



Session 5: Maniacs Blast Off

Content Learning Objectives:

- Describe the importance of protein in a nutritious diet
- Identify sources of dietary protein
- Demonstrate how to safely handle and prepare meat and other protein sources
- Prepare easy protein rich foods
- Reinforce the importance of healthy eating and physical activity through various fun activities, interactive games and taste testing opportunities.

Key Components:

- Review MyPyramid Food Guide highlighting the meat group.
(Show MyPyramid Food Guide chart)
 - Number of servings and servings sizes (use food models for examples and deck of cards for example of 3 ounce serving size of cooked meat).
- Discuss alternative protein sources i.e.: milk, cheese, yogurt, eggs, dried beans, legumes, nuts, seeds, soy products, and peanut butter
- Discuss nutritional components of meat and other protein sources
 - Protein helps to build muscles and to keep other parts of the body healthy. In the United States, most people eat much more protein than needed; this extra protein is used for energy. Have youth calculate how much protein they need and what are good sources using “Adding Up Your Protein” handout.
 - Meat, poultry and fish are one of the best food sources of iron and also supply varying amounts of zinc and B vitamins.
 - Meat and meat products can be high in substances (total fat, saturated fat, and cholesterol) that many people may need to limit in their diets to reduce the risk of chronic diseases such as heart disease. By choosing leaner cuts of meat and by using appropriate preparation methods (such as dry heat cookery, where the fat can drip away from the meat) the amount of fat can be reduced. (Display plates showing varying amounts of fat in roasted and fried chicken with and without skin.)
 - Explain the importance of food safety when handling protein foods.
 - Have students demonstrate proper hand washing and cleaning and sanitizing of work surfaces and equipment
 - Show how to cook protein foods to proper temperatures by using a calibrated food thermometer
 - Discuss what cross contamination is and how it can be avoided.

- Play “Protein Upset” (Directions listed in experiential learning activities section)
- Prepare recipes
- Evaluate session using “Protein Trivia” worksheet

Experiential Learning Activities:

- Activity: Calculate daily protein needs and select protein foods to meet needed grams (cardboard food models) using “Adding Up Your Protein” handout
- Prepare plate display of amount of fat in fried and roasted chicken with and without skin (see “Fried and Roasted Chicken Comparison” instruction sheet)
- Physical Activity: Protein Upset
 - *Equipment needed:* Chairs placed in a circle, facing in (there should be one less chair than the amount of youth playing) Optional: protein cardboard food models
 - *How to play:* Participants must each choose the name of a protein-rich food (ex. Beef, Pork Chops, Tofu, Milk, Eggs...) or be allowed to choose a different protein cardboard food model. Have all participants announce/show their protein-rich food. All are seated in chairs arranged in a circle, facing the inside of the circle. One participant remains standing in the center with no chair to sit in. This participant, for example, might be called “Tofu.” The child in the center calls a protein-rich food, and all participants with that protein type must jump up and sit in a different seat than the one they were in. While they are changing, the person in the middle tries to find an empty chair, leaving someone chair-less. This repeats, and different names are called. Occasionally the person in the middle may yell different combinations of proteins to change (like “Tofu, Chicken, Beans!”). They can also choose to yell, “Protein Upset!” At this time, EVERYONE must get up and find a new chair.
- Sanitize food preparation area, properly wash hands, and prepare recipes
 - Green Gulps from Outer Space
 - UFO Quesadillas
 - Alien P.B. & J’s

Handouts:

- “Munchin’ Maniacs Blast Off” Recipes
- “Adding Up Your Protein” activity
- “Protein Trivia” evaluation worksheet
- MyPyramid Food Guide chart

Lesson Materials:

- MyPyramid Food Guide Chart <http://www.mypyramid.gov/>
- Food models showing serving size of meat
- Deck of cards depicting size of 3 ounces cooked meat
- Food models showing examples of other protein food sources such as: milk, cheese, yogurt, eggs, dried beans, nuts, seeds, soy products, peanut butter
- Plates showing amount of fat in roasted and fried chicken with and without skin
- Figuring Your Daily Protein: cardboard food models of protein rich foods and pencils
- Bi-stem thermometer
- Protein Upset: one less chair than the amount of youth playing; optional cardboard food models representing protein foods
- Recipe ingredients and equipment

MUNCHIN' MANIACS

Maniacs Blast Off Recipes

GREEN GULPS FROM OUTER SPACE

Makes: 5 (6 ounce) servings

1 banana
 1 cup pineapple juice
 6 ounces low-fat vanilla yogurt
 1-2 drops green food coloring

Directions:

In an electric blender, combine banana, pineapple juice, yogurt and food coloring. Blend until smooth, about one minute. Pour into two (8 ounce) glasses and serve immediately.

Serving: 8-ounce serving

Nutrition Analysis per serving: Calories 172 kcal, Protein 4 g, Fat 1 g, Carbohydrates 37 g, Fiber 0.6 g, Calcium 115 mg, Sodium 57 mg

Green Gulps from Outer Space Shopping List-10 Participants

Yield: 10-6 ounce servings

Ingredients	Purchase	Groups of 2
Banana	5	1
Pineapple juice	5 cups (40 oz)	1 cup
Low fat vanilla yogurt	5 (6 ounce) cartons	1 (6 ounce) carton
Green food coloring	1 bottle	1-2 drops

- If no electricity, replace banana with orange juice and stir ingredients together

Equipment: (Work Group: 5 participants)

2 blenders
 2 1-tablespoon measuring spoons
 2 1 cup liquid measuring cups

10 (6 ounce) drinking cups
 paper towels

UFO QUESADILLAS

Makes: 1 quesadilla

2 flour tortillas (6 to 8 inches across)
¼ cup low fat shredded cheese
¼ cup finely chopped cooked chicken
Cooking spray and/or 1 tablespoon vegetable oil
Salsa

Directions:

Coat a skillet with cooking spray or vegetable oil. Place one tortilla in skillet. Sprinkle ¼ cup cheese and ¼ cup chopped cooked chicken on the tortilla. Place the remaining tortilla on top. Cook over medium heat for 1 to 2 minutes. Using a pancake turner, flip the quesadilla over and continue to cook until the bottom tortilla is light golden brown and the cheese is melted. Remove the quesadilla from the skillet. On a cutting board, cut each quesadilla into 4 pieces using either a pizza cutter or kitchen scissors. Top with salsa. Serve immediately.

Serving: 1 quesadilla

Nutrition Analysis per serving: Calories 323 kcal, Protein 25 g, Fat 7 g, Carbohydrates 37 g, Fiber 0.9 g, Calcium 197 mg, Sodium 745 mg

UFO Quesadillas Shopping List-10 Participants Yield: 10 quesadillas

Ingredients	Purchase	Individual
Flour tortilla shells	20 (6-8")	2
Shredded cheddar cheese	2 ½ cups	¼ cup
Cooked chicken breast	1 ¼ lb. raw boneless breast	¼ cup cooked
Salsa	1 jar	2 tablespoons
Pam cooking spray	1 can	1 can shared with group

- If no electricity, do not heat tortillas

Equipment: (Work Group: 3-4 participants)

3-4 cutting boards
3-4 dry measuring cups (¼)
3-4 tablespoon measuring spoons
2-3 electric frying pans
2-3 extension cords

3 pancake turners
2 pizza cutters
10 paper plates
paper towels

ALIEN P. B.&J'S
Makes: 1 sandwich

Ingredients:

2 slices whole wheat bread
1-tablespoon peanut butter
1-tablespoon jelly
2 raisins

Directions:

Cut each bread slice into a shape that looks like the head of a space alien.
Spread peanut butter on one piece of bread. Spread jelly on the peanut butter.
Cut 2 eyes in the remaining piece of bread. Place the bread with the eyes on top of the jelly. Put raisins in the eyeholes. If not serving immediately, place in sealed bag or wrap in plastic wrap and use within 1-2 days.

Serving: 1 recipe

Nutrition Analysis per serving: Calories 280 kcal, Protein 9 g, Fat 8 g, Carbohydrates 41 g, Fiber 5 g, Calcium 46 mg, Sodium 273 mg

MUNCHIN' MANIACS
Shopping List-10 Participants
Yield: 10 sandwiches

Ingredients	Purchase	Individual
Whole wheat bread	20	2
Peanut butter	1 jar	1 tablespoon
Jelly	1 jar	1 tablespoon
Raisins	20	2

Equipment: (Work Group: 1 participant)

10 plastic knives
2 tablespoon measuring spoons

10 paper plates
paper towels

Dietary Protein Sources

Food	Amount	Protein grams	Iron milligrams	Niacin milligrams	Vitamin A (IU)	Vitamin C milligrams
Hamburger	3 oz	21	1.8	4.4	(trace)	0
Steak	3 oz	23	2.6	3.3	(trace)	0
Lamb Chop	2.2 oz	20	1.5	4.4	(trace)	0
Ham	3 oz	21	0.9	3.9	(0)	0
Venison	3.5 oz	30	4.5	6.7	(?)	0
Chicken Breast	3.5 oz	31	1.2	13.5	(50)	0
Turkey Breast	2 pieces	25	1.1	5.8	(0)	0
Ocean Perch	1 fillet	16	1.2	2.0	(70)	0
Canned Tuna	3 oz	24	1.6	10.1	(70)	0
Milk 2%	8 oz	8	0.1	0.2	(500)	2
Yogurt (plain)	8 oz	12	0.2	0.3	(150)	2
Cheese (American)	2.0 oz	12	0.4	trace	(520)	0
Eggs (poached)	2	12	2.0	trace	(520)	0
Dry Beans (cooked)	1 cup	15	5.0	1.0	(0)	0
Peanut Butter	4 tbsp.	20	1.2	8.8	(0)	0
Soy Milk	8 oz	6.7	1.4	0.4	77	0
Tofu	0.5 cup	19.8	3.4	0.5	209	trace
Tempeh	4 oz	21.6	2.6	5.3	778	0

Source: USDA Data Base 2003

As you can see from these charts, meats are an excellent source of protein, and good sources of iron and niacin. However, in general protein-source foods supply little vitamin A and vitamin C. These vitamins are found in generous amounts in many fruits and vegetables. No one group of foods supplies all nutrients in adequate amounts. That is why it is important to eat a varied diet from all food groups.

Recommended Daily Dietary Allowances for 9 to 18 Year Olds

	Protein (grams)	Iron (milligrams)	Niacin (milligrams)	Vitamin A (micrograms)	Vitamin C (milligrams)
Girls					
9-13 y	34	8	12	600	45
14-18 y	46	15	14	700	65
Boys					
9-13 y	34	8	12	600	45
14-18 y	46	11	16	900	75

In the chart below, compare the total fat and saturated fat content of chicken breasts with and without the skin, prepared either by frying or roasting.

Total Fat and Saturated Fat Content of Chicken Breasts

Item	Amount grams (ounces)	Total Fat grams	Saturated Fat* grams
Chicken breast, meat and skin, batter dipped and fried	100 (3.5)	13.2	3.5
Chicken breast, meat and skin, roasted	100 (3.5)	7.8	2.2
Chicken breast, meat only, fried	100 (3.5)	4.7	1.3
Chicken breast, meat only, roasted	100 (3.5)	3.6	1.0

By choosing leaner cuts of meat and by using appropriate preparation methods (such as dry heat cookery, where the fat can drip away from the meat) the amount of fat can be reduced.

Removing the skin and roasting the breast drastically reduces both the total fat and saturated fat. The lowest fat alternative (meat only, roasted) has only 27% of the total fat and 29% of the saturated fat of the highest fat form (meat and skin, fried) of chicken breast.



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