

Development and field testing of nutrition education for Latinos: The Spanish Versions of the Plate Method and Food Label Lessons



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Presented at the American Public Health Association Annual Meeting. November 4 to 7, 2007

Study Objectives

1. Integrate nutrition education lessons for people with diabetes into a diabetes prevention program.
2. Include principles of instructional psychology.
3. Refine and culturally tailor the content for pregnant and postpartum Latina women.
4. Use the plate method and food label to reinforce nutrition concepts in the Healthy MOMs curriculum.

Racial and Ethnic Approaches to Community Health (REACH 2010)

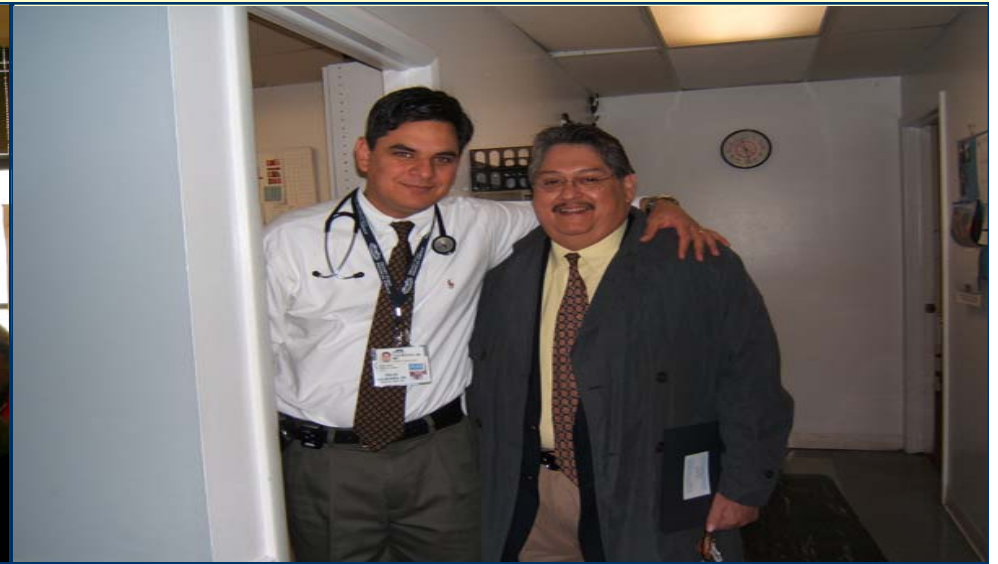
The REACH Detroit Partnership is a CDC-funded multi-level intervention that provides inter-related family, health system, social support, and community interventions to reduce disparities in diabetes among African-Americans and Latinos in eastside and southwest Detroit.



U50/CCU522189, Centers for Disease Control and Prevention

REACH Detroit Partnership Interventions

Social Support, Community, Family, and Health Care System



Family Intervention

The Family Health Advocates (FHA's)

Increase Physical Activity & Healthy Eating, Enhance Family-Provider Relationships, Increase Use of Community Resources, Improve Diabetes Self-Management, Increase Health Care Consumer Skills.



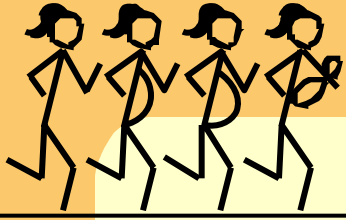


Healthy MOMS (Mothers on the Move)



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Funding: grant #5 R18 DK 062344 National Institute of Diabetes, Digestive and Kidney Disorders and grant #K23DK071552 HRSA/Maternal and Child Health Bureau



Healthy MOMs Specific Aims

Primary Aims: Increase healthy eating (increased fruits, vegetables & fiber; reduced trans and saturated fat and simple sugars); and increase amount of exercise.

Secondary Aims: Increase the proportion of women who have appropriate levels of pregnancy weight gain and postpartum weight reduction.

Process Aim: Assess and document challenges and contributors to successful project implementation with an aim for translation and sustainability.

Integrated Women's Health Advocate (WHA) and Clinic Interventions

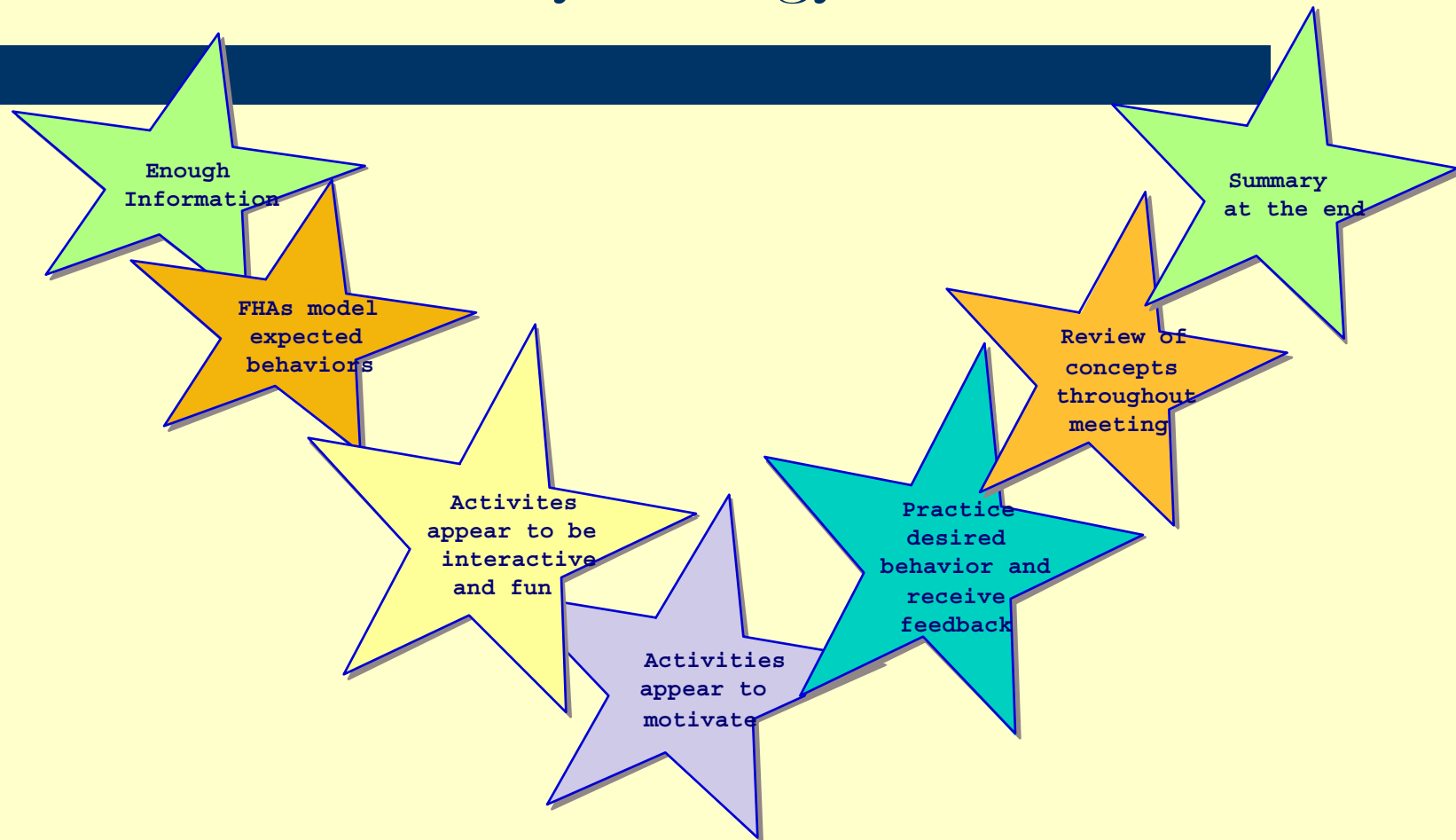
WHAs: Facilitate classes, lead activity/social support group meetings, make home and clinic visits



Methods REACH Detroit

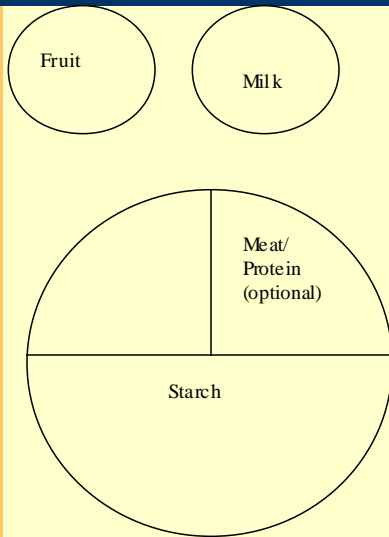
1. Adapted an English & Spanish version of:
 - a. The Plate Method
 - b. Nutrition Food Label
2. Pilot and field-test in Detroit with African American and Latino clients and FHAs.
3. Content revised by primary investigator and FHAs.

Instructional Psychology



What is the Plate Method?

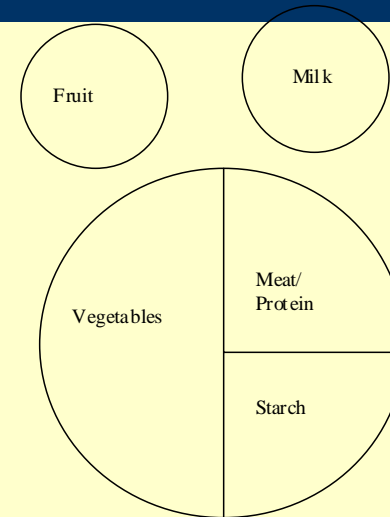
(Adapted from the American Diabetes Association (ADA). Type 2 Diabetes Curriculum)



Divide your plate into fourths. At breakfast, $\frac{1}{2}$ is for starches and $\frac{1}{4}$ is for meat. No vegetables are eaten and protein is optional, so the entire plate is not used.

The Plate Method: Breakfast

Filling a 9-inch dinner plate, without snacks, will provide 1,200-1,500 calories per day, depending on serving sizes.



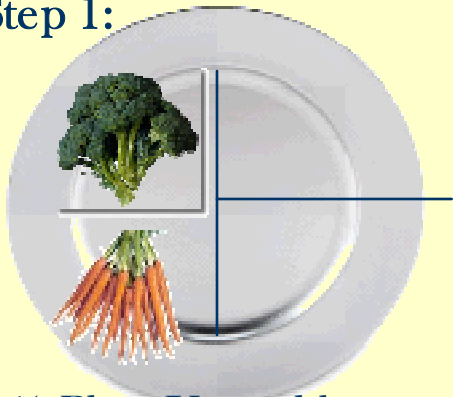
The Plate Method: Lunch/ Dinner

At lunch and dinner, use $\frac{1}{4}$ of the plate for starches, $\frac{1}{4}$ for meat, and $\frac{1}{2}$ for vegetables. If weight loss is not a goal, you can divide the starch and vegetable portions more evenly.

Healthy Plate Model

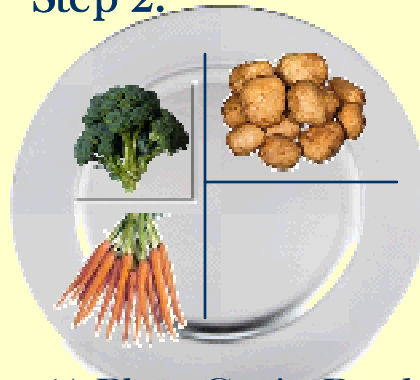
Guidelines for a Healthy Meal (Camelon et al. 1998)

Step 1:



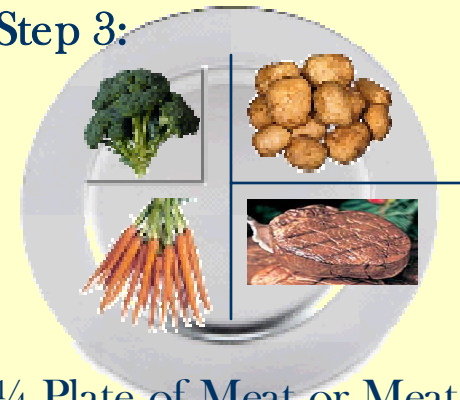
1/2 Plate Vegetables

Step 2:



1/4 Plate Grain Products
(Carbohydrates)

Step 3:



1/4 Plate of Meat or Meat
Alternatives

On the side...

Step 4:



Fruit

Step 5:



Low fat milk or yogurt

Step 6:



Grains like bread or rolls

The Plate Method

Directions:

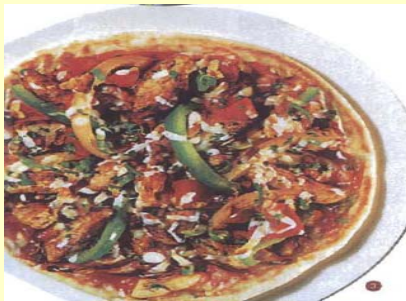
1. Look at the picture and rate with a “YES” the examples of the plate method.
2. Guess how many calories are in each plate.



1. Plate Method _____
Calories _____



2. Plate Method _____
Calories _____



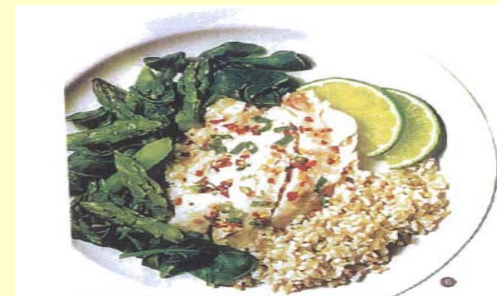
3. Plate Method _____
Calories _____



4. Plate Method _____
Calories _____



5. Plate Method _____
Calories _____



6. Plate Method _____
Calories _____

Interactive Activity with Corrective feedback



Results: Plate Method

1. Eliminate nonessential information
2. Use culturally relevant examples and non-examples of the plate method.
3. Provide list with names of foods.
4. Explain calories in more detail and show examples of food with caloric values.
5. Obtain pictures representative of the plate method.

The Nutrition Facts Label

Sample label for
Macaroni & Cheese

① **Start Here** →

② **Check Calories**

③ **Limit these Nutrients**

④ **Get Enough of these Nutrients**

⑤ **Footnote**

Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container 2	
Amount Per Serving	
Calories 250	Calories from Fat 110
	% Daily Value*
Total Fat 12g	18%
Saturated Fat 3g	15%
<i>Trans</i> Fat 3g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

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

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

⑥ **Quick Guide to % DV**

- 5% or less is Low
- 20% or more is High

Source: FDA

Results: Food Label

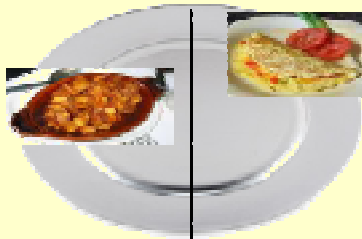
1. The lesson was too long.
2. The information was very good
3. Footnote and percent daily values were difficult to teach in one lesson.
4. Learning activities were good.

Methods: Healthy Moms

1. Lessons refined by graduate students and Womens Health Advocates from the MOMs program.
2. Field tested with Spanish postpartum women participating in Healthy MOMS (n=10)
3. Lessons were revised and implemented in the Healthy MOMS program.



Metodo del Plato



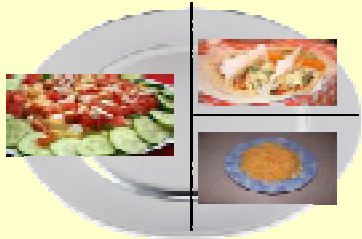
Desayuno



½ Plato de Almidones



¼ Plato de Carne/Proteína



Almuerzo



½ Plato de Verduras

¼ Plato de Almidones

¼ Plato de Carne/Proteína



Cena



½ Plato de Verduras

¼ Plato Almidones

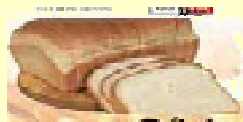
¼ Plato de Carne/Proteína



Al Lado...

Frutas

Leche baja en grasa o yogur

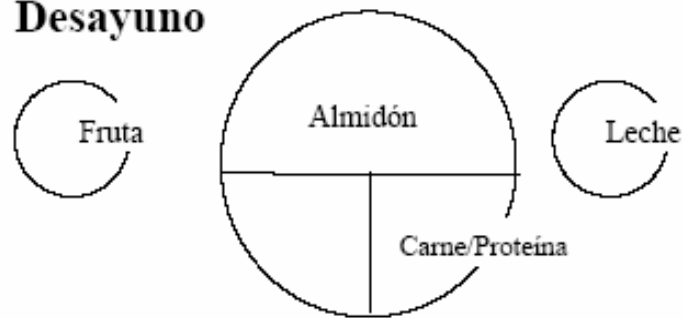


Bocadillos saludables y bajos en grasa

Non Examples of the Plate Method

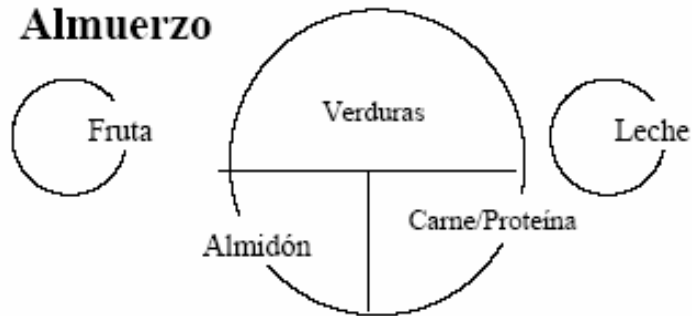


Desayuno



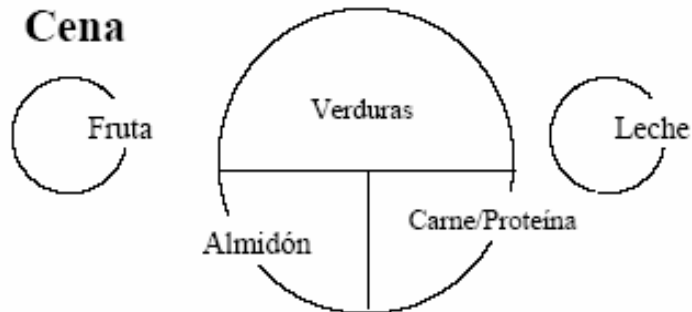
Bocadillos:

Almuerzo



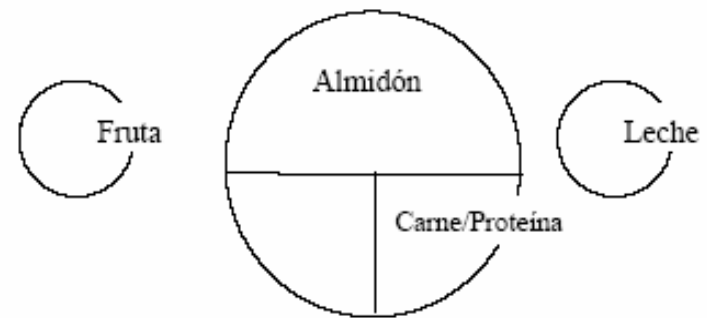
Bocadillos:

Cena

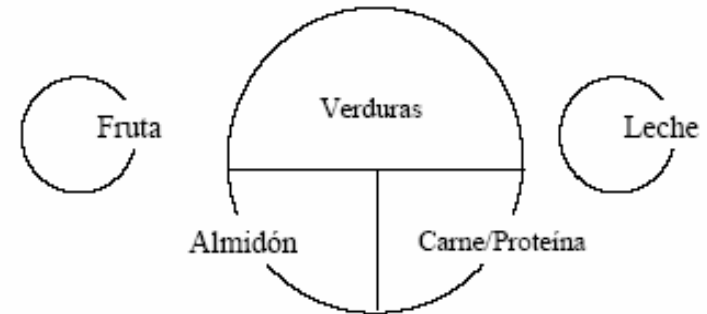


Bocadillos:

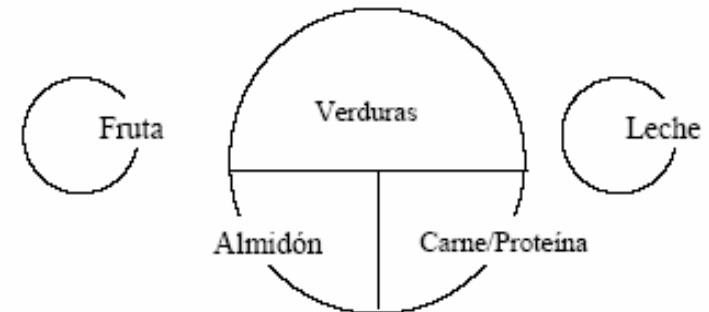
Actividades:



Bocadillos:



Bocadillos:



Bocadillos:

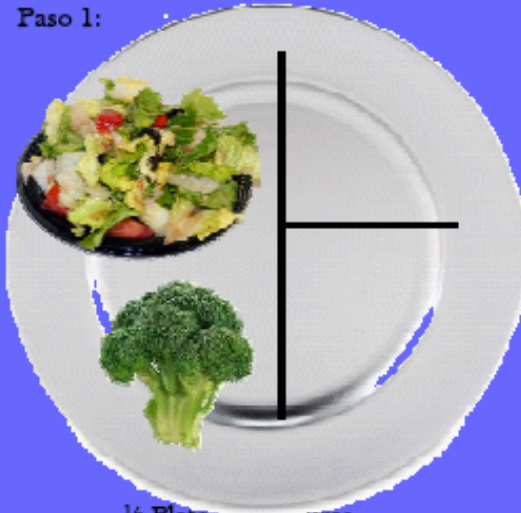
Actividades:



EL MÉTODO DEL PLATO

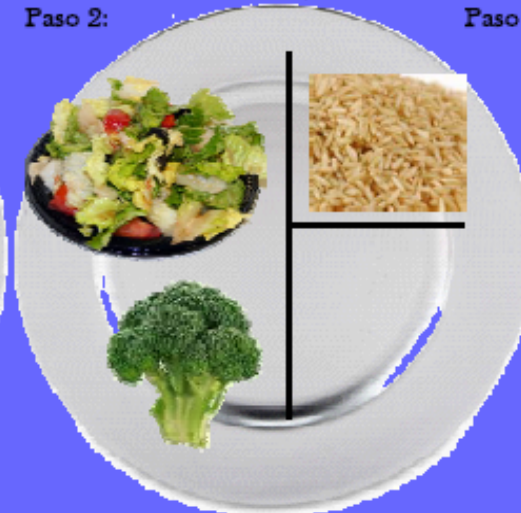
Como comer saludable (Camelon et al. 1998)

Paso 1:



1/2 Plato de verduras

Paso 2:



1/4 Almidones (Carbohidratos)

Paso 3:



1/4 Plato de carne o Substitutos de carne

POR UN LADO:



Fruta

+



Leche baja en grasa, agua o yogurt



+



Granos como panes y tortillas

ALIMENTOS CON FIBRA



Frijoles
Porción: 1/2 taza
Calorías: 129
Gramos de Fibra: 6.6

Tortillas de Maíz
Porción: 6 pulgadas
Calorías: 56
Gramos de Fibra: 1.2



Arroz Integral Cocido
Porción: 1/2 taza
Calorías: 109
Gramos de Fibra: 2.0

Oats
Porción: 1/2 taza
Calorías: 73
Gramos de Fibra: 3.0



Pan de Grano Integral
Porción: 1 tajada
Calorías: 40
Gramos de Fibra: 2.8

Frosted Mini-Wheats
Porción: 1 taza
Calorías: 173
Gramos de Fibra: 5.1



Pasta de Trigo Integral
Porción: 1 taza
Calorías: 210
Gramos de Fibra: 2.0



Shredded Wheat
Porción: 9 piezas
Calorías: 170
Gramos de Fibra: 6.0

Triscuits Con Grasa Reducida
Porción: 8 piezas
Calorías: 130
Gramos de Fibra: 3.0



Increasing fiber in your diet is very important to you.

Which of these muffins would you choose to maximize your fiber intake:


The oat bran muffins OR the honey wheat muffins?

Select This One



Nutrition Facts	
Serving Size 1 muffin Servings Per Container 2	
Amount Per Serving	
Calories 250	Calories from Fat 110
% Daily Value*	
Total Fat 12g	18%
Saturated Fat 3g	15%
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 2g	8%
Sugars 5g	
Protein 5g	
Vitamin A 4%	Vitamin C 2%
Calcium 20%	Iron 4%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
Calories: 2,000 2,500	
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

Select This One



Nutrition Facts	
Serving Size 1 muffin Servings Per Container 2	
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% Daily Value*	
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Saturated Fat 3g	15%
Cholesterol 30mg	10%
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Dietary Fiber 3g	12%
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Protein 5g	
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Calcium 20%	Iron 4%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
Calories: 2,000 2,500	
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

<http://www.cfsan.fda.gov/~dms/tquiz1b.html>

1. ¿Cual de estos alimentos tiene más fibra en una porción?



Arroz Moreno/Integral
Cocidos



Arroz Blando
Cocido



Avena Instantánea
Preparada con agua



Ejotes

Nutrition Facts	
Serving Size 195 g	
Amount Per Serving	
Calories 218	Calories from Fat 14
% Daily Value*	
Total Fat 2g	2%
Saturated Fat 0g	2%
Trans Fat	
Cholesterol 0mg	0%
Sodium 2mg	0%
Total Carbohydrate 46g	15%
Dietary Fiber 4g	14%
Sugars	
Protein 5g	
Vitamin A 0%	Vitamin C 0%
Calcium 2%	Iron 6%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
NutritionData.com	

Nutrition Facts	
Serving Size 186 g	
Amount Per Serving	
Calories 242	Calories from Fat 3
% Daily Value*	
Total Fat 0g	1%
Saturated Fat 0g	1%
Trans Fat	
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 53g	18%
Dietary Fiber 1g	2%
Sugars	
Protein 4g	
Vitamin A 0%	Vitamin C 0%
Calcium 1%	Iron 15%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
NutritionData.com	

Nutrition Facts	
Serving Size 234 g	
Amount Per Serving	
Calories 129	Calories from Fat 18
% Daily Value*	
Total Fat 2g	3%
Saturated Fat 0g	2%
Trans Fat	
Cholesterol 0mg	0%
Sodium 105mg	4%
Total Carbohydrate 22g	7%
Dietary Fiber 4g	15%
Sugars 0g	
Protein 5g	
Vitamin A 25%	Vitamin C 0%
Calcium 13%	Iron 56%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
NutritionData.com	

Nutrition Facts	
Serving Size 125 g	
Amount Per Serving	
Calories 44	Calories from Fat 3
% Daily Value*	
Total Fat 0g	1%
Saturated Fat 0g	2%
Trans Fat	
Cholesterol 0mg	0%
Sodium 1mg	0%
Total Carbohydrate 10g	3%
Dietary Fiber 4g	16%
Sugars 2g	
Protein 2g	
Vitamin A 17%	Vitamin C 20%
Calcium 5%	Iron 5%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
NutritionData.com	

Conclusion and Future Directions

- The work by the REACH Detroit team facilitated the adaptation to the Healthy MOMs program. Similar outcomes in both projects.
- “Plate Method” was simple to implement. Activities were successfully tailored to Spanish speaking Latina women.
- The “Food Label” contained a mixture of easy and difficult concepts. The % daily values and footnote were difficult to understand.

Future directions:

- Find more activities for “Food Label”
- Develop and validate an assessment for both lessons.

Acknowledgements

- Partners: REACH Detroit Partnership, Healthy MOMs Steering Committees, and Community Health and Social Services (CHASS).
- MOMs Staff and Womans Health Advocates: Lula Harris, Marta Rodriguez, Elena Tamez and Olivia Garza
- Students: Ninive Sanchez, Carolina Nunez, Cassandra Rondel, Marla Andrade, Tatiana Kline, Megan Beems and Julia Schlueter and Hypatia Ostojic.
- Support: HRSA/Maternal and Child Health Bureau, National Institutes of Health/NIDDK, Centers for Disease Control and Prevention and the W. K. Kellogg Community Health Scholars Program.
- Affiliation: Detroit Community Academic Urban Research Center (URC) and Michigan Diabetes Research and Training Center and Detroit Community Academic Urban Research Center



Thank You!