are also echoed in the MyPyramid food guidance system, along with the 2006 dietary recommendations from the American Heart Association and the American Cancer Society.[3, 6-9]

Most fast food restaurants publish the nutrition facts information on their website. Often, this information is limited to basic nutritional data such as those found on a food package label. Minimally, total Calories, grams of total fat, saturated fatty acids (SFAs, saturated fat, sat. fat), trans fatty acids (TFAs or trans fat), carbohydrate, fiber, sugar, and protein, as well as milligrams of cholesterol (chol.) per food serving size are provided. The complete nutritional analysis of many fast food items can be accessed freely online through the United States Department of Agriculture (USDA) Nutrient Data Laboratory or MyPyramid tracker.

Rarely is there a public health message that per se reveals that eating fast foods may cause obesity. The American Medical Association recently advised families to limit the consumption of meals outside the home.[5] Nearly all health experts, public and private, agree that overweight and obesity happens when a person is in positive energy balance from chronically and consistently consuming more Calories than they expend. Positive energy balance is much more likely to happen when eating outside the home or quick serve foods.[1,5] The abundance of fast food restaurants likely contributes to the rise in obesity rates.[2] Fast food restaurants make up 74% of all restaurant traffic and the foods are notoriously heavy in Calories.[10] Due to the lack of Calorie information readily available to use when making menu selections, it is not uncommon for consumers to purchase and consume more than 1000 Calories in a

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Table 1. Promoting Healthy Food Choices with the Dietary Guidelines for Americans, 2005; American Heart Association, 2006; and American Cancer Society, 2006.

The purpose of eating: The major causes of sickness, disease, and death in the United States are related to poor diet and sitting around too much (being sedentary). People should eat to fuel (provide Calories or energy) and nourish (provide nutrients) the body. This process involves eating an appropriate number of Calories and engaging in physical activity to expend more energy. Calorie needs depend on age, gender and physical activity level. In the 9-13 year old age group, females require 1600-2200 Calories per day while males require 1800-2600 Calories per day. In the 14-18 year age group, females require 1800-2400 Calories per day while males require 2200-3200 Calories per day. In the 19-30 years old age group, females require 2000-2400 Calories per day while males require 2400-3000 Calories per day.

The role of diet in health and disease: Diets high in total Calories, total fat, saturated and trans fat, cholesterol, sugars (added and naturally occurring in milk and fruit), and sodium promote obesity (excess body fat), heart disease, hypertension, cancer, and/or type 2 diabetes. Fast, processed, animal, and full-fat dairy foods provide an abundance of one or more of these substances and thus promote disease when eaten in excess.

Basic food recommendations for health promotion: Eat a variety of different foods from each food group (grains, vegetables, fruits, milk and milk alternatives, meat and meat alternatives, and liquid oils). Eat mostly plant foods (vegetables, fruits, whole grains, and legumes/dried beans). Eat mostly whole plant foods rather than refined plant foods (such as an apple instead of apple juice, brown rice instead of white rice, or whole wheat bread instead of white bread). Moderate the intake of substances that promote obesity and disease. Eat smaller portions (amounts) of foods and stop eating when you feel full.

Spotlight Nutrient Emphasis Areas:

Calories: Calorie intake should be balanced with need and expenditure to achieve and maintain a healthy body weight. Fast and processed foods tend to be high in Calories. Whole plant foods tend to be low in Calories. Consumers should know their Calorie needs and how many Calories are provided by the foods and beverages they consume.
Fat and Cholesterol: Total fat should be 25-35% of Calories for those age 4-18 years and 20-35% of Calories for those 19 years and older. Saturated fat should be <7% of Calories and trans fat should be <1% of Calories. Cholesterol should be <300 mg/day. To achieve these goals, consumers should limit high-fat animal meat and dairy foods and processed and fast foods, consume the low fat and unprocessed versions of meat, fish, and milk products instead, as well as incorporate healthy fats from nuts, seeds, and plant oils.
Salt/Sodium: Salt is 40% sodium. Excess sodium contributes to elevated blood pressure which promotes heart disease. Sodium intake should be 1,500-2,300 mg/day for most people. The vast majority (77%) of salt consumption comes from food processing.
Sugar: The intake of sugar should be <10% of Calories when added to processed foods (soda, cookies, cake, candy, etc) and ≤25% of Calories from both added sugars and naturally occurring sugars (from milk, fruit, and fruit juices).

Calculations:

Converting grams of total fat, saturated fat, or trans fat to percent of Calories *(Fat grams x 9 Calories/gm = Fat Calories ÷ total Calories x 100 = % of Calories from Fat)*.
Converting grams of sugar to percent of Calories *(Sugar grams x 4 Calories/gm = Sugar Calories ÷ total Calories x 100 = % of Calories from Sugar)*.

single fast food meal.[10] Having this information present at the point of purchase could help consumers make healthier choices because many fast food restaurants have some healthy foods available.[11] Taken together, it is easy to deduce that eating foods that are high in Calories from fast food restaurants too frequently typically promotes excess energy consumption, positive energy balance, weight gain, obesity, and a demise of human health.

OBJECTIVES

At the conclusion of this teaching strategy, instructors will have met several national credentialing standards (Table 2)[12,13] and students will be able to (1) access and analyze fast food nutrition facts information (Calorie, total fat, saturated fat, trans fat, cholesterol, sugar, and sodium content); (2) decipher unhealthy and healthier food choices from fast food restaurant menus for better meal and diet planning to reduce obesity and minimize disease risk; and (3) discuss consumer tips, challenges, perceptions, and needs regarding fast foods.

Table 2. Correlation of Objectives to National Standards

National Health Education Standards:
- Standard 1, grade performance indicators 1 and 7
- Standard 5, grade performance indicators 1, 2, 4, 6, and 7

National Commission for Health Education Credentialing Standards for Certified Health Education Specialists:
- Responsibility area I, competencies A and C

MATERIALS AND RESOURCES

The following materials and resources are needed for this teaching idea and activity:

- Tables 1 and 3 through 8 in this publication
- Nutrition facts, which are described under procedures and can be accessed online and provided in print format
- Calculators
- Pencils

TARGET AUDIENCE

This activity is provided with three target audience options: short and easy for junior students, intermediate for high school students, and advanced for collegiate health and/or nutrition students.

PROCEDURE

1. Alert teaching lesson plan: The activity facilitator will use Table 1 to provide background information to students on ways to eat healthy and the role of excess Calories, total fat, saturated fat, trans fat, cholesterol, sugar, and salt in the development of leading chronic and degenerative health conditions such as obesity, heart disease, cancer, and type 2 diabetes.

2. Access nutrition information: After educating students on the importance of making wise food selections within dietary guidelines to promote health, the fast food nutrition facts menu activity should be placed into action. To implement this activity, the facilitator and/or users need to access the nutrition facts for fast food restaurants. The links in Table 3 should be used to access basic nutritional analysis facts information online from Arby's, Burger King, Kentucky Fried Chicken, McDonalds, and Wendy's. Other fast food restaurant links also could be included in the activity. The PDF files can be printed and then used for group processing of menu items during the activity. Alternatively, a more advanced option suitable for online collegiate level courses or classrooms equipped with internet access and student computers is to access the full nutrition analysis data through the United States Department of Agriculture (USDA) nutrient data laboratory or MyPyramid (Table 3).

3. Apply/Assimilate knowledge: Divide the class into groups or three to five participants; assign each group a fast food restaurant: Arby's, Burger King, Kentucky Fried Chicken, McDonalds, Wendy's, or the like. To work through the activity, require group participants to use the nutrition facts provided to them in print form or visit the assigned website. The facilitator should share the sample unhealthy diet (Table 4) and healthier diet (Table 5) and then assign the short and easy (junior high level), in-

Table 3. Nutritional Analysis Data Web Links

Data Source	Web Link (All Accessed May 2, 2009)
Arby's	Available at: http://www.arbys.com/nutrition/ or http://www.arbys.com/nutrition/printable.php?type=nutrition
Burger King	Available at: http://www.bk.com/#menu=3,-1,-1 or http://www.bk.com/nutrition/PDFs/NutritionalBrochure.pdf
Kentucky Fried Chicken	Available at: http://www.yum.com/nutrition/menu.asp?brandID_Abbr=2_KFC or http://www.yum.com/nutrition/documents/kfc_nutrition.pdf
McDonald's	Available at: http://nutrition.mcdonalds.com/nutritionexchange/nutritionexchange.do or http://www.mcdonalds.com/usa/eat/mcdonalds_menu.RowPar.40645.ContentPar.19145.ColumnPar.96594.DownloadFiles.0001.File.tmp/CS-9694_McD_Menu-03-12-09.pdf
Wendy's	Available at: http://www.wendys.com/food/NutritionLanding.jsp or http://www.wendys.com/food/pdf/us/nutrition.pdf
USDA Nutrient Data Laboratory	Available at: http://www.nal.usda.gov/fnic/foodcomp/search/
MyPyramid Tracker	Available at: http://www.mypyramidtracker.gov/

Table 4. Sample Unhealthy Fast Food 1-Day Diet (Burger King, April 2009)

Food Item	Calories	Total Fat (g)	Sat. Fat (g)	Trans Fat (g)	Chol. (mg)	Sodium (mg)	Sugar (g)
Breakfast							
Sausage, Egg, & Cheese Biscuit	560	37	19	1	175	1560	4
Hash Browns – Medium (140 gm)	610	39	8	0	0	980	0
Hershey's 1% Low Fat Chocolate Milk (8 fl oz)	180	2.5	1.5	0	15	140	29
Lunch							
TENDER-CRISP Chicken Sandwich – with Mayo	800	46	8	0.5	70	1640	9
COCA COLA® CLASSIC – Large (32 fl oz)	290	0	0	0	0	5	79
Dinner							
DOUBLE WHOPPER® Sandwich – with Cheese & Mayo	1010	66	24	2.5	160	1530	12
French Fries - Large Salted	580	28	6	0	0	990	0
Vanilla Milk Shake - Large (32 fl oz)	720	29	19	1	120	480	114
TOTAL	4750	247.5	85.5	5	540	7325	247
Gram Conversion to Calories	N/A	x 9 Cal/gm 2228	x 9 Cal/gm 770	x 9 Cal/gm 45	N/A	N/A	x 4 Cal/gm 988
% Calories = Calories/Total Calories X 100	N/A	47%	16%	1%	N/A	N/A	21%
Goal	Balance with Expenditure	Age ≥ 19: 20-35% of Calories	<7% of Calories	<1% of Calories	<300 mg/day	1500-2300 mg/day	<10% added ≤25% total
Interpretation	Excess	Excess	Excess	Excess	Excess	Excess	Excess

termediate (high school level), or advanced (collegiate level) activity option described as follows.

A. Short and easy (junior high level): Require participants to look through the fast food menu nutrition facts information and answer the short and easy group discussion questions from Table 6.

B. Intermediate (high school level): Instruct participants to look through the fast food menu and identify items that are high in total Calories, fat, saturated fat, trans fat, cholesterol, sugar, and/or sodium. Using two copies of Table 7, student groups should create a typical unhealthy dinner meal plan

Table 5. Sample Healthier Fast Food 1-Day Diet (Burger King, April 2009)

Food Item	Calories	Total Fat (g)	Sat. Fat (g)	Trans Fat (g)	Chol. (mg)	Sodium (mg)	Sugar (g)
Breakfast							
French Toast Sticks (3 piece)	230	11	2	0	0	260	8
Strawberry Jam	30	0	0	0	0	0	6
Hersey®'s 1% Fat FREE Milk (8 fl oz)	100	0	0	0	5	150	13
Minute Maid® Apple Juice – (6.67 fl oz)	100	0	0	0	0	15	21
Lunch							
KRAFT® Macaroni and Cheese (113 gm)	160	5	1.5	0	10	340	5
BKTM Fresh Apple Fries	25	0	0	0	0	0	5
Minute Maid® Orange Juice – (6.67 fl oz)	140	0	0	0	0	20	30
Water (16 fl oz)	0	0	0	0	0	0	0
Dinner							
Flame Broiled Hamburger	290	12	4.5	0.5	35	560	6
Onion Rings – (value)	150	8	1.5	0	0	230	2
Garden Salad, No Chicken	70	4	2.5	0	10	100	2
KEN'S® Light Italian Dressing (2 oz)	120	11	1.5	0	0	440	4
Dutch Apple Pie (107 gm)	320	13	5	0	0	290	23
Hersey®'s 1% Fat FREE Milk (8 fl oz)	100	0	0	0	5	150	13
Water (16 fl oz)	0	0	0	0	0	0	0
TOTAL	1835	64	18.5	0.5	65	2555	138
Gram Conversion to Calories	N/A	x 9 Cal/gm 576	x 9 Cal/gm 167	x 9 Cal/gm 4.5	N/A	N/A	x 4 Cal/gm 552
% Calories = Calories/Total Calories X 100	N/A	31.4%	9%	0.25%	N/A	N/A	30%
Goal	Balance with Expenditure	Age ≥ 19: 20-35% of Calories	<7% of Calories	<1% of Calories	<300 mg/day	1500-2300 mg/day	<10% added ≤25% total
Interpretation	Depends on age, gender, & activity	OK	Over	Good	Good	Over	Excess

Table 6. Discussion Questions

Short and Easy Group Work Questions	Comprehensive Discussion Questions
1. Which fast foods provide the most number of Calories? 2. Which fast foods provide the most amount of unhealthy saturated and trans fats? 3. Which fast foods provide the most amount of sugars (added or natural)? 4. Which fast foods provide the most amount of sodium? 5. List the top five fast food items that do not help consumers meet the dietary guidelines? Briefly explain why? 6. Which fast foods provide the least number of Calories? 7. Which fast foods provide the least amount of unhealthy fats? 8. Which fast foods provide the least amount of sugars? 9. Which fast foods provide the least amount of sodium? 10. List the top five fast food items that do help consumers meet the dietary guidelines? Briefly explain why?	1. What are some consumer tips to make better fast food choices? 2. What is the biggest challenge that consumers are likely to face in making fast food selections that optimize their health? 3. What is your perception of the availability of fruits, vegetables, and whole grain food choices at fast food restaurants? 4. Describe how fast food menus should change (both the removal and addition of food choices) to support consumer health. 5. Did your perception of "fast food" change after this activity? If so, how (give an example)?
Answers Based on Burger King Menu (April, 2009)	**Answers**
1. Any WHOPPER®, double, triple, quad burgers, chicken sandwich with mayo, double CROISSAN'WICH®, enormous omelet, big fish sandwich, large and king fries and onion rings, medium and large shakes, and king sodas. 2. Any WHOPPER®, burgers, chicken and fish sandwiches, any CROISSAN'WICH®, biscuits, hash browns, chicken fries, onion rings, French fries, French toast, honey mustard dressing, TENDERCRISP® chicken garden salad, and milk shakes. 3. Cini-minis, vanilla icing, syrup, honey mustard dressing, barbecue and sweet and sour dipping sauce, iced coffee, milk, milk shakes, sundaes, regular soda drinks, and juice. 4. Any WHOPPER®, burgers, chicken and fish sandwiches, any CROISSAN'WICH®, biscuits, hash browns, chicken fries, CHEESEY TOTS™, Caesar dressing, and TENDERCRISP® chicken garden salad. 5. Quad stacker (1010 Calories, 70g Fat, 30g SFA, 3g TFAs, 1800 mg sodium, 6g sugars), triple WHOPPER® sandwich with mayo (1160 Calories, 76g Fat, 27g SFA, 3g TFAs, 1170 mg sodium, 11g sugars), medium hash browns (610 Calories, 39g Fat, 8g SFA, 0g TFAs, 980 mg sodium), double CROISSAN'WICH® with sausage, egg, and cheese (690 Calories, 50g Fat, 19g SFA, 1g TFAs, 1560 mg sodium, 5g sugars), medium Oreo® sundae shake (980 Calories, 34g Fat, 21g SFA, 1g TFAs, 620 mg sodium, 153g sugars). 6. Hamburger, CHICKEN TENDERS®, apple fries, side and garden salads, black coffee, and water. 7. TENDERGRILL™ chicken sandwich without mayo, fat free ranch dressing, veggie burger, apple fries, side and garden salads, fat free milk, and juice. 8. Original chicken sandwich, CHICKEN TENDERS® and fries, hash browns, onion rings, and French fries. 9. Hamburger, apple pie, HERSHEY® sundae pie, small onion rings and French fries, garden salad (no chicken), and fat free milk. 10. Fat free milk, apple fries, hamburger, side salad or garden salad (no chicken), and orange juice. These are foods that are low in Calories, unhealthy fat, sodium, and low to moderate in sugars. They are also sources of fruits and vegetables in some cases.	1. Choose fresh foods such as whole fruits and vegetables more often. Limit the use of sauces and extras because these can contribute a lot of Calories, SFAs, TFAs, sugar, and sodium. Choose a smaller size of a menu item high in Calories, SFAs, TFAs, sugar, and sodium if you must eat it. 2. When cutting fat, the sugar and/or sodium usually increase so pay attention when making menu selections. Keeping sodium at a healthy intake level is very difficult to do when eating processed and fast foods. Adding some whole fresh foods to the meal will bring big nutritional and health benefits. 3. Often, there is a lack of variety of these foods. Apple and orange products are available fruits. Iceberg lettuce and potato products are available vegetables. Very few whole grain products (such as whole wheat hamburger buns) are served depending on the restaurant. 4. Fast food menus should have more availability and variety of fresh fruits, vegetables, whole grain products, legumes, nuts, and seeds. Restaurants should reduce the levels of unhealthy fats, added sugars, and sodium in their menu items whenever possible. When a menu item has an abundance of potentially harmful substance (SFA, TFA, added sugars, sodium), consumers should be made aware on the menu. 5. Yes, I was unaware of how high the Calorie, fat, sugar, and/or sodium content is in many fast foods. I had not looked for healthier alternatives available at fast foods restaurants. I was not familiar with using the nutrition facts information available online.

and then a healthier dinner meal plan. Students should try to implement the dietary guidelines that they were taught from Table 1 when creating the healthier meal. The nutritional data for each menu item should be entered into the table and data columns should be totaled. The total fat, saturated fat, trans fat, and sugar grams should be converted to Calories and the percent of Calories from these components should then be calculated using the formulas provided in Table 7. The diet should be interpreted for meeting the dietary guidelines (see Tables 4 and 5 for examples).

C. Advanced (university level): Ask student groups to work through the same process as the intermediate option except construct a one day diet rather than a single meal. The facilitator should provide two copies of Table 8 to each group.

ASSESSMENT TECHNIQUE

Student learning will be assessed when the group work is shared with the class and discussion is lead by the facilitator. Facilitators should have groups share their group work results with the class and then lead the class discussion using the comprehensive discussion questions (Table 6).

1. Sharing of unhealthy results: Require each group to share their answers to group work questions 1-5 from Table 6 (easy) or unhealthy meal (intermediate) or unhealthy 1-day diet (advanced) and nutritional analysis results with the class. The group should comment on the nutritional aspects of the food items and the impact on the consumers' health.

2. Sharing of healthy results: Instruct each group to share their answers to group work questions 6-10 from Table 6 (easy) or healthy meal (intermediate) or healthy 1-day diet (advanced) with the class. Group members should comment on the nutritional aspects of the food items and the impact on the consumers' health.

CONCLUSION

After working through any level of this teaching activity it can be concluded that it is presently difficult to consume a healthy

Table 7. Fast Food Dinner Meal Activity

Food Item	Calories	Total Fat (g)	Sat. Fat (g)	Trans Fat (g)	Chol. (mg)	Sodium (mg)	Sugar (g)
TOTAL							
Gram Conversion to Calories	N/A	x 9 Cal/gm	x 9 Cal/gm	x 9 Cal/gm	N/A	N/A	x 4 Cal/gm
% Calories = Calories/Total Calories X 100		%	%	%			%
Goal	1/3 of the daily need	Age ≥ 19: 20-35% of Calories. ≤18: 25-35%	<7% of Calories	<1% of Calories	<100* mg/day	500-767* mg/day	<10% added ≤25% total
Interpretation							

Table 8. Fast Food 1-Day Diet Activity

Food Item	Calories	Total Fat (g)	Sat. Fat (g)	Trans Fat (g)	Chol. (mg)	Sodium (mg)	Sugar (g)
Breakfast							
Lunch							
Dinner							
TOTAL							
Gram Conversion to Calories	N/A	x 9 Cal/gm	x 9 Cal/gm	x 9 Cal/gm	N/A	N/A	x 4 Cal/gm
% Calories = Calories/Total Calories X 100	N/A	%	%	%	N/A	N/A	%
Goal	Balance with Expenditure	Age ≥ 19: 20-35% of Calories. ≤18: 25-35%	<7% of Calories	<1% of Calories	<300 mg/day	1500-2300 mg/day	<10% added ≤25% total
Interpretation							

diet by eating mostly fast foods. Healthier food choices, however, can be made when the foods nutritional facts are considered. It should become apparent after sharing the various fast food restaurant group analysis results and engaging in discussion that some fast food restaurants provide healthier food choices than others and that almost all fast food restaurants have some healthy choices. In general, fast food restaurants typically lack a variety of plant food selections from their menu such as fresh fruits and vegetables and whole grain products. Further, it is difficult to limit sodium, sugar, fat, and Calorie intake levels to meet dietary recommendations that support health and prevent obesity and many chronic diseases when eating fast foods. Ideally, students should conclude the need of fast food restaurants to provide even more healthy food choices for their patrons as well as make nutritional facts available to consumers at the point of purchase.

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