

### TOPIC

Healthy Eating and Sport Performance

### AUDIENCE

Teenage Athletes

### TIME NEEDED

45 minutes

### HEALTH EDUCATION STANDARDS

7.12.2 Demonstrate a variety of healthy practices and behaviors that will maintain or improve the health of self and others.

### LEARNING OBJECTIVES

By the completion of the program,

1. At least 80% of participants will be able to list two key nutrients to help boost performance indicated by post-test questions.
2. At least 80% of participants will be able to list at least 1 vitamin and mineral and its benefits indicated by post-test questions.

### MATERIALS NEEDED

- Computer (1)
- Internet
- Pen (1)
- Paper (1)
- Appendix A
- PowerPoint presentation (1)

### PREPARATION

1. Load presentation onto computer, ready to share.
2. Have students be ready with pen and paper for later activity
3. Load video to be ready to view
4. Set up the post-test on Menti.com using Appendix A.

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## PROCEDURE

### 1.) Introduction (5 minutes)

#### Slides 1, 2, & 3:

- a.) State objectives for the lesson.
  - i.) *“By the end of this presentation you will be able to list two key nutrients to help boost performance indicated by post-test question”*
  - ii.) *“By the end of this presentation you will be able to list at least 2 food groups from MyPlate indicated by post-test questions.”*
- b.) Introduce the topic of healthy eating and have the audience answer the opening question.
  - i.) Question: *“What is a sport you enjoy and how do you think healthy eating supports your performance?”*
  - ii.) Give students time to formulate answers
  - iii.) Have students respond via chat or out loud by unmuting

### 2.) Information - Mix of Lecture and Questions (15 minutes)

#### Slide 4: Healthy Diet Overview

- a.) Discuss with the audience the importance of why they as high school athletes should be eating healthy.
  - i.) *“Having a balanced diet with the correct amount of fats, carbohydrates, and proteins is key to having enough energy for growth and energy.”*

#### Slide 5: My Plate Review

- a.) Talk about MyPlate and its important nutrients.
- b.) The five food groups from MyHealth Plate include: fruit, vegetables, lean meats and poultry such as fish, eggs, and nuts, grains (cereal), and milk young and cheeses. Eating a wide range of foods from the five food groups can help balance your diet.
- c.) Serves as a reminder to maintain a healthy eating style throughout your lifetime
- d.) Provides a basis for what individuals should consume in order to maintain a healthy diet
- e.) Focuses on:
  - i.) Variety, amount, nutrition
  - ii.) Less on saturated fats, sodium, added sugars
- f.) Your health is shaped by social factors such as:

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- i.) Stages of your life (different stage of age)
- ii.) Situations (obstacles that lead to unhealthy choices)
- iii.) Preferences (vegan, vegetarian, picky eater)
- iv.) Access to food
- v.) Culture
- vi.) Traditions
- vii.) Personal choices over time
- g.) All food choices count in the long term

## Slide 6: Healthy Tips

- 1.) Go over some tips on how to maintain a healthy balanced diet.
  - a.) Limit foods in saturated fats
    - i.) Saturated fats are “bad fats” and are commonly grouped with trans fats.
    - ii.) Saturated fats are found in animal products like milk, cheese, and meat.
  - b.) Limit foods and drinks high in salts
    - i.) Foods such as canned vegetables, beans, and meats contain high salts levels
  - c.) Don't over consume fatty foods
    - i.) Red meat
    - ii.) Fried animal skins
    - iii.) Butter
    - iv.) Junk foods
    - v.) Fast food
  - d.) Drink fluids often (preferably water)
  - e.) Eat lots of carbohydrates

## Slide 7: Important Nutrients for Performance

- 1.) Discuss two important nutrients for sport performance: Carbohydrates and Proteins
- 2.) Carbohydrates
  - a.) Carbohydrates are one of the most important nutrients needed in an athlete's diet. Carbohydrates are vital to help reach peak performance during physical activity because they provide
  - b.) Delaying fatigues allows athletes to compete at higher levels at a longer duration.
  - c.) Benefits:
    - i.) Provides energy
    - ii.) Helps with brain and body functions
    - iii.) Broken down into glucose molecules to provide fuel
    - iv.) Delays fatigue

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- d.) Sources:
  - i.) Whole grains (oats, brown rice, bread)
  - ii.) Fruits
  - iii.) Vegetables
- e.) Proteins
- f.) Building blocks of muscle made from smaller units of amino acids
- g.) Muscles are in constant turnover during sports which leads to soreness and reduced strength
- h.) Protein helps rebuild and repair muscles
- i.) Offset effects and decrease muscle breakdown
- j.) Provides the same amount of energy as carbs only when carb reserves run out
- k.) Sources:
  - i.) Poultry
  - ii.) Dairy products
  - iii.) Beans
  - iv.) Nuts and seeds
  - v.) Lean beef or pork

## Slide 8: Food Choices

- 1.) Go over different food choices.
  - a.) Breakfast
    - i.) breaks a fast during sleep
    - ii.) replenished energy
    - iii.) Kick starts metabolism.
      - (1) Examples: low-fat yogurt, granola bars, fruits, whole grain cereals, low-fat milk
  - b.) Lunch
    - i.) Helps students gain energy for practice or games
    - ii.) Allows time for the body to digest foods
      - (1) Examples: Chicken breast, fish, lean beef w/pasta, rice, veggies on the side, whole-grain rolls, and yogurt
      - (2) Can substitute rice for side salad
  - c.) Dinner
    - i.) A recovery meal
    - ii.) Regain spent nutrients and energy.
      - (1) Examples: stir fry w/ chicken, pork, beef and veggies, served over rice or noodles
  - d.) Snacks

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- i.) Frequent eating helps prevent loss of important nutrients
- ii.) Maintain optimal athletic performance
  - (1) Examples: Trail mix, crackers, pretzels, fruits, and yogurt

## Slides 9: MyPlate Activity (10 mins)

- 1.) Instruct students to take out a piece of paper and pen.
- 2.) Have students fill in their own MyPlate based on what they believe is the ideal meal.
- 3.) Give students 2-3 minutes to prepare their Myplate.
- 4.) Break the class into 2 separate breakout rooms (as long as there are 2 facilitators)
  - a.) Each facilitator will ask the students in their breakout groups to share their MyPlate meals.
  - b.) Ask students if their MyPlate meets the requirements. If it doesn't, ask students *"What can you add or take out of your meal to meet the requirements?"*
- 5.) Bring the students back into the main room once the breakout rooms have finished the activity.

## Slide 10: Vitamins and Minerals

- 1.) Discuss Vitamins and Minerals athletes should take
  - a.) Discuss the different vitamins and minerals that are good for their body and performance. Go over Thiamin, B12, B6, niacin, and iron. Talk about the different foods that each one contains. Explain the importance of each one discussing how each one fuels energy.
    - i.) Thiamin or B1 is a crucial vitamin because it converts carbohydrates to energy. Exercising helps increase the need for thiamin.
    - ii.) Foods that are a good source of thiamin are whole grains, fish, and vegetables (beets and potatoes).
    - iii.) B12 is essential for athletes because it is used for the synthesis of red blood cells and it helps repair damaged muscle cells.
    - iv.) Many athletes take B12 in vitamin form but b12 is also found in foods such as tuna, beef, and fortified cereals.
    - v.) Niacin or B3 is a vitamin to help turn the foods you eat into energy while training. Niacin also plays a role in fat metabolism in which it helps keep the body using carbohydrates while also blocking free fatty acids.
    - vi.) Iron also plays an important role in energy metabolism and oxygen transport
    - vii.) Iron can be found in foods such as meats(turkey and chicken), beans, lentils, and dried fruits raisins and prunes).

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## Slide 11: Supplements

- 1.) Discuss supplements that athletes use
  - a.) Supplements help build muscle, lose weight and improve endurance
  - b.) Completely optional
  - c.) There are two main types of supplements; creatine and protein
  - d.) Creatine
    - i.) Turns into creatine phosphate, helps make ATP
    - ii.) Make energy for muscle contractions
    - iii.) Creates short bursts of intense energy with short recovery times
    - iv.) Creatine is also ideal for sprinting and powerlifting.
      - (1) Available in pills, powder, drinks, or energy bars.
      - (2) Side effects: weight gain, joint stiffness, and headaches
      - (3) All nutritional needs can come from just proper dieting
  - e.) Protein
    - i.) The most widely used supplements
    - ii.) Helps to build muscle
    - iii.) Provides extra protein if one is not consuming enough from diet
      - (1) Made of casein and whey
      - (2) Side effects: bloating, stomach cramps, or diarrhea
    - iv.) \*\*\*Warning: can cause bodily harm if used in excess

## Slide 12: Videos (reinforcing knowledge) (10 mins)

- 1.) Show both videos - Nutrition is Key to Sports Performance & Lunch Ideas for Teenage Athletes.
  - a.) Nutrition is Key to Sports Performance - Ohio State Wexner Medical Center  
<https://www.youtube.com/watch?v=3XMh6f0xB7A>
  - b.) Lunch Ideas for Teenage Athletes - Momables Laura Fuentes  
<https://www.youtube.com/watch?v=evomZmBbDdw>
- 2.) Ask the students to unmute or type in the chat to respond to these questions:
  - a.) *“What did you learn from this video?”*
  - b.) *“How did the lunches in the second video differ from what you usually eat?”*
  - c.) *“How can you apply what you learned in these videos to your meals?”*

## Slide 13: Local Resources

- 1.) Provide a list of local resources

## Slide 14: Post- Test Questionnaire (5 minutes)

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- 1.) Go to Menti.com to open up the post-test questionnaire which will be presented on this site.
- 2.) Instruct students to take out their phone or use their computer to go to Menti.com and type in the code on your screen to access the post test.
- 3.) Each question will go one by one.
  - a.) The answers will be revealed after each question.
  - b.) Each student's performance will be evaluated through the menti admin side.
- 4.) Questions:
  - a.) What are two key nutrients to help boost performance ?
  - b.) Name one vitamin or mineral and its benefits
  - c.) What are two supplements that athletes can use but are completely optional?

## **Slide 16 & 17: Conclusion (5 mins)**

- 1.) Wrap up the lesson and provide an opportunity for students to ask questions.

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## Appendix A

### Post Test Questions:

1. What are two key nutrients to help boost performance ?
2. Name one vitamin or mineral and its benefits
3. What are two supplements that athletes can use but are completely optional?

### Post Test Answers:

1. Carbohydrates and proteins
2. Possible answers:
  - a. Thiamin or B1 is a crucial vitamin because it converts carbohydrates to energy. Exercising helps increase the need for thiamin.
  - b. B12 is essential for athletes because it is used for the synthesis of red blood cells and it helps repair damaged muscle cells.
  - c. Niacin or B3 is a vitamin to help turn the foods you eat into energy while training. Niacin also plays a role in fat metabolism in which it helps keep the body using carbohydrates while also blocking free fatty acids.
  - d. Iron also plays an important role in energy metabolism and oxygen transport
3. Creatine and protein supplements

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## References

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