



Come Back Stronger Webinar Series

November 9th, 2020





American Dairy Association North East



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with chocolate
MILK

Sports Nutrition Experts

2020
Sports Nutrition
Advisory Panel



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Protein: How Much and How Often for the High School Athlete

STEPHANIE COPPOLA, MS, RD, LDN

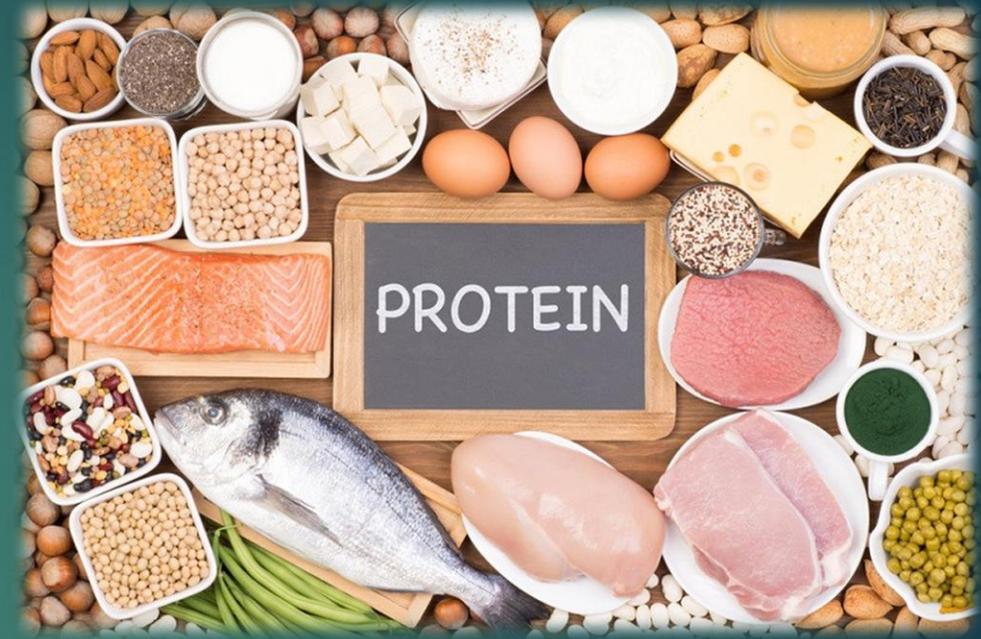
PERFORMANCE NUTRITION ASSISTANT FOR THE PHILADELPHIA EAGLES

SPORTS NUTRITION PANELIST FOR THE AMERICAN DAIRY ASSOCIATION NORTH EAST

Polling Questions

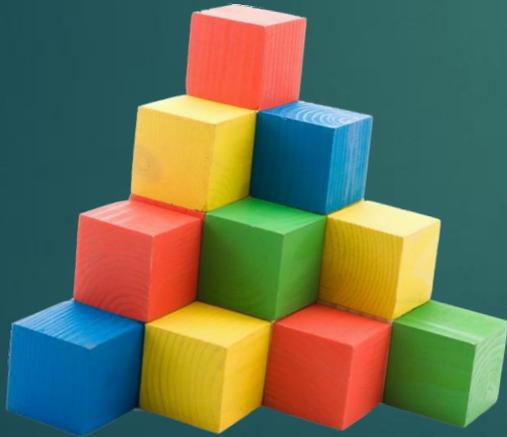
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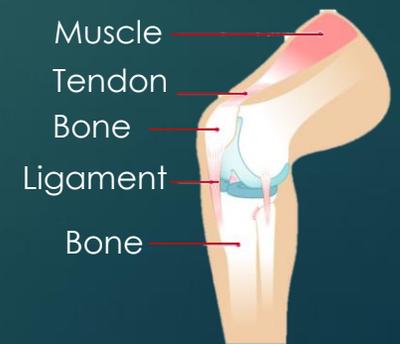
Role of Protein in the Diet

- ▶ Protein is made up of 20 amino acids or building blocks
 - ▶ 9 are considered essential
 - ▶ Rebuilds, repairs and increases size of muscle fibers during muscle protein synthesis
- ▶ Helps improve protein balance and decrease muscle damage during training
- ▶ Enhances muscle repair and growth



Role of Protein in the Diet

- ▶ Makes up tendons, ligaments, muscles, enzymes, hormones and antibodies in the body among a vast majority of other things
- ▶ Supports the immune system
- ▶ Takes longer to digest than carbohydrates to help you feel full for longer
- ▶ Supports adaptation of:
 - ▶ Lean Body Mass, Strength, Power, Speed



Protein Requirements

- ▶ Children and Adolescents use more energy per unit of body weight to do the same activity compare to an adult
 - ▶ Children and Adolescents are not just smaller adults
- ▶ Aim to have 10 - 35% of calories coming from protein for adults
 - ▶ Does not need more than 10 - 15% total energy on average for adolescents
- ▶ Greater than non-athletes, but not as much as you may think
- ▶ Vary from person to person
 - ▶ 1.2 – 2 g/kg of bodyweight per day

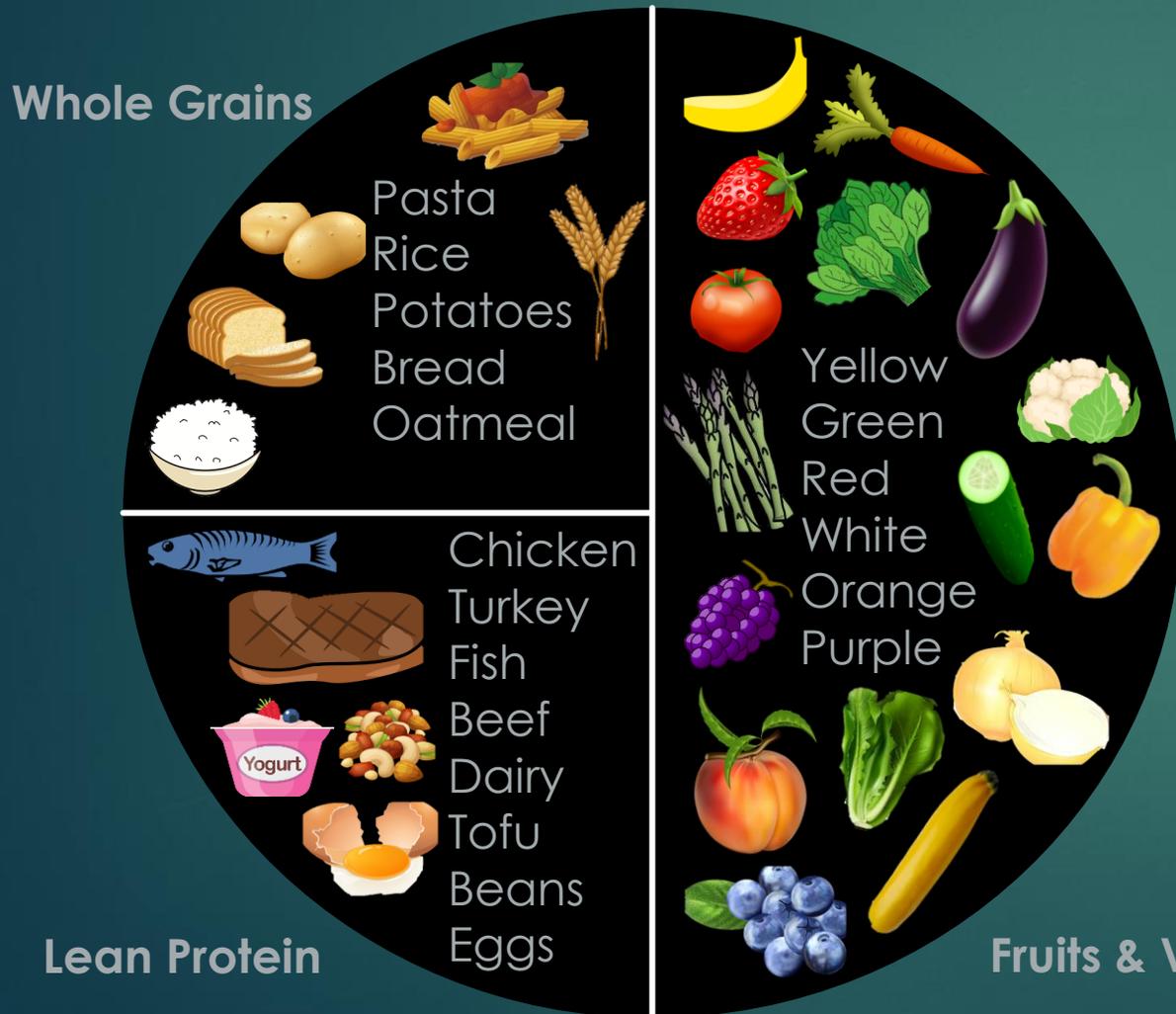


Protein Timing

- ▶ Consume protein evenly throughout the day because the body better utilizes it in smaller amounts rather than in large amounts at one time
- ▶ Consume a meal or snack every ~3 hours
 - ▶ 3 main meals and 2 – 3 snacks per day
 - ▶ Aim to eat ~15 - 20 g per snack and ~30 g per meal
 - ▶ 1 oz meat is 7 g protein
- ▶ Post-Game or Post-Practice
- ▶ Protein ingestion 30 min – 1 hour before bed may help with recovery

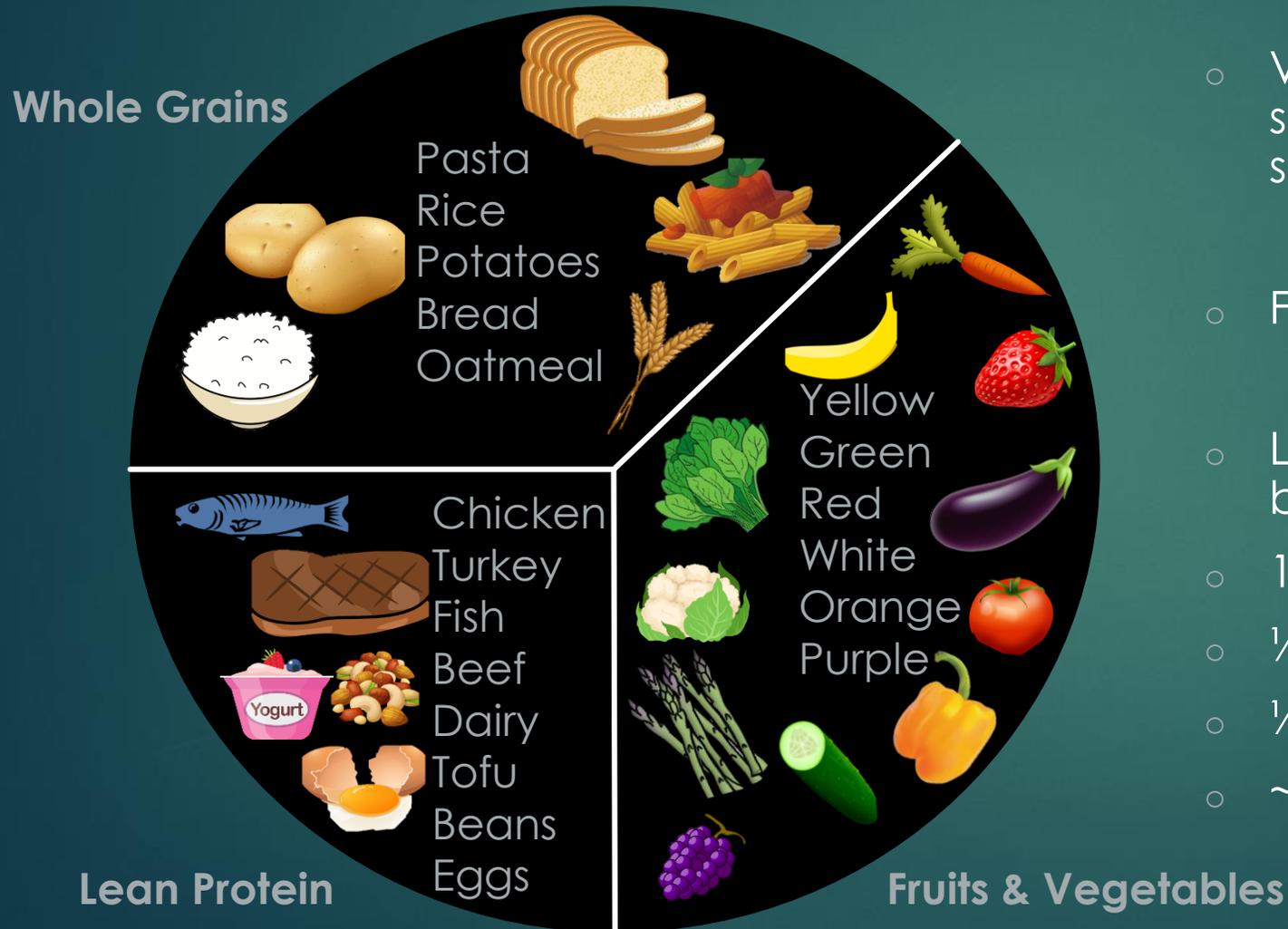


Building a Performance Plate – Easy Training & Off Day



- Vegetables: fresh, frozen, canned, steamed, roasted, grilled, sautéed, in soups
 - Aim to eat a variety of different colors
- Fruit: fresh or frozen
 - Aim to eat a variety of different colors
- Lean Protein: fresh, frozen, grilled, baked, broiled
 - 1 oz protein = 7 g protein
 - ½ cup carbs/fruit = 15 g carbohydrates
 - ½ cup vegetables = 5 g carbohydrates
 - ~1 hour of non-strenuous activity

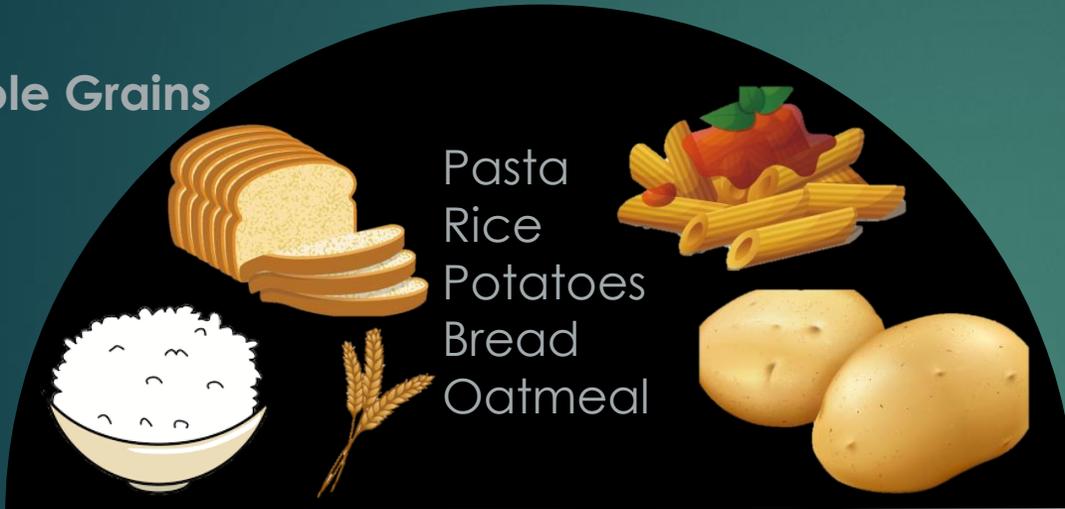
Building a Performance Plate – Moderate Training



- Vegetables: fresh, frozen, canned, steamed, roasted, grilled, sautéed, in soups
 - Aim to eat a variety of different colors
- Fruit: fresh or frozen
 - Aim to eat a variety of different colors
- Lean Protein: fresh, frozen, grilled, baked, broiled
 - 1 oz protein = 7 g protein
 - ½ cup carbs/fruit = 15 g carbohydrates
 - ½ cup vegetables = 5 g carbohydrates
 - ~1-2 hours of moderately strenuous activity

Building a Performance Plate – Hard Training

Whole Grains



Chicken
Turkey
Fish
Beef
Dairy
Tofu
Beans
Eggs

Lean Protein

Yellow
Green
Red
White
Orange
Purple



Fruits & Vegetables

- Vegetables: fresh, frozen, canned, steamed, roasted, grilled, sautéed, in soups
 - Aim to eat a variety of different colors
- Fruit: fresh or frozen
 - Aim to eat a variety of different colors
- Lean Protein: fresh, frozen, grilled, baked, broiled
 - 1 oz protein = 7 g protein
 - ½ cup carbs/fruit = 15 g carbohydrates
 - ½ cup vegetables = 5 g carbohydrates
 - ~2-3+ hours of strenuous activity

Post-Game/Practice Nutrition

- Goals:
 - Rebuild Muscles
 - Refuel Energy Stores
 - Rehydrate
- Recommendations:
 - Post-activity meal 1-2 hours after the end time
 - Carbohydrates: 40-80 g
 - Protein: 20-40 g
 - Fluids & Electrolytes: 16-20 oz. per pound lost



High Protein Snacks

- ▶ Create Your Own Trail Mix
- ▶ Overnight Oats
- ▶ Chia Seed Pudding
- ▶ Protein Balls
- ▶ Beefy Jerky
- ▶ Cottage Cheese
- ▶ Chocolate Milk
- ▶ PB & J Sandwich



Supplements

- Protein consumption can enhance rates of protein synthesis and possibly lower rates of muscle protein breakdown
- Protein shakes should be used for a snack, additional calories and recovery but **NOT** as a meal replacement
- Non-Protein Powder Options:
 - Greek yogurt, milk, nut butters, chia seeds
- Supplements are **NOT** regulated by the FDA
 - Third Party Certification: undergo a rigorous screening program for banned substances in sport and is **safer** to use
 - NSF for Sport or Informed Choice



References:

- ▶ Olympic Food Plate Models: <https://www.teamusa.org/nutrition>
- ▶ CPSDA Downloadable Resources: <https://www.sportsrd.org/downloadable-resources/>
- ▶ NSF for Sport: <https://www.nsf sport.com/>
- ▶ Informed Choice: <https://www.informed-choice.org/>



Discussion/Questions

Thank you!



Reminders

- Post-webinar polling questions
- Raffle Prize Winners

- Post Webinar E-Blast Coming Soon!
Includes:
 - ✓ Presentation Slides
 - ✓ On-Demand Webinar Link
 - ✓ Handout
 - ✓ Resources



Thank you!