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Healthy eating and physical activity curriculum

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Capstone: “Healthy Eating and Physical Activity Curriculum”

Senior Capstone, CHHS 400 & 496
Instructors Simmons & Tweed
May 21, 2005

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Introduction

“Childhood obesity rates have doubled and tripled over the past decades, becoming a national public health crisis” (Go for Health!, 2004). California alone is estimated to spend about 24.6 billion dollars in health related problems attributed to childhood obesity and physical inactivity ([info.sen.ca.gov./pub/bill/sen/sb_0651-0700/sb_677_bill_2003](http://info.sen.ca.gov/pub/bill/sen/sb_0651-0700/sb_677_bill_2003)). Further research into the growing health concern has shed light into the causes of childhood obesity which are described as 1) Lack of awareness and education pertaining to healthy eating, physical activity, and obesity, 2) unhealthy eating habits, 3) lack of physical activity, 4) lack of access to health care, and 5) genetic and medical conditions (Hardus, Van Vauuren, Crawford & Worsley, 2003). As a result, children who are overweight are more likely to develop chronic diseases such as high blood pressure, high cholesterol, asthma and Type 2 diabetes...and are more prone to become obese adults with added life threatening illnesses (Go for Health!, 2004).

Description of the Problem

Furthermore, evidence indicates that Santa Cruz County ranks in the top ten counties with the highest rates of childhood obesity in the state (Go for Health!, 2004). As noted in an August 2003 article of the Santa Cruz Sentinel, “Among the county’s low-income children (defined as those in families at 200 percent of the poverty level or below), 23.2 percent of those ages 5 through 19 were found to be overweight, the state’s third highest percentage...according to the Child Health and Disability Prevention Program” (Alexander, 2003). More recent studies show that about 12 percent of children in Santa Cruz County are overweight and the percentage are estimated to be higher among the poor (Santa Cruz Sentinel, 2004).

Consequently, The Pajaro Valley Unified School District (PVUSD) -Healthy Start Program---shares the PVUSD's goal of improving academic achievement through: improved health, increased access to health and social services, and safety and injury prevention---was granted 10 thousand dollars by the Pajaro Valley Community Health Trust to address this pressing issue because out of all the school districts in Santa Cruz County, PVUSD had the highest number of low income students. Out of 19, 100 enrolled students in the PVUSD, 64 percent qualified for free or reduce lunch, which was an indicator of the socioeconomic level of families (PVUDS free/reduced lunch). The grant money would fund the Kindergarten Roundup Childhood Obesity Program whose specific objectives were (PVUSD Grant Proposal, 2003):

- To provide healthy weight/healthy lifestyles education and counseling services for 200 families of young children with BMI's¹ at or above the 85th percentiles as well as link families to recreation programs that will support increased physical activity for their children.
- To offer at least three parent education workshops and/or discussion groups that offer tools to develop and maintain healthy habits.

Preliminary data that was gathered and included in PVUSD's grant proposal showed that, in the 2003 Kindergarten Round-Ups, 33% had a BMI (A measurement of the relative percentages of fat and muscle mass in the human body, in which weight in kilograms is divided by height in meters and the result used as an index of obesity) at or above the 85th percentile and 19% had a BMI at or greater than the 95th percentile (PVUSD Grant Proposal, 2003). These numbers were significant because "Childhood obesity increases the risk of obesity in adulthood" (<http://content.nejm.org/cgi/content/short/337/13/869>).

Description of Intervention

Given the high number of overweight children enrolled in PVUSD schools, a comprehensive intervention was needed. Additionally, another article written in the Santa Cruz Good Time suggests that there is a lack of awareness and education regarding obesity among schools, parents and children (Contini, 2004, p.12-20). Therefore, a bilingual, culturally competent educational Healthy Eating and Physical Activity (HEPA) curriculum was developed to address the problem of childhood obesity, directed towards parents. This curriculum consisted of an hour-long bilingual presentation (on PowerPoint) that addressed healthy eating habits, how to read a food label, and family-based physical activities. Additionally, HEPA curriculum included detailed instructions on how to present the PowerPoint; a pre and post-test to evaluate the effectiveness of the intervention in terms of knowledge gained; a directory of community based recreation/physical activity options; and relevant handouts and materials to support the presentation. The intervention was implemented on five different occasions during various parent meetings held through out PVUSD. This project produced a tangible manual, which provided all the components mentioned above (Appendices A-F). HEPA curriculum became archived in PVUSD's Migrant Education Library, which makes available presentations to teachers and staff that have access to the site. Therefore, a teacher looking for a presentation on healthy eating and physical activity could access the capstone project developed by the intern. All visual aids incorporated in the presentation were included in a bin and were available for the presenter to enhance the presentation. In addition, a display board was created to illustrate components of the HEPA curriculum.

Analysis of Results

The pre and post-test evaluation tool consisted of six questions that were intended to measure the level of awareness of parents regarding healthy eating and physical activity before and after the intervention. Pre and post-test averages indicated that there was an increase in awareness given that participants scored a higher average for the post-test. The increase in right answers for the post-test could have been attributed to: an actual increase in knowledge, audience participants guessed correctly the second time around, or they received assistance from another audience member. The following was a breakdown of the pre and post-test averages.

Averages Means for Right Answers		
	Pre-test Averages	Post-test Averages
Question #1	97%	100%
Question #2	56%	94%
Question #3	80%	83%
Question #4	73%	79%
Question #5	68%	89%
Question #6	92%	99%

Most notably were question number two with a 38 percent increase and question number five with a 21 percent increase in average mean for right answers for the post-test. However, when further statistical analysis was conducted the findings showed no real significance between the pre and post-tests (Appendix G).

Major Learning Outcomes

The Major Learning Outcomes that were covered by the CUSMB intern included Knowledge of Health and Human Services---both Social Work Concentration and Community Health Concentration---Collaboration, and Professional Development to say the least. It was essential for the intern to have the knowledge of social work theory and principles and have the skills to be able to work with the parents and children. Furthermore, the nutritional and health information included in the curriculum was based upon the intern's knowledge of community health issues. Second, the intern experienced the dynamics involved in collaboration with other interns and professionals in different service areas, which enhanced the ability to refer families to needed community resources. The directory of community based recreation/physical activity options that was created assisted with the family referrals. Also, the intern collaborated and shared resources with PVUSD's staff and administration to improve the quality and implementation of the curriculum if needed. Finally, the intern became competent in public speaking and developing sound professional skills.

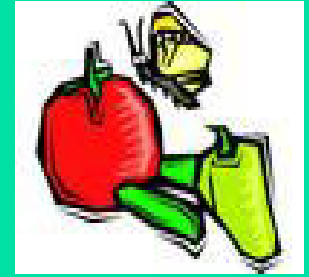
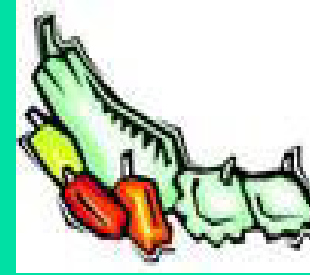
Conclusion

Overall, this capstone project was perceived to be successful by the intern given that she experienced personal and professional growth and development. As a result, of working with low income---predominately migrant population--- the intern found her niche and discovered the population she would like to work with in the future. The intern was fortunate to have enjoyed every step of the capstone process. It was a great experience!!!!

References

- Alexander, K. (2003, August 31). Santa Cruz children rank among state's heaviest. Santa Cruz Sentinel, pp. 1-7.
- Contini, C. (2004). Super sized kids. *The Good Times*, p.12-21.
- Go for Health! (2004). *A comprehensive plan to increase healthy nutrition and regular physical activity among children and youth in Santa Cruz county*. Santa Cruz, CA: Author.
- Hardus, P.M., Van Vuuren, C. L., Crawford, D., & Worsley, A. (2003). Public perceptions of the causes and prevention of obesity among primary school children. *International Journal of Obesity and Related Metabolic Disorders* 27,1465-1471.
- Pajaro Valley Unified School District Grant Proposal. (2003).
- Santa Cruz Sentinel. (2004). As We see It: An obesity problem right here in Santa Cruz County. Santa Cruz: Author.

Note: *Appendices are not included in document given that some of the documents were not created electronically.*



“Healthy Habits at Home”



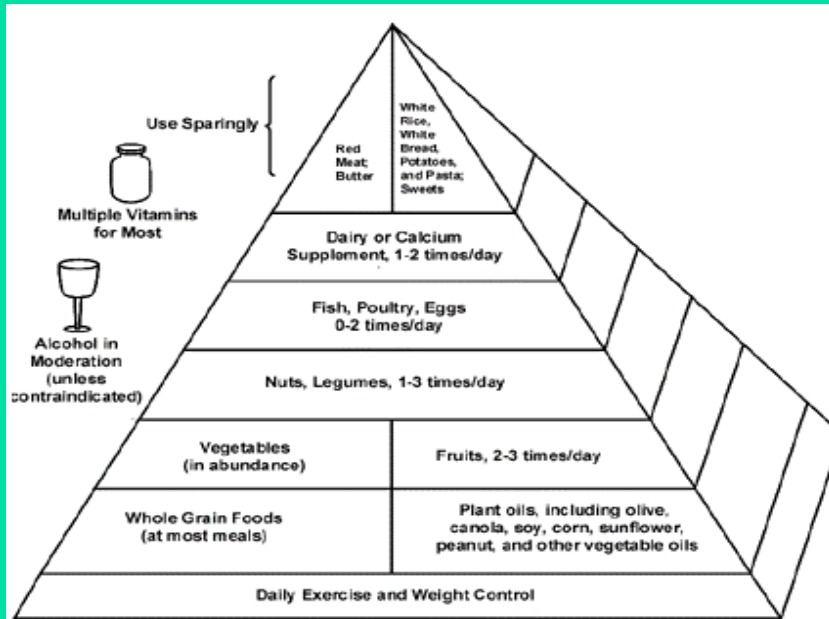
- **How to Improve your Diet to Lead a Healthier Life**
- **How to Read a Food Label**
- **Physical Activity**

For Good Health, Children & Adults Should Eat:

- 3 or more portions of vegetables daily
- 2 or more portions of fruits daily
- 2-3 portions of protein daily

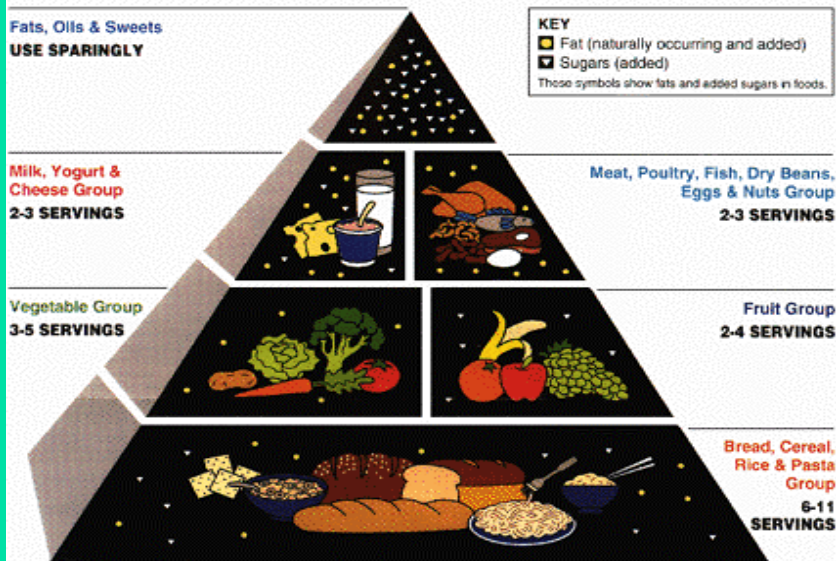


Food Pyramid



© Reproduced from *Eat, Drink, and Be Healthy* by Dr. Walter C. Willett (NY: Simon & Schuster 2001.)

- The foods at the top of the pyramid should be eaten sparingly
- The foods at the bottom of the pyramid are more beneficial for good health
- A balanced diet which includes a variety of foods and 5-9 servings of fruits and vegetables is best for good health

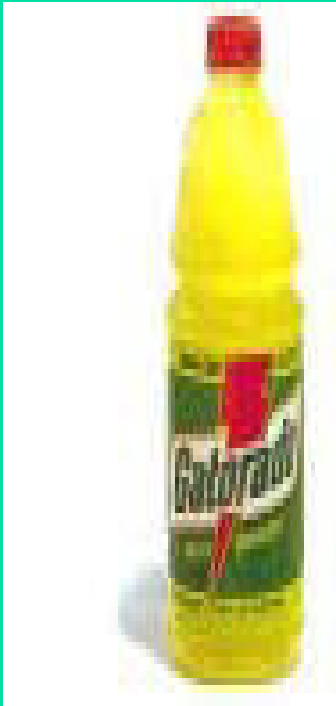


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For Good Health Children and Adults Should Eat:

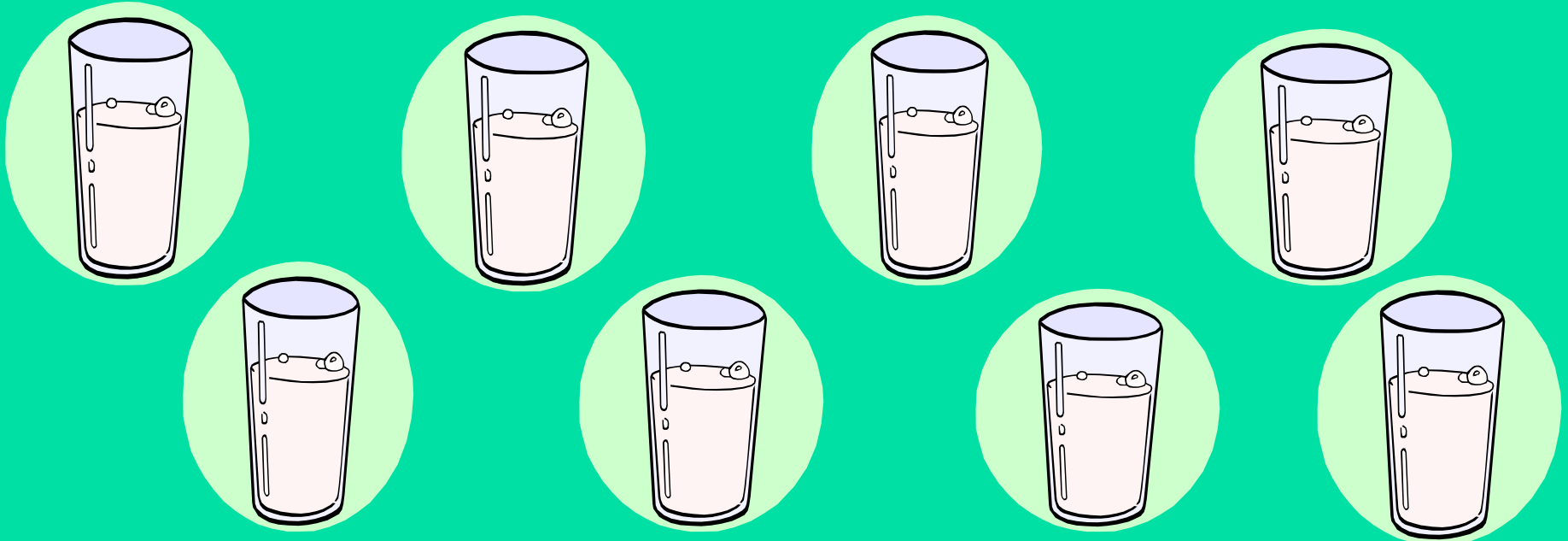
- Foods **low** in fat, sugar, and salt
- Foods **high** in fiber like: oatmeal, plums, broccoli, bananas, carrots, potatoes, peas, cereals, corn, lentils, beans, apples, and oranges
- Whole grains like: brown rice and a variety of beans (preferably unrefined grains like wheat, millet, barley, etc.)

Limit the Amount of Sodas & Juices with added Sugar Content



For a Good Health Children and
Adults Should Drink:

8 Glasses of Water Daily



Is this a Healthy Meal?

- Spanish Rice
- Beans Refried with lard
- Flour Tortillas
- Meat
- Chips and Salsa
- Soda





How to Read a Food Label

Sample label for
Macaroni & Cheese

Nutrition Facts

Serving Size 1 cup (228g)
Serving 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 1.5g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
<hr/>	
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:

		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

① Start Here →

②

③ Limit these
Nutrients

④ Get Enough
of these
Nutrients

⑥ Footnote

Quick Guide
to % DV

⑤

5% or less
is Low

20% or more
is High

Below are two kinds of milk- one is "Reduced Fat," the other is chocolate "Nonfat" milk. Each serving size is one cup. Which has more calcium?

REDUCED FAT MILK

2% Milkfat

Nutrition Facts

Serving Size 1 cup (236ml)

Servings Per Container 1

Amount Per Serving		
Calories	120	Calories from Fat 45
		% Daily Value*
Total Fat	5g	8%
Saturated Fat	3g	15%
Trans Fat	0g	
Cholesterol	20mg	7%
Sodium	120mg	5%
Total Carbohydrate	11g	4%
Dietary Fiber	0g	0%
Sugars	11g	
Protein	9g	17%
Vitamin A 10% • Vitamin C 4%		
Calcium 30% • Iron 0% • Vitamin D 25%		

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

CHOCOLATE NONFAT MILK

Nutrition Facts

Serving Size 1 cup (236ml)

Servings Per Container 1

Amount Per Serving		
Calories	80	Calories from Fat 0
		% Daily Value*
Total Fat	0g	0%
Saturated Fat	0g	0%
Trans Fat	0g	
Cholesterol	Less than 5mg	0%
Sodium	120mg	5%
Total Carbohydrate	11g	4%
Dietary Fiber	0g	0%
Sugars	11g	
Protein	9g	17%
Vitamin A 10% • Vitamin C 4%		
Calcium 30% • Iron 0% • Vitamin D 25%		

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



Physical Activities



Activities that you Should Minimize in the Home

- Limit amount of time watching TV
- Limit amount of time playing on the computer
- Limit amount of time sitting on the couch (including when in the car)



Activities that you Should Maximize in the Home

- Walking
- Running
- Stretching
- Dancing!!!!

- Go to the Park

- Walk to the store instead of driving



Be Active!!!!!!

Places to Carry Out Physical Activity with the Family

- Parks
- Schools
- Gyms



Key Points for Parents

- ✓ Never put your child on a diet
- ✓ Offer healthy eating options
- ✓ Support your child no matter what their weight and let them know you love and accept them the way they are
- ✓ Slowly increase physical activity with your family
- ✓ Never use food as a reward or punishment
- ✓ Teach children to listen to their bodies

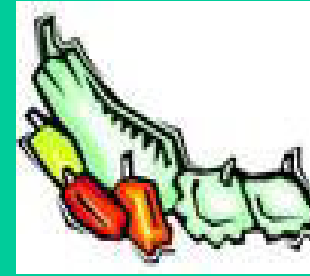


Questions or Comments
Thank You!!!!



Contact Information

- Children's Resource Center 761-6125
- Pajaro Resource Center 761-6633
- Teen Resource Center 761-6131
- Salud Para La Gente 728-0222
- Alianza Parent Center 761-6120
- Migrant Health 786-2100 ext.720



“Hábitos saludables en el hogar”



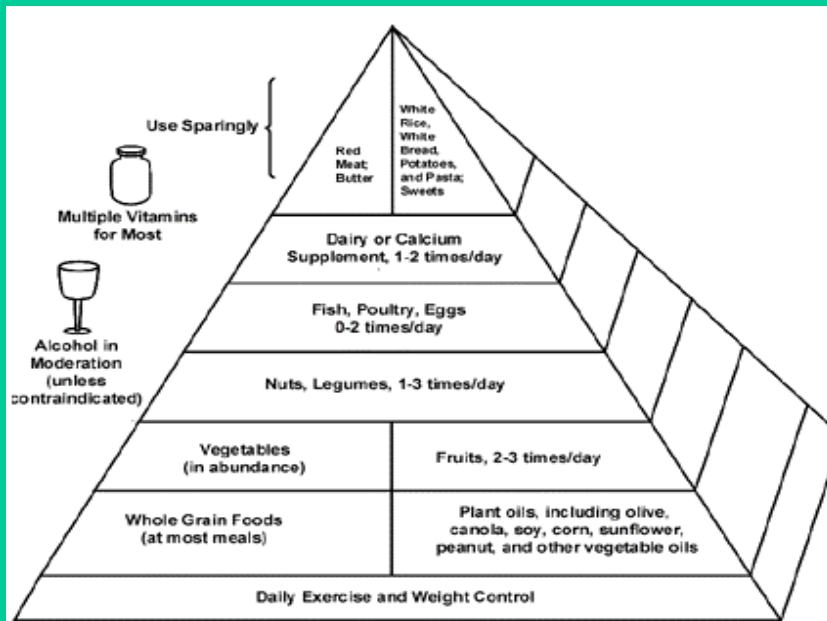
- **Como mejorar su dieta para llevar acabo una vida más saludable**
- **Como leer una etiqueta de alimentos**
- **Actividades físicas**

Para buena salud niños y adultos deben comer:

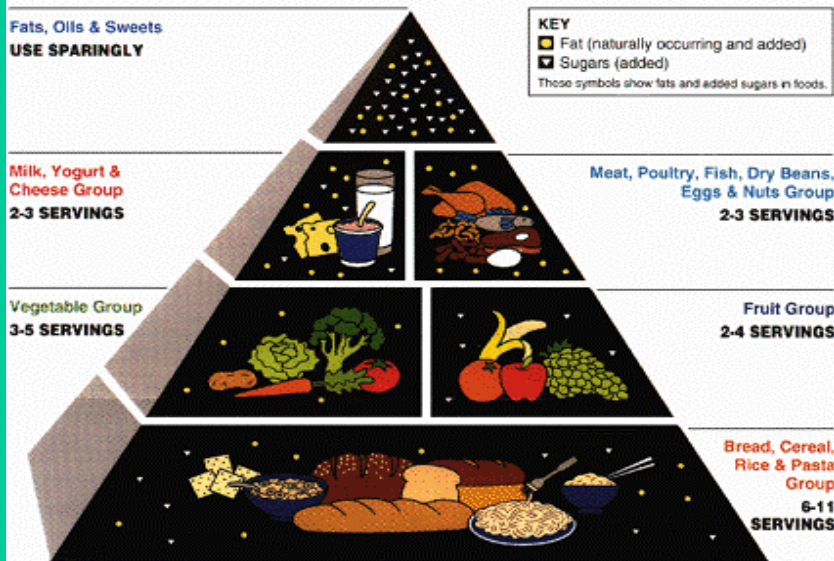
- 3 o más porciones de verduras diariamente
- 2 o más porciones de fruta diariamente
- 2-3 porciones de proteína diariamente



Pirámide alimenticia



© Reproduced from *Eat, Drink, and Be Healthy* by Dr. Walter C. Willett (NY: Simon & Schuster 2001)



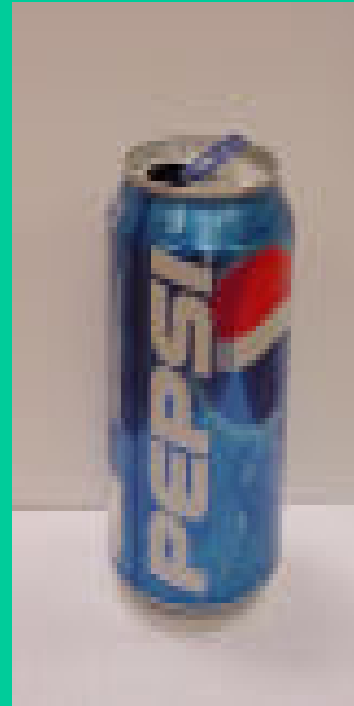
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- Las comidas en la parte de arriba de la pirámide deben comerse lo menos posible
- Las comidas en la parte de abajo de la pirámide son las de más provecho para su salud
- Para una dieta balanceada hay que comer una variedad de comidas y 5-9 porciones de frutas y verduras diariamente

Para buena salud niños y adultos deben comer:

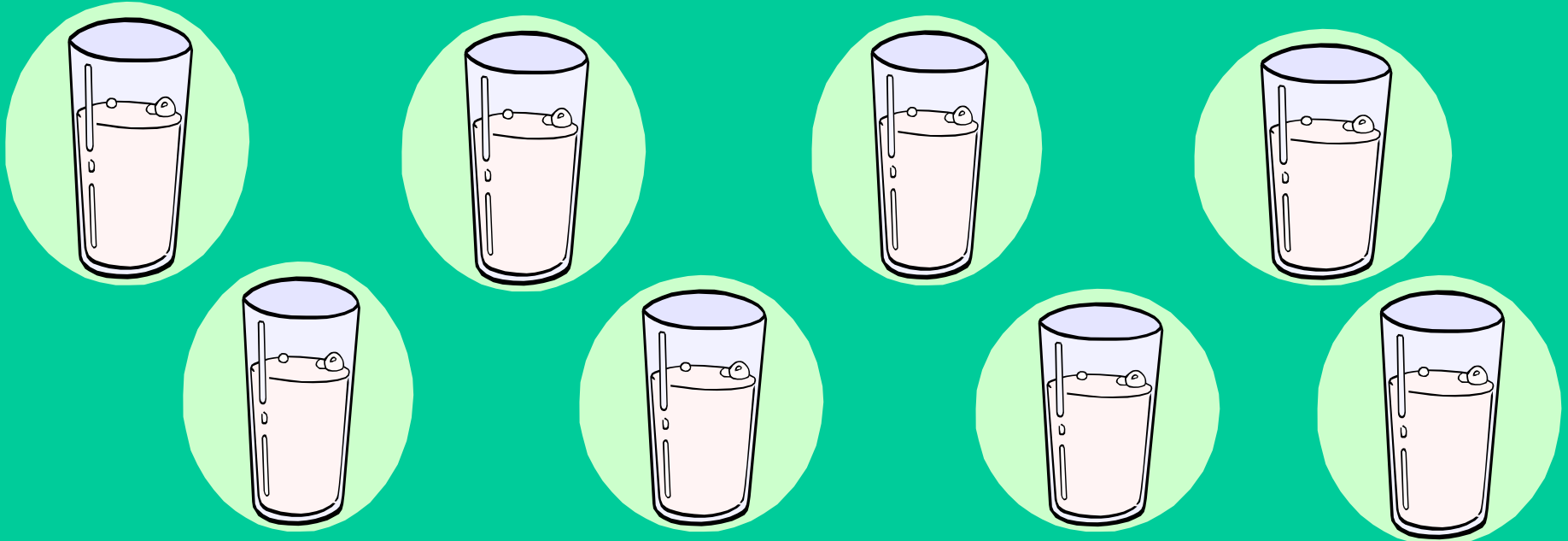
- Comidas **bajas** en grasa, azúcar, y sal
- Comidas **altas** en fibra como: avena, ciruelas, brócoli, plátanos, zanahorias, papas, chícharos, cereales, elotes, lentejas, frijoles, manzanas, y naranjas
- Granos integrales: arroz que no sea blanco, una variedad de frijoles (preferible no refinados) y trigo

Límite el número de sodas y jugos con azúcar añadida



Para buena salud
niños y adultos deben tomar:

8 vasos de agua diariamente



¿Es éste un platillo saludable?

- Arroz
- Frijoles fritos
- Tortillas de harina
- Carne
- Chips y salsa
- Soda





Como leer una etiqueta de alimentos

1

Comience Aquí →

Datos Nutricionales

Tamaño de la Porción 1 taza (228 g)
Porciones en el paquete 2

Cantidad por Ración

Calorías 250 Calorías de Grasa 110

% Valor Diario*

Grasa Total 12g	18%
Grasa Saturada 3g	15%
Acido Graso Trans 1.5g	
Colesterol 30mg	10%
Sodio 470mg	20%
Carbohidrato Total 31g	10%
Fibra Dietética 0g	0%
Azucares 5g	
Proteínas 5g	
Vitamina A	4%
Vitamina C	2%
Calcio	20%
Hierro	4%

3 Limite estos Nutrientes

5 **Guía Rápida para el % Valor Diario**

Menos de 5% es bajo

Más de 20% es alto

4

Obtenga suficientes de Estos Nutrientes y Vitaminas

6 Nota al Pie

* Los porcentajes de Valores Diarios están basados en una dieta de 2,000 calorías. Sus Valores Diarios pueden ser mayores o menores dependiendo de sus necesidades calóricas:

	Calorías:	2,000	2,500
Grasa Total	Menos de	65g	80g
Grasa Saturada	Menos de	20g	25g
Colesterol	Menos de	300mg	300mg
Sodio	Menos de	2,400mg	2,400mg
Carbohidrato Total		300g	375g
Fibra Dietética		25g	30g

¿ Cual de las dos leches es más saludable? ¿ La primera o la segunda?

REDUCED FAT MILK
2% Milkfat

Nutrition Facts	
Serving Size 1 cup (236ml)	
Servings Per Container 1	
Amount Per Serving	
Calories 120	Calories from Fat 45
<hr/>	
	% Daily Value*
Total Fat 5g	8%
Saturated Fat 3g	15%
Trans Fat 0g	
Cholesterol 20mg	7%
Sodium 120mg	5%
Total Carbohydrate 11g	4%
Dietary Fiber 0g	0%
Sugars 11g	
Protein 9g	17%
<hr/>	
Vitamin A 10%	Vitamin C 4%
Calcium 30%	Iron 0% • Vitamin D 25%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	

NONFAT MILK

Nutrition Facts	
Serving Size 1 cup (236ml)	
Servings Per Container 1	
Amount Per Serving	
Calories 80	Calories from Fat 0
<hr/>	
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol Less than 5mg	0%
Sodium 120mg	5%
Total Carbohydrate 11g	4%
Dietary Fiber 0g	0%
Sugars 11g	
Protein 9g	17%
<hr/>	
Vitamin A 10%	Vitamin C 4%
Calcium 30%	Iron 0% • Vitamin D 25%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	



Actividades físicas



Las actividades que se deben limitar en la familia

- Límite el tiempo mirando la televisión
- Límite el tiempo jugando en la computadora
- Límite el tiempo sentado en el sillón (incluyendo en el carro)



Las actividades que se deben aumentar en la familia

- Caminar
- Correr
- Flexibilidad
- Bailar!!!!

*Ir al parque

*Caminar a la tienda en vez de manejar



¡Mantenerse activos!!!!

Lugares donde llevar acabo actividades físicas con la familia

- Parques
- Escuelas
- Gimnasios



Puntos Importantes para padres

- ✓ Nunca ponga a sus hijos en una dieta
- ✓ Ofrezca opciones saludables para comer
- ✓ Apoyé a sus hijos sin importar su peso y hay que decirles que los aceptan tal y como son
- ✓ Aumente la actividad física de la familia poco a poco
- ✓ Nunca use la comida como premio o castigo
- ✓ Enseñe a sus hijos a escuchar a su cuerpo



Preguntas o comentarios
¡GRACIAS A TODOS!



Contactos

- Centro de Recursos de Niños 761-6125
- Centro de Recursos de Pájaro 761-6633
- Centro de Recursos para Adolescentes 761-6131
- Salud Para La Gente 728-0222
- Centro de Padres de Alianza 761-6120
- Salud Migrante 786-2100 ext.720