

Plan a Pre-Game Lunch

Plan a menu to cook for class. Groups can be decided, each group may prepare one dish to complete a full meal for the whole class or groups can plan a meal to prepare for the students in their particular group. Meal must be okayed by teacher and meet the guidelines for a meal to be eaten before an event to prepare an athlete for competition. It should be a high carb meal, with moderate - low fiber, moderate - low in lean proteins, few low-fat foods, an easily digested meal that is high in nutrition, but within a low budget expenditure. The groups will have to also make a work plan for whom will do what to prepare, cook, serve and clean up the meal and dishes.

—Pre-Game Meal should include:

- Contain 8-16 oz of water
- Contain moderate – low fiber foods
- Be familiar, not a new food & is easily digested
- Contain 1-3 grams of carbs/lb of weight (350 carbs)
- Be Carb-rich: (rice, cereals, pasta, bread, fruits, potatoes, corn, peas, & squash) (check carbs for foods that you decide on), Smaller amounts of Lean-proteins (chicken, turkey or fish) (maybe 1-2 oz) & Very small amount of Low-fat Fats (skim milk, low-fat yogurt, avocados, nuts & seeds)
- Should take into account: duration of event, gender, body mass, age, sport & energy needs

Sports Nutrition Crossword Puzzle

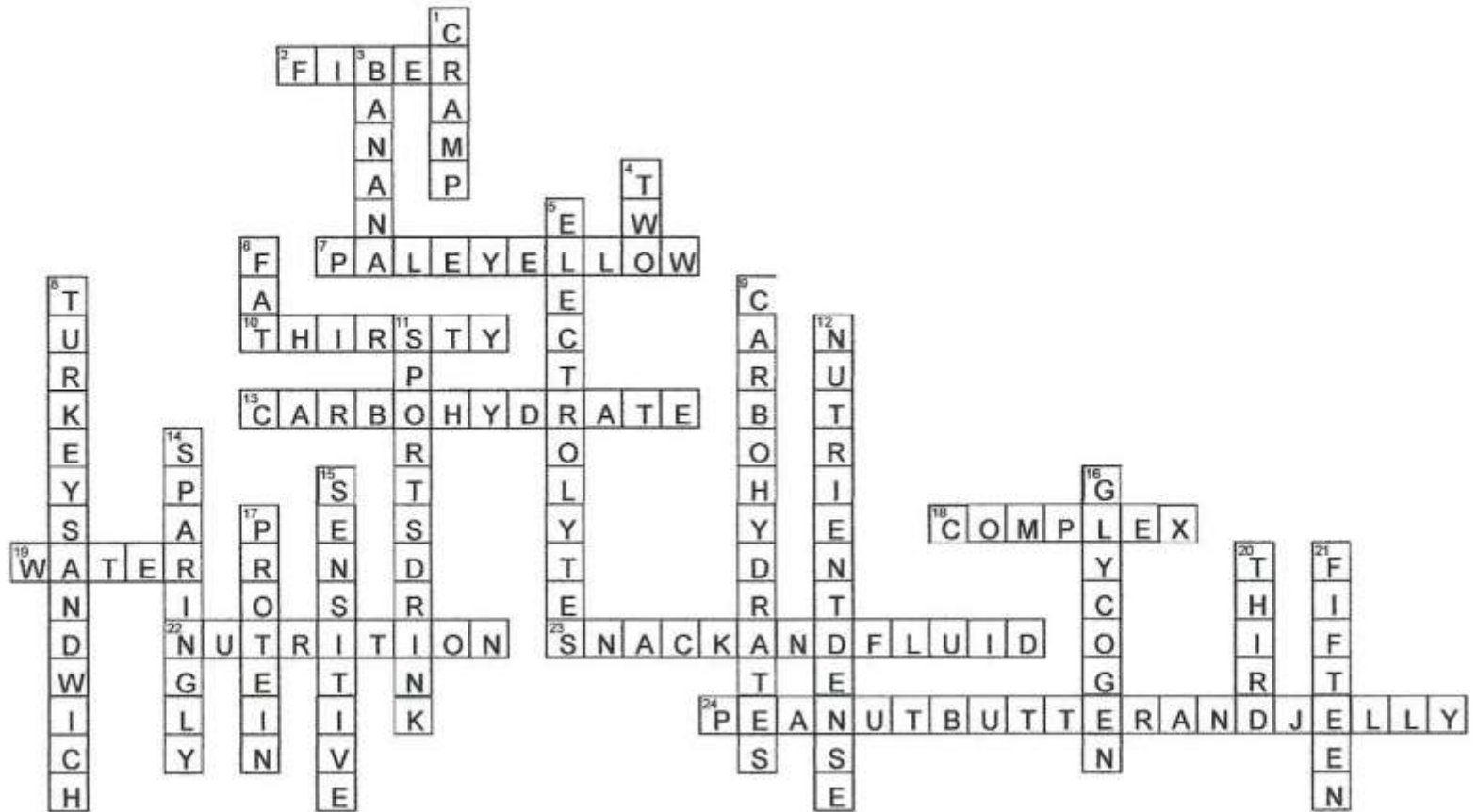
ACROSS

- 2 The last meal before a competition or intense exercise should include a moderate amount of protein, low fat and _____
- 7 color of your urine if not dehydrated
- 10 Athletes should drink water before, during and after an event even if they don't feel _____
- 13 nutrient that provides energy during exercise
- 18 the last meal before a competition or intense exercise should come from this type of carbohydrate
- 19 This helps the body regulate many important functions: temperature, blood pressure, nutrient concentration, nutrient transportation.
- 22 One of the keys to top athletic performance
- 23 the first stage in recovery that should start within 15-60 minutes after exercise and consist of carbohydrate and 10-15 grams of protein
- 24 good pre-vent/exercise food

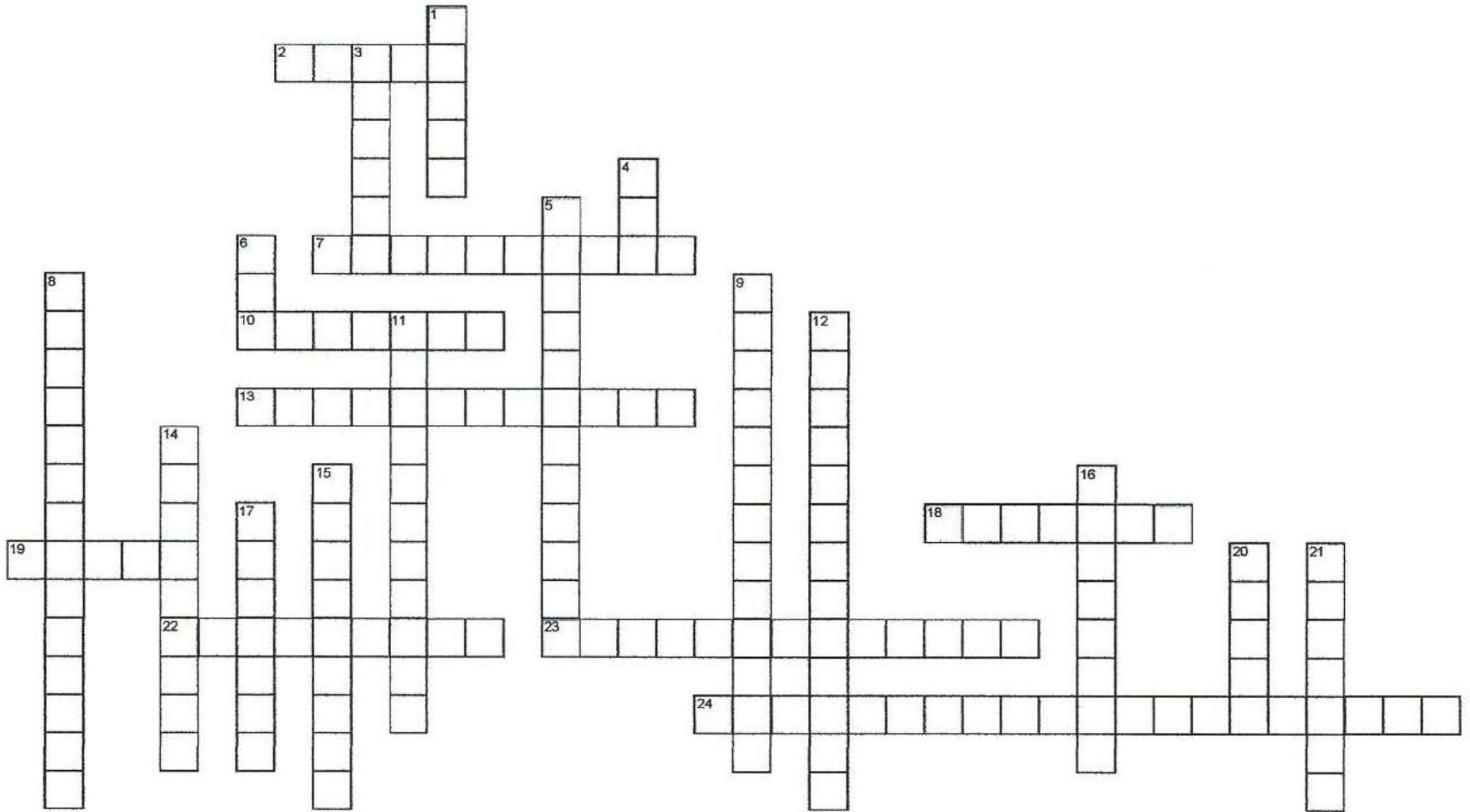
DOWN

- 1 muscles tend to do this when they are dehydrated
- 3 good during event/exercise food
- 4 how many hours should a meal and fluid be eaten after exercise and consist of mostly carbohydrates, lean protein and low fat
- 5 drinking too much water can alter this and cause body harm
- 6 20 to 25 percent of an athletes calories should come from this
- 8 good post-event/ exercise food
- 9 55 to 60 percent of an athletes calories should come from this
- 11 a good choice if exercising over 45 minutes
- 12 The kind of diet athletes should eat
- 14 how you should eat protein and fat during exercise
- 15 athletes should consume their last meal 2-4 hours before a training or competition unless they have this type of stomach then 4 hours before
- 16 this is how carbohydrates are stored in the liver and muscle to fuel working muscles
- 17 15 to 20 percent of an athletes calories should come from this
- 20 what stage of recover is eating a snack and fluid within 4 hours after exercise an consist of carbohydrate an 10-15 grams of protein
- 21 How often in minutes should athletes drink water during an event

Sports Nutrition



Sports Nutrition



Sports Nutrition Lab

Name _____ Date _____ Class _____

1. Training-

- a. With your group, create a 2 day menu with breakfast, lunch, dinner and snacks that fits the 60, 20, 20 % training formula.

Day 1	Carbohydrate	Fat	Protein
breakfast			
lunch			
dinner			
snack			

Day 2	Carbohydrate	Fat	Protein
breakfast			
lunch			
dinner			
snack			

2. Pre-event/exercise

- b. Make a peanut butter and jelly or turkey sandwich add some fruits and vegetables and enjoy. Make sure you choose the foods that your stomach can digest without any problem.

3. Hydration

- c. Drink 8 ounces of water with your pre-even meal.

4. During an event/exercise

- d. Wait 2-4 minutes (simulating hours) then go for a 25 minute walk (read 4d before you start)
- e. Approximately half way through your 30 minute walk, eat banana, orange, yogurt or a small cookie or cracker snack to replace glycogen stores in your muscles to prevent you from "hitting the wall" and forcing you to slow down.]
- f. Drink water every 10-15 minutes during your walk.

5. Recovery

- g. Stage 1 (snack and fluid) - Soon after event/exercise (simulating 15-60 minutes), eat a snack of carbohydrate (fruits/veggies) and protein (milk/chocolate milk), drink water.
- h. Stage 2 (meal and fluid) - 2 minutes after event/exercise (simulating 2 hours) eat a chicken salad, drink water.
- i. Stage 3 (snack and fluid) - 4 minutes after event/exercise (simulating 4 hours) eat some trail mix and drink water.

Sports Nutrition PPT Worksheet & Study Guide

Name _____

1. Sports Nutrition Depends on the following:

- Additional _____ Expenditures that are Needed
- _____ Specific Needs for:
 - Team Sports, _____ Sports, Aesthetic Sports, _____ Sports, Winter Sports, _____ Sports, Mixed Sports, _____ Sports
- Food _____ with Type of _____
- _____ Tools to Improve & Prepare _____

2. Food & Functionality

- Energy =
 - High & Low-fiber _____
 - Animal & Vegetable Lean _____
 - Low-fat _____
- Food Choices the Impact Performance =
 - Eat a _____ of Foods
 - Eat _____ Dense Foods
 - Eat High _____ & _____ Foods

3. Carbohydrates

- Carbohydrates are the body's _____ source of _____.
- Dietary _____ include: _____, Fruits, _____, Beans, _____ & Dairy.
- These foods can be stored in the _____ & in the muscles as _____ to be used later for energy.
- _____ is a polysaccharide that forms into a _____ when it is hydrated.

4. Carbohydrate Recommendations . . .

- Minimum Amounts
 - _____ per day
 - Athletes need to get _____ of their daily calories from _____ the same as non-athletes
- Considerations

- Size, _____, Sport & _____
- Caloric Density: Carbs are _____ per gram
- Carbohydrate _____ requires _____
- During Training use _____ of carbs/hr

5. Student Goal

- Tina is a 16 year-old Soccer Player, she is 5'6" & weighs 135 lbs. Her Carbohydrate Goal is 305-365 grams/day.

FOOD	CARBOHYDRATE GRAMS
1.5 cups Dry Cereal, 1 cup Skim Milk, 1 Banana, 8 fluid oz Orange Juice	Breakfast _____
Turkey Sandwich (2 slices Bread, 2 slices Turkey, 1 slice Tomato, 1 slice Lettuce, 1 Tbsp Mayo & Mustard), 1 Apple, 2 Whole Grain Crackers, 1 cup Yogurt	Lunch _____
1 cup Chicken Stir-fry w/Vegetables, ½ cup Brown Rice, 1 cup Yogurt w/ ½ cup Berries	Dinner _____
TOTAL	_____

6. Carbohydrates help the body by?

- If excessive _____ are eaten they are stored as _____ by the body but can be called upon later for _____ to improve your _____.
- Carbs reduce the risk of _____ or low blood sugars.
- Carbs provide _____ for active working _____.
- Carbs prevent "bonking" or " _____ " & forcing you to slow down or _____ during an event.

7. Carbs During Exercise

- Research shows that _____ of carbs/hr will help delay glycogen _____ & keep the body feeling _____.
- Foods to eat during an event to keep the _____ strong:
 - 1 medium Banana - _____
 - 1 slice _____
 - bread with Peanut Butter - _____

- 2 Fig Newton Cookies - _____
- 1 oz Pretzels - _____
- Roll with 1 Tbsp Jam - _____

8. Tips to limit stomach distress

- Stay _____ & practice drinking during _____
- Avoid “_____” both before & during events.
- Keep _____ meal _____ in lean protein & low in _____.
- Eat a high _____, high _____ diet regularly.
- Avoid high _____ foods before _____.
- Limit anti-inflammatory meds, alcohol, _____, antibiotics & _____ before events.
- Visit the _____ before your event.

9. Proteins

- Use _____ + Vegetable Sources
- Athletes need _____ of their daily calories from _____, which is a higher protein content than _____.
- Caloric Density: Proteins are _____
- _____ & _____ Body Tissue, Bone & Muscle
- Provide _____ Functions, _____, Hormones & _____
- Provide _____ & _____
- Help with Transportation & _____ of _____.

10. Protein Recommendations

- Girls need _____ & Boys need _____
- Athlete Girls & Boys need _____ or _____.

PROTEIN-RICH FOODS	PROTEIN GRAMS
1.5 cups Skim Milk	
¾ Cup Oatmeal	
1 String Cheese	
¼ Cup Almonds	
1 Cup Plain Yogurt	
2 Slices Deli Turkey	

2 Tbsp Peanut Butter	
1 Chicken Breast	
1 Sports Bar	
TOTAL	

11. Recovery Nutrition

- _____ eating after a workout helps the body _____ lost _____ stores, repairs damaged tissue & prepares for the next _____.
- When you eat _____ it is very _____.
- The body is primed to _____ lost glycogen stores within _____. Start refueling within _____ min after an event.
- _____ is in 3 stages.
 - **Stage 1** - _____ + _____ (15-60 min after an event)
 - _____ (chocolate milk, Gatorade or smoothie w/fruit)
 - Protein _____ (peanut butter sandwich, fruit yogurt or sports bar)
 - **Stage 2** - _____ + _____ (within 2 hrs after event)
 - Balance mostly _____, some lean _____, few _____
 - _____ w/tomato sauce, veggies & _____; Turkey sandwich, whole wheat _____ & fruit; or Chicken _____ with brown rice & _____.
 - **Stage 3** - _____ + _____ (within 4 hrs after event)
 - _____ (chocolate milk, sports drinks, fruit waters, or smoothies)
 - Protein _____ (crackers & _____; graham crackers w/peanut butter; or _____ w/low-fat milk)
- Certain types of training or _____ require greater detail.
 - 2 or more _____ sessions/day
 - Less than _____ between sessions
 - _____ training more than _____
 - _____ competitions

12. Fats

- Sources include _____ Products (full fat _____, meats - _____, chicken, pork, _____ & egg yolks.
- _____ Products (_____, seeds, _____ & olives)
- _____ Foods (cookies, _____, baked goods & salad _____)
- _____ (olive, _____, peanut, _____, walnut, safflower, etc)
- Caloric Density: Fats are _____
- Athletes need to get _____ of their calories from _____. Athletes need a _____ fat content than not-athletes.

13. Fats help the body by?

- Providing _____ energy that can be used for walking _____ & easy cycling.
- Providing _____, insulation, protect our vital _____, start chemical reactions, aid _____, can improve hearth health, & help with _____ functions.
- Transporting fat soluble vitamins _____ to the body to be used.
- Providing _____ acids (flax seeds, _____, salmon), which are _____ & reduce body _____.
- When _____ fats are eaten they lead to:
 - _____
 - Obesity
 - _____
 - Clogged Arteries
 - _____
- Athletes should use _____ fats & limit their fatty _____, high fat _____ products, _____ foods & _____ fats.

14. Hydration

- All _____ need water, a minimum of _____ a day.
- _____ are found in most foods which helps the _____ to consume 64 fl. oz.
- Fluids help to _____ the body's _____, regulate blood pressure, provide structure & _____ for the body, maintain _____ balances, help with the _____ transport & aid in a quicker body _____ (dehydration delays recovery)

- As exercise _____, weight loss due to _____ increases. A _____ weight loss can impair body _____.
- Allowing the body to become _____ can cause _____ to cramp, alter blood _____, causes weight _____.
- _____ too much water can _____ electrolytes & cause _____ - low levels of _____ in the body which cause low _____ levels.
- A good _____ of thumb is to get _____ of water with each meal.
- Carry a _____ bottle with you whether you are _____, working, at _____, or doing whatever.
- Start to hydrate _____ before any event. Drinking about _____ during this time.
- _____ color darkens as dehydration increases, monitor urine _____ & lack of _____.
- Fluid _____ is influenced by: _____, age, body _____, outside temperature, _____, altitude & type of sport involved in.
- How much should I drink?
 - Always drink a glass of _____, milk, or 100% juice at each _____.
 - Drink more when adapting to a new _____ (_____, temperature & _____)
- Determine Sweat Rate:
 - **Step 1** - _____ (minimal clothing, no shoes) before event.
 - **Step 2** - Keep _____ of all _____ consumed during event
 - **Step 3** - _____ after event (same clothing)
 - **Step 4** - Find the _____ & _____ to oz (1 lb = 16 oz or 2 cups of fluid)
 - **Step 5** - _____ to the oz you _____ during the event.
 - **Step 6** - _____ hourly sweat rate: _____ total oz _____ by _____ of event.

15. Sweat Rate Example

- Tim practices for 2 hrs & drinks 20 oz (2.5 cups)

STEPS	ACTION	RESULTS
1	Weigh self before event	

2	Keep track of fluids consumed	
3	Weigh self after event (same clothing)	
4	Find the difference & convert to oz	
5	Add the oz consumed to oz lost	
6	Determine hourly sweat rate: divide oz lost by hrs in event	

16. Supplements

- Athletes who eat a varied, _____ dense diet, following the _____ guidelines & get _____ of water a day do not need _____, dietary supplements, or _____.
- _____ include the following risks: _____ at events, Financial Burdens, _____, FDA Non-tested ingredients, _____, Quality Research, & Can Effect a Good _____.

17. Pre-Game Meals

- Before the Pre-Game Meal, usually the night before:
 - Have a meal that is high in _____ foods, moderate in _____ & low in _____.
- Pre-Game Meal should:
 - Be _____ before the event
 - Contain _____ of water
 - Contain _____ foods
 - Be _____, not a new food & is easily _____
 - Contain _____ of carbs/lb of _____
 - Be _____: (rice, _____, pasta, _____, fruits, _____, corn, peas & _____), _____ (chicken, _____, or fish) & _____ (skim milk, low-fat _____, avocados, _____, & seeds)
 - Should take into account: _____ of event, _____, body mass, _____, sport & _____ needs

17. Pre-Game Meal Examples

- **Breakfast**

- 1-2 cups Rice Chex Cereal w/1 cup skim milk
 - Low fiber Carbohydrate
 - Vegetable Protein
- 1 cup sliced Strawberries
 - Low fiber Carbohydrate
- 1/3 cups Almonds
 - Vegetable Protein
 - Low-fat Fats
- 8 oz glass of water
 - Hydration

- **Write 2 more Different Breakfasts** – Use the following format for a Pre-Game Meal & plan 2 breakfasts using the following grid.

Breakfast Pre-Game Meals

DAY	FOOD ITEM	TYPE OF CARB	TYPE OF PROTEIN	TYPE OF FAT
1				
2				

- **Lunch**

- Pasta Salad (1 ½ cups cooked pasta; 1 cup vegetables (carrots, tomatoes, celery, olives, broccoli & peas); ¼ cup meat (tuna, chicken, or salmon); 1.5 Tbsp vinaigrette dressing)
 - Low-fiber Carbohydrate
 - Lean Animal Protein
 - Low-fat Fats
- Dinner Roll
 - Low-fiber Carbohydrate
- Slice of Watermelon
 - Low-fiber Carbohydrate
- 8 oz glass of Water
 - Hydration

- **Write 2 more Different Lunches** – Use the following format for a Pre-Game Meal & plan 2 breakfasts using the following grid.

-

Lunch Pre-Game Meals

DAY	FOOD ITEM	TYPE OF CARB	TYPE OF PROTEIN	TYPE OF FAT
1				
2				

- **Dinner**

- Turkey wrap (2 slices of lean turkey, romaine lettuce, tomatoes, avocados, olives, cucumbers, celery, tortilla, mozzarella cheese)
 - Low-fiber Carbohydrate
 - Lean Animal Protein
 - Low-fat Fats
- 1 cup low-fat yogurt w/ ½ cup fruit
 - Lean Protein
 - Low-fiber Carbohydrate
- ½ cup snap peas
 - Low-fiber Carbohydrate
- 8 oz glass of Water
 - Hydration

- **Write 2 more Different Dinners** – Use the following format for a Pre-Game Meal & plan 2 breakfasts using the following grid.

Dinner Pre-Game Meals

DAY	FOOD ITEM	TYPE OF CARB	TYPE OF PROTEIN	TYPE OF FAT
1				
2				

Sports Nutrition Test

Name _____

Class _____

Period _____

1. Sports Nutrition should be practiced by? (Worth 1 point)
 - a. Those that are involved in Team Sports, Individual Sports & Mixed Sports
 - b. Those that are involved in Power Sports, Endurance Sports & Aesthetic Sports
 - c. Those that are involved in Winter Sports, Water Sports & Olympic Sports
 - d. Anyone involved in any type of Sport, Exercise, or anyone in general

2. Energy can be found in what type of foods? (Worth 1 point)
 - a. Vitamins
 - b. Minerals
 - c. Proteins
 - d. Electrolytes

3. The Body's primary source of energy is? (Worth 1 point)
 - a. Glycogen
 - b. Carbohydrates
 - c. Fats
 - d. Proteins

4. Glycogen is a form of? (Worth 1 point)
 - a. Glucose
 - b. Electrolytes
 - c. Vitamins
 - d. Saccharine

5. Carbohydrates are found in? (Worth 1 point)
 - a. Grains
 - b. Dairy Products
 - c. Fruits & Vegetables
 - d. All answers listed are correct

6. Athletes need to get what % of their daily calories from Carbohydrates? (Worth 1 point)
 - a. 45 - 50
 - b. 65 - 70
 - c. 55 - 60
 - d. 40 - 45

7. Carbs contain how many calories per gram? (Worth 1 point)
 - a. 4 cal
 - b. 6 cal
 - c. 7 cal
 - d. 9 cal

8. Carbohydrate loading requires? (Worth 1 point)
 - a. 5-7 oz per day
 - b. 7-9 oz per day
 - c. 8-10 oz per day
 - d. all of these answers are correct

9. The number of grams of Carbohydrates needed per day by any athlete is? (Worth 1 point)
 - a. 300 grams
 - b. 10 grams
 - c. 1000 grams
 - d. Based on gender, sport, body mass & diet

10. Eating Carbs prevents the athlete from developing? (Worth 1 point)
 - a. hypoglycemia
 - b. hitting the wall
 - c. glycogen depletion
 - d. Carbs can prevent all of these things.

11. A good source of a Carbs to be used during exercise is? (Worth 1 point)
- a. a banana
 - b. a diet coke
 - c. a whole wheat roll
 - d. a piece of beef jerky
12. Tips to use while competing to limit stomach distress include all of the following **Except?** (Worth 1 point)
- a. Stay hydrated & practice drinking during competition.
 - b. Use lean protein products as a snack while competing.
 - c. Avoid high fiber carbs before competing.
 - d. Go to the bathroom before an event.
13. Proteins contain how many calories per gram? (Worth 1 point)
- a. 4 cal
 - b. 6 cal
 - c. 7 cal
 - d. 9 cal
14. Proteins help the body in all of the following ways **Except?** (Worth 1 point)
- a. Build & repair body tissues, bone & muscles.
 - b. Transport vitamins A, D, E, & K for the body to use.
 - c. Provide immune functions, enzymes, hormones & antibodies.
 - d. Transport & balance fluids in the body.
15. Athlete boys & girls need how much protein a day? (Worth 1 point)
- a. 6.5 oz – 8.5 oz/day
 - b. 95 grams
 - c. About 20% of their daily calories
 - d. All the answers are correct
16. Recovery Nutrition involves how many stages? (Worth 1 point)
- a. 4
 - b. 3
 - c. 2
 - d. It only involves time not stages.
17. The most important part of Nutrition Recovery is? (Worth 1 point)
- a. The amount of fluids consumed
 - b. The amount of food consumed
 - c. When you eat
 - d. The type of food that you eat
18. Recovery Nutrition should be completed within how many hours? (Worth 1 point)
- a. 6 hours
 - b. 4 hours
 - c. 3 hours
 - d. 1 hour
19. Fats are found in all of the following foods **Except?** (Worth 1 point)
- a. Fruits
 - b. Dairy Products
 - c. Meats
 - d. Processed Foods
20. Fats contain how many calories per gram? (Worth 1 point)
- a. 4 cal
 - b. 6 cal
 - c. 7 cal
 - d. 9 cal
21. When it comes to fats Athletes need? (Worth 1 point)
- a. To get about 20% of their calories from fats.
 - b. To concentrate on solid fats more than oils.
 - c. To limit the amount of Omega-3 fatty acids they get.
 - d. To reduce their fat intake by 20% over a non-athlete.

22. Water helps the body in all of the following **Except?** (Worth 1 point)
- a. Regulates body's temperature.
 - b. Maintains electrolyte balances.
 - c. works with dehydration
 - d. provides structure & lubricants
23. The athletes body needs a minimum of how many fluid oz of water a day? (Worth 1 point)
- a. 16 fl oz
 - b. 32 fl oz
 - c. 64 fl oz
 - d. 128 fl oz (1 gal)
24. Dehydration can be recognized in all of the following **Except?** (Worth 1 point)
- a. a reduction in water intake
 - b. a lack of urine frequency
 - c. climate & altitude changes
 - d. a yellow color to your urine.
25. To determine sweat rate which of the following set of steps is correct? (Worth 1 point)
- a. 1 - Weigh yourself before event, 2 - Keep track of all fluids consumed during event, 3 - Weigh yourself after event (same clothing), 4 - Find the difference in weight & convert to oz, 5 - Add the weight conversion to the oz consumed, 6 - Divide total oz by hrs in event, 7 = Hourly sweat rate.
 - b. 1 - Weigh yourself before event, 2 - Keep track of all fluids consumed before event, 3 - Weigh yourself after event, 4 - Find the difference in weight & convert to oz, 5 - Add the weight conversion to the oz consumed before, 6 - Divide total oz by hrs in event, 7 = Hourly sweat rate.
 - c. 1 - Keep track of all fluids consumed during event, 2 - Weigh yourself after event (same clothing), 3 - Convert oz consumed to weight(1 lb = 16 fl oz), 4 - Subtract oz consumed from weight after event, 5 - Divide total oz by hrs in event, 6 = Hourly sweat rate.
 - d. All answers are incorrect
26. When it comes to supplements for Athletes all are true **Except?** (Worth 1 point)
- a. If athletes eat a nutrient dense diet with plenty of water they don't really need supplements.
 - b. Supplements can be very costly.
 - c. Supplements can contain caffeine, non-tested ingredients & cause Health Risks.
 - d. Will almost always improve your Performance.
27. Plan a Pre-Game Meal for an athlete. Use the outlined example in your Pre-Game Meal Activity & ideas presented in power point. (Worth 5 points)

Sports Nutrition Test Key

Name _____

Class _____

Period _____

1. Sports Nutrition should be practiced by? (Worth 1 point)
 - a. Those that are involved in Team Sports, Individual Sports & Mixed Sports
 - b. Those that are involved in Power Sports, Endurance Sports & Aesthetic Sports
 - c. Those that are involved in Winter Sports, Water Sports & Olympic Sports
 - d. Anyone involved in any type of Sport, Exercise, or anyone in general**

2. Energy can be found in what type of foods? (Worth 1 point)
 - a. Vitamins
 - b. Minerals
 - c. Proteins
 - d. Electrolytes

3. The Body's primary source of energy is? (Worth 1 point)
 - a. Glycogen
 - b. Carbohydrates
 - c. Fats
 - d. Proteins

4. Glycogen is a form of? (Worth 1 point)
 - a. Glucose
 - b. Electrolytes
 - c. Vitamins
 - d. Saccharine

5. Carbohydrates are found in? (Worth 1 point)
 - a. Grains
 - b. Dairy Products
 - c. Fruits & Vegetables
 - d. All answers listed are correct**

6. Athletes need to get what % of their daily calories from Carbohydrates? (Worth 1 point)
 - a. 45 - 50
 - b. 65 - 70
 - c. 55 - 60
 - d. 40 - 45

7. Carbs contain how many calories per gram? (Worth 1 point)
 - a. 4 cal
 - b. 6 cal
 - c. 7 cal
 - d. 9 cal

8. Carbohydrate loading requires? (Worth 1 point)
 - a. 5-7 oz per day
 - b. 7-9 oz per day
 - c. 8-10 oz per day
 - d. all of these answers are correct

9. The number of grams of Carbohydrates needed per day by any athlete is? (Worth 1 point)
 - a. 300 grams
 - b. 10 grams
 - c. 1000 grams
 - d. Based on gender, sport, body mass & diet**

10. Eating Carbs prevents the athlete from developing? (Worth 1 point)
 - a. hypoglycemia
 - b. hitting the wall
 - c. glycogen depletion
 - d. Carbs can prevent all of these things.**

11. A good source of a Carbs to be used during exercise is? (Worth 1 point)
- a. a banana
 - b. a diet coke
 - c. a whole wheat roll
 - d. a piece of beef jerky
12. Tips to use while competing to limit stomach distress include all of the following **Except?** (Worth 1 point)
- a. Stay hydrated & practice drinking during competition.
 - b. Use lean protein products as a snack while competing.
 - c. Avoid high fiber carbs before competing.
 - d. Go to the bathroom before an event.
13. Proteins contain how many calories per gram? (Worth 1 point)
- a. 4 cal
 - b. 6 cal
 - c. 7 cal
 - d. 9 cal
14. Proteins help the body in all of the following ways **Except?** (Worth 1 point)
- a. Build & repair body tissues, bone & muscles.
 - b. Transport vitamins A, D, E, & K for the body to use.
 - c. Provide immune functions, enzymes, hormones & antibodies.
 - d. Transport & balance fluids in the body.
15. Athlete boys & girls need how much protein a day? (Worth 1 point)
- a. 6.5 oz – 8.5 oz/day
 - b. 95 grams
 - c. About 20% of their daily calories
 - d. All the answers are correct
16. Recovery Nutrition involves how many stages? (Worth 1 point)
- a. 4
 - b. 3
 - c. 2
 - d. It only involves time not stages.
17. The most important part of Nutrition Recovery is? (Worth 1 point)
- a. The amount of fluids consumed
 - b. The amount of food consumed
 - c. When you eat
 - d. The type of food that you eat
18. Recovery Nutrition should be completed within how many hours? (Worth 1 point)
- a. 6 hours
 - b. 4 hours
 - c. 3 hours
 - d. 1 hour
19. Fats are found in all of the following foods **Except?** (Worth 1 point)
- a. Fruits
 - b. Dairy Products
 - c. Meats
 - d. Processed Foods
20. Fats contain how many calories per gram? (Worth 1 point)
- a. 4 cal
 - b. 6 cal
 - c. 7 cal
 - d. 9 cal
21. When it comes to fats Athletes need? (Worth 1 point)
- a. To get about 20% of their calories from fats.
 - b. To concentrate on solid fats more than oils.
 - c. To limit the amount of Omega-3 fatty acids they get.
 - d. To reduce their fat intake by 20% over a non-athlete.

22. Water helps the body in all of the following **Except?** (Worth 1 point)
- a. Regulates body's temperature.
 - b. Maintains electrolyte balances.
 - c. works with dehydration
 - d. provides structure & lubricants
23. The athletes body needs a minimum of how many fluid oz of water a day? (Worth 1 point)
- a. 16 fl oz
 - b. 32 fl oz
 - c. 64 fl oz
 - d. 128 fl oz (1 gal)
24. Dehydration can be recognized in all of the following **Except?** (Worth 1 point)
- a. a reduction in water intake
 - b. a lack of urine frequency
 - c. climate & altitude changes
 - d. a yellow color to your urine.
25. To determine sweat rate which of the following set of steps is correct? (Worth 1 point)
- a. 1 - Weigh yourself before event, 2 - Keep track of all fluids consumed during event, 3 - Weigh yourself after event (same clothing), 4 - Find the difference in weight & convert to oz, 5 - Add the weight conversion to the oz consumed, 6 - Divide total oz by hrs in event, 7 = Hourly sweat rate.
 - b. 1 - Weigh yourself before event, 2 - Keep track of all fluids consumed before event, 3 - Weigh yourself after event, 4 - Find the difference in weight & convert to oz, 5 - Add the weight conversion to the oz consumed before, 6 - Divide total oz by hrs in event, 7 = Hourly sweat rate.
 - c. 1 - Keep track of all fluids consumed during event, 2 - Weigh yourself after event (same clothing), 3 - Convert oz consumed to weight(1 lb = 16 fl oz), 4 - Subtract oz consumed from weight after event, 5 - Divide total oz by hrs in event, 6 = Hourly sweat rate.
 - d. All answers are incorrect
26. When it comes to supplements for Athletes all are true **Except?** (Worth 1 point)
- a. If athletes eat a nutrient dense diet with plenty of water they don't really need supplements.
 - b. Supplements can be very costly.
 - c. Supplements can contain caffeine, non-tested ingredients & cause Health Risks.
 - d. Will almost always improve your Performance.
27. Plan a Pre-Game Meal for an athlete. Use the outlined example in your Pre-Game Meal Activity & ideas presented in power point. (Worth 5 points)
- They need to have a meal that is high in carbs, no fiber, low protein, low fat, good variety of nutrients, 8-16 oz of water. You will have to grade this yourself**

SPORTS NUTRITION

NUTRITION FOR THE ATHLETE

Sports Nutrition Depends on the following

- Additional Energy Expenditures that are Needed
- Sport Specific Needs for:
 - Team Sports, Power Sports, Aesthetic Sports, Endurance Sports, Winter Sports, Water Sports, Mixed Sports, Individual Sports
- Food Function with Type of Sport
- Training Tools to Improve & Prepare Athletes



Food & Functionality

- Energy =
 - High & Low-fiber Carbohydrates
 - Animal & Vegetable Lean Proteins
 - Low-fat Fats
- Food Choices that Impact Performance =
 - Eat a Variety of Foods
 - Eat Nutrient Dense Foods
 - Eat High Vitamin & Mineral Foods



Carbohydrates



- Carbohydrates are the body's primary source of energy.
- Dietary carbohydrates include: Grains, Fruits, Vegetables, Beans, Nuts & Dairy.
- These foods can be stored in the liver & in the muscles as glycogen to be used later for energy.
- Glycogen is a polysaccharide that forms into a glucose when it is hydrated.





Carbohydrate Recommendations . . .



- Minimum Amounts
 - 5-7 oz. per day
 - Athletes need to get 55 – 60% of their daily calories from Carbohydrates the same as non-athletes
- Considerations
 - Size, Gender, Sport & Diet
 - Caloric Density: Carbs are 4 cal/gram
- Carbohydrate Loading requires 8-10 oz.
- During Training use 30-60 grams of carbs/hr



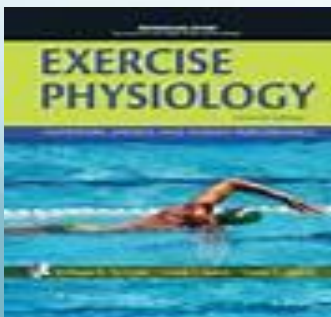
Student Goal

- Tina is a 16 year-old Soccer Player, she is 5'6" & weighs 135 lbs. Her Carbohydrate Goal is: 305-365 grams/day

Food	Carbohydrate Grams
1.5 C Dry Cereal, 1 C Skim Milk, 1 Banana, 8 fl. oz. Orange Juice	Breakfast 100 grams
Turkey Sandwich (2 sl. Bread, 2 sl. Turkey, 1 sl. Tomato, 1 sl. Lettuce, Mayo & Mustard), 1 Apple, 2 Whole Grain Crackers, 1 C Yogurt	Lunch 130 grams
1 C. Chicken Stir-fry w/Vegetables, ½ C Brown Rice, 1 C Yogurt w/½ C Berries	Dinner 125 grams
Total	355 grams

Carbs help the body by?

- If excessive Carbs are eaten they are stored as fat by the body but can be called upon later for energy to improve your performance.
- Carbs reduce the risk of hypoglycemia or low blood sugars.
- Carbs provide fuel for active working muscles.
- Carbs prevent “bonking” or “hitting the wall” & forcing you to slow down or stop during an event.



Carbs During Exercise

- Research shows that 40-60 grams of carbs/hr will help delay glycogen depletion & keep the body feeling stronger.
- Foods to eat during an event to keep the body strong:
 - 1 medium Banana – 25 g
 - 1 slice Bread w/Peanut Butter - 20 g
 - 2 Fig Newton Cookies – 14 g
 - 1 oz. Pretzels – 20 g
 - Roll w/1 Tbsp Jam – 50 g



Tips to limit stomach distress

- Stay hydrated & practice drinking during training
- Avoid “over nutrition” both before & during events
- Keep pre-race meal moderate in lean protein & low in fat
- Eat a high energy, high carb diet regularly
- Avoid high fiber foods before exercise
- Limit anti-inflammatory meds, alcohol, caffeine, antibiotics & supplements before events
- Visit the Port– A–Potty before your event



Proteins

- Use Animal + Vegetable Sources
- Athletes need 15-20% of their daily calories from protein, which is a higher protein content than non-athletes.
- Caloric Density: Proteins are 4 cal/gram
- Build & Repair Body Tissue, Bone & Muscle
- Provide Immune Functions, Enzymes, Hormones & Antibodies
- Provide Vitamins & Minerals
- Help w/Transportation & Balance of Fluids



Protein Recommendations

- Girls need 5.5 oz/day & Boys need 6.5 oz/day
- Athlete Girls & Boys need 6.5 – 8.5 oz/day or 95 grams

Protein-Rich Foods	Protein grams
1.5 C Skim Milk	12 grams
$\frac{3}{4}$ C Oatmeal	7 grams
1 String Cheese	8 grams
$\frac{1}{4}$ C Almonds	8 grams
1 C Plain Yogurt	10 grams
2 Slices Deli Turkey	7 grams
2 Tbsp Peanut Butter	7 grams
1 Chicken Breast	25 grams
1 Sports Bar	10 grams
Total	94 grams



Recovery Nutrition

- Well-balanced eating after a workout helps the body replenish lost nutrient stores, repairs damaged tissue & prepares for the next workout.
- When you eat matters it is very important.
- The body is primed to replenish lost glycogen stores within 4 hrs. Start refueling within 15-60 min after an event.
- Recovery is in 3 stages.
 - **Stage 1** - Snack + Fluids (15-60 min after an event)
 - Carb drink (chocolate milk, Gatorade or smoothie w/fruit)
 - Protein 10-15 grams (peanut butter sandwich, fruit yogurt or sports bar)



Recovery Nutrition Cont.

- **Stage 2 – Meal + Fluid (within 2 hrs after event)**
 - Balance mostly carbs, some lean proteins, few low-fat)
 - Pasta w/tomato sauce, veggies & chicken; Turkey sandwich, whole wheat crackers & fruit; or Chicken stir-fry with brown rice & veggies.
- **Stage 3 – Snack + Fluid (within 4 hrs after event)**
 - Carb drink (chocolate milk, sports drinks, fruit waters, or smoothies)
 - Protein 10-15 grams (crackers & string cheese; graham crackers w/peanut butter; or cereal w/low-fat milk)
- Certain types of training or competition require greater detail.
 - 2 or more training sessions/day
 - Less than 8 hrs between sessions
 - Endurance training more than 90 min.
 - Multi-Day competitions



Fats

- Sources include Animal Products (full fat dairy, meats – beef, chicken, pork, fatty fish & egg yolks)
- Vegetable Products (nuts, seeds, avocados & olives)
- Processed Foods (cookies, crackers, baked goods & salad dressings)
- Vegetable Oils (olive, canola, peanut, sesame, walnut, safflower, etc.)
- Caloric Density: Fats are 9 cal/gram
- Athletes need to get 20-25% of their calories from fat. Athletes need a leaner fat content than non-athletes.



Fats help the body by?

- Providing lasting energy that can be used for walking, jogging & easy cycling
- Providing heat, insulation, protect our vital organs, start chemical reactions, aid metabolism, can improve heart health, & help with immune functions.
- Transporting fat soluble vitamins A, D, E, & K to the body to be used.
- Providing Omega-3 Fatty acids (flax seeds, walnuts, salmon), which are valuable nutrients & reduce body inflammation



Fats help the body by? Cont.

- When excessive fats are eaten they lead to:
 - Heart Disease
 - Obesity
 - Diabetes
 - Clogged Arteries
 - Stroke
- Athletes should use healthy fats & limit their fatty meats, high fat Dairy products, Fried foods & Solid Fats



Hydration

- All individuals need water, a minimum of 64 fl. oz. a day.
- Fluids are found in most foods which helps the body to consume 64 fl. oz.
- Fluids help to regulate the body's temperature, regulate blood pressure, provide structure & lubricants for the body, maintain electrolyte balances, help with nutrient transport & aid in a quicker body recovery (dehydration delays recovery)
- As exercise increases, weight loss due to dehydration increases. A 2% weight loss can impair body performance.



Hydration cont.

- Allowing the body to become dehydrated can cause muscles to cramp, alter blood pressure & causes weight loss.
- Drinking too much water can alter electrolytes & cause hyponatremia – low levels of sodium in the body which causes low blood levels.
- A good rule of thumb is to get 16 oz. of water with each meal.
- Carry a water bottle with you whether you are working out, working, at school, or doing whatever.
- Start to hydrate 4 hrs before any event. Drinking about 10-16 fl. oz during this time.



Hydration cont.



- Urine color darkens as dehydration increases. Monitor urine color & lack of frequency.
- Fluid intake is influenced by: gender, age, body weight, outside temperature, sweat rate, altitude & type of sport involved in.
- How much should I drink?
 - Always drink a glass of water, milk, or 100% juice at each meal.
 - Drink more when adapting to a new environment (altitude, temperatures & humidity)

Hydration cont.

- Determine Sweat Rate:
 - **Step 1** – Weigh yourself (minimal clothing, no shoes) before event.
 - **Step 2** – Keep track of all fluids consumed during event
 - **Step 3** – Weigh yourself after event (same clothing)
 - **Step 4** – Find the difference & convert to oz. (1 lb. = 16 oz or 2 cups of fluid)
 - **Step 5** – Add to the oz you consumed during the event
 - **Step 6** – Determine hourly sweat rate: divide total oz lost by hrs of event



Sweat Rate Example

- Tim practices for 2 hrs & drinks 20 oz (2.5 cups)

Steps	Action	Results
1	Weigh self before event	175 lbs
2	Keep track of fluids consumed	20 oz
3	Weigh self after event (same clothing)	172 lbs
4	Find the difference & convert to oz	Lost 3 lbs = 48 oz
5	Add the oz consumed to oz lost	20 oz + 48 oz = 68 oz (8.5 cups)
6	Determine hourly sweat rate: divide oz lost by hrs in event	68 oz/2 hrs = 34 oz or 4 cups/hr lost

Supplements

- Athletes who eat a varied, nutrient dense diet, following the dietary guidelines & get 8 glasses of water a day do not need sports bars, dietary supplements, or sports drinks.
- Supplements include the following risks: Drug tests at events, Financial Burdens, Caffeine, FDA Non-tested ingredients, Health Risks, Quality Research, & Can Effect a Good Performance.



Pre-Game Meals

- Before the Pre-Game Meal, usually the night before:
 - Have a meal that is high in carb-rich foods, moderate in lean protein & low in fat.
- Pre-Game Meal should:
 - Be 2-4 hrs before the event
 - Contain 8-16 oz of water
 - Contain low-fiber foods
 - Be familiar, not a new food & is easily digested
 - Contain 1-3 grams of carbs/lb of weight
 - Be Carb-rich: (rice, cereals, pasta, bread, fruits, potatoes, corn, peas, & squash), Lean-proteins (chicken, turkey or fish) & Low-fat (skim milk, low-fat yogurt, avocados, nuts & seeds)
 - Should take into account: duration of event, gender, body mass, age, sport & energy needs



Pre-Game Meal Examples

- **Breakfast**

- 1-2 cups Rice Chex Cereal w/1 cup skim milk
 - Low fiber Carbohydrate
 - Vegetable Protein
- 1 cup sliced Strawberries
 - Low fiber Carbohydrate
- 1/3 cups Almonds
 - Vegetable Protein
 - Low-fat Fats
- 8 oz glass of water
 - Hydration



- **Write 2 more Different Breakfasts** – Use the following format for a Pre-Game Meal & plan 2 breakfasts using the following grid.

Pre-Game Meal Examples

- **Lunch**

- Pasta Salad (1 ½ cups cooked pasta; 1 cup vegetables (carrots, tomatoes, celery, olives, broccoli & peas); ¼ cup meat (tuna, chicken, or salmon); 1.5 Tbsp vinaigrette dressing)

- Low-fiber Carbohydrate
- Lean Animal Protein
- Low-fat Fats

- Dinner Roll

- Low-fiber Carbohydrate

- Slice of Watermelon

- Low-fiber Carbohydrate

- 8 oz glass of Water

- Hydration



- **Write 2 more Different Lunches** – Use the following format for a Pre-Game Meal & plan 2 breakfasts using the following grid.

Pre-Game Meal Examples

- **Dinner**

- Turkey wrap (2 slices of lean turkey, romaine lettuce, tomatoes, avocados, olives, cucumbers, celery, tortilla, mozzarella cheese)

- Low-fiber Carbohydrate
- Lean Animal Protein
- Low-fat Fats

- 1 cup low-fat yogurt w/ ½ cup fruit

- Lean Protein
- Low-fiber Carbohydrate

- ½ cup snap peas

- Low-fiber Carbohydrate

- 8 oz glass of Water

- Hydration

- **Write 2 more Different Dinners** – Use the following format for a Pre-Game Meal & plan 2 breakfasts using the following grid.

