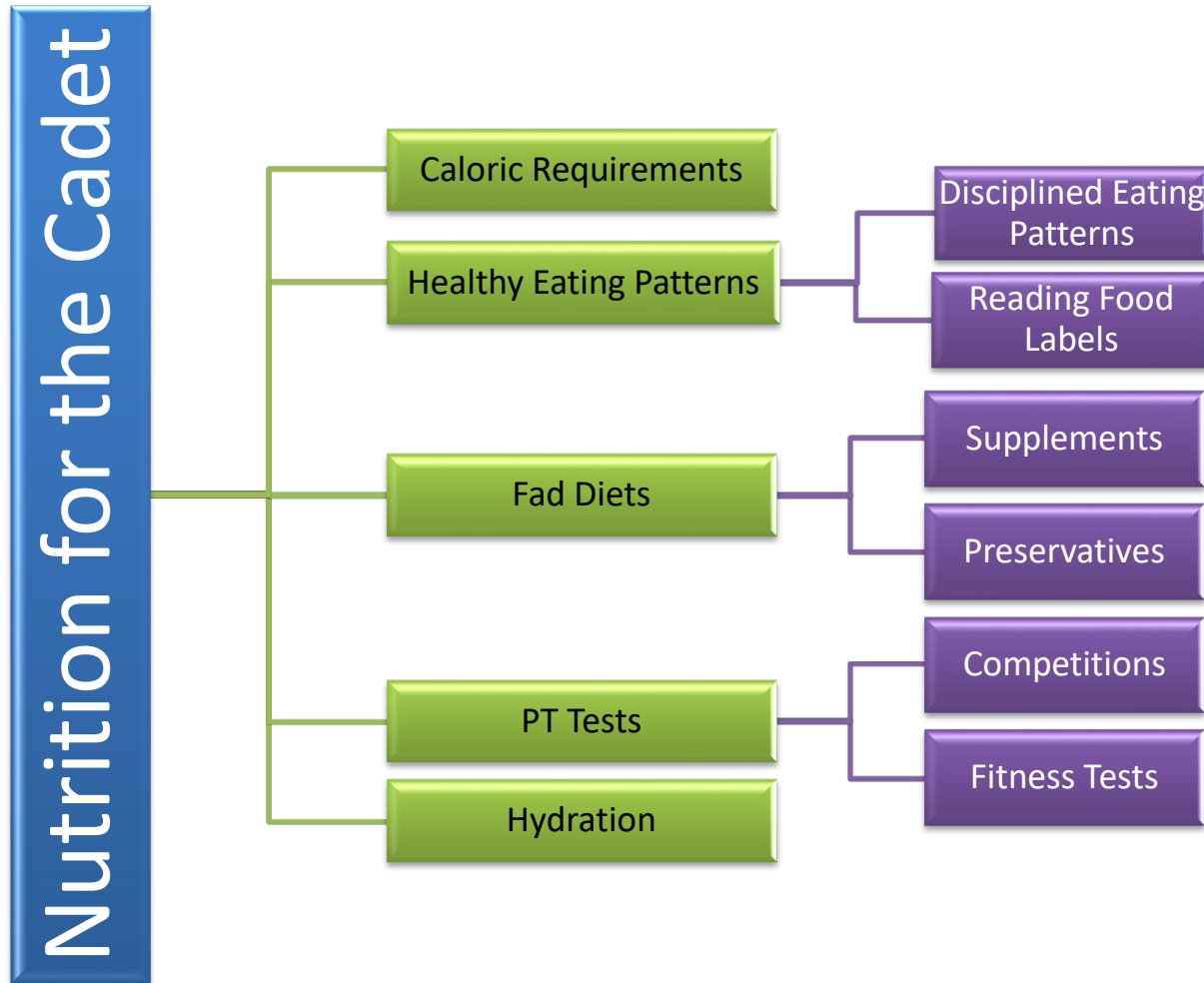




Wellness 4B: Nutrition for the Cadet





HEALTH & WELLNESS AGENDA

B1. Caloric Requirements For Moderately Active Lifestyle

B2. Healthy Eating Patterns For A Cadet Requirement

B3. Reading Nutrition Labels

B4. Fad Diets, Supplements, Preservatives

B5. Nutrition For PT Tests, Competitions, And Fitness Tests

B6. Hydration



NUTRITION FOR THE CADET: UNIT OBJECTIVES

The desired outcome of this unit is for students to learn various nutritional facts, proper diets of nutrition, and planning for specific activities in a student cadet's life.

Plan of Action:

1. Define energy balance, caloric intake, and caloric expenditure
2. Define a Kcal and compare Kcal to cal
3. Explain and expand on each individual tier of the Physical Activity Pyramid
4. List the 3 stages in the slogan of the CDC for establishing healthy eating habits.
5. Define each of the 3 stages of the Reflect, Replace and Enforce model
6. Understand that the USDA has tools for aiding in improving healthy eating
7. Define discipline in the matter of healthy eating
8. List the main concepts of The Definite Dozen with explanations
9. Understand the Principle of Reinforcement, cognitive theory and self-determination theory
10. Define each indicator found on labels and what information each of the 6 indicators holds



NUTRITION FOR THE CADET: UNIT OBJECTIVES

11. Define fad diets, compare them to healthy balanced diets
12. Understand what dietary supplements are and what is in them
13. Define and understand performance enhancing drugs such as anabolic steroids, peptide hormones, and diuretics; explain the health risks of all
14. Understand Carbo-loading and High Protein diets, explain their effectiveness or ineffectiveness
15. Understand the anatomical importance of factors relating to hydration, dehydration, and hyponatremia.
16. Explain the similarities and differences between heat stroke and heat exhaustion.



NUTRITION FOR THE CADET: CALORIC REQUIREMENTS FOR A MODERATELY ACTIVE LIFESTYLE

Objectives: Cadets will be able to

- Define energy balance, caloric intake, and caloric expenditure
- Define a Kcal and compare Kcal to cal
- Explain and expand on each individual tier of the Physical Activity Pyramid

Essential Question:

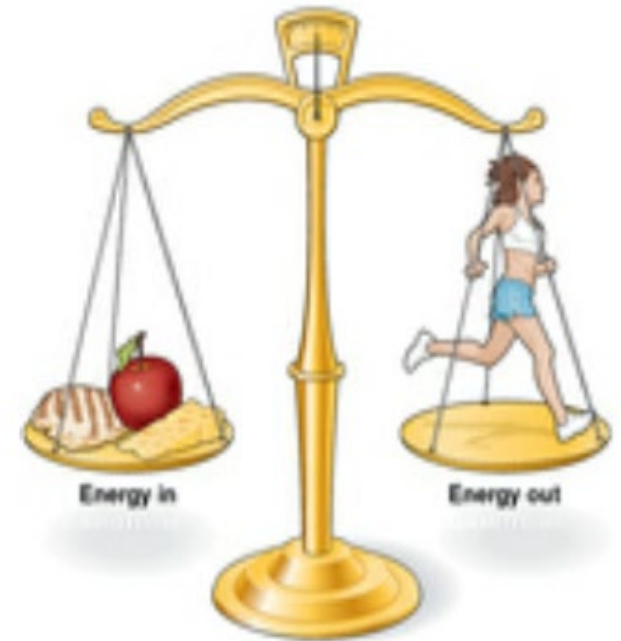
How do you utilize caloric intake to cater to exercise expectations?



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CALORIC REQUIREMENTS FOR A CADET

- **Energy balance**, which is a combination of two factors
 - **caloric intake:** energy in/food
 - **caloric expenditure:** calories used/burned during physical activity or workouts
- **Calorie:** the amount of energy in food products
- **Kilo-calorie (Kcal):** a unit of energy or heat.
 - Weight management is always calories in vs Kcals burned. In order to balance caloric intake of 3,500 calories, in order to not gain weight the individual must burn 3,500 kcals in the same amount of time. The number 3,500 is significant because 3,500 is equal to one pound of fat.





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CALORIC REQUIREMENTS FOR MODERATE ACTIVE LIFESTYLE

TABLE 13.7 Energy Expenditure

	Calories used per hr based on weight				
	100 lb (45 kg)	120 lb (54 kg)	150 lb (68 kg)	180 lb (82 kg)	200 lb (91 kg)
Backpacking/Hiking	307	348	410	472	513
Badminton	255	289	340	391	425
Baseball	210	238	280	322	350
Basketball (half-court)	225	240	300	345	375
Bicycling (normal speed)	157	178	210	242	263
Bowling	155	176	208	240	261
Canoeing (4 mph [6.5 kph])	276	344	414	504	558
Circuit training	247	280	330	380	413
Dance (ballet/modern)	240	300	360	432	480
Dance (aerobic)	300	360	450	540	600
Dance (social)	174	222	264	318	348
Fitness calisthenics	232	263	310	357	388
Football	225	255	300	345	375
Golf (walking)	187	212	250	288	313
Gymnastics	232	263	310	357	388
Horseback riding	180	204	240	276	300
Interval training	487	552	650	748	833
Jogging (5.5 mph [9 kph])	487	552	650	748	833
Judo/Karate	232	263	310	357	388
Racquetball/Handball	450	510	600	690	750
Rope jumping (continuous)	525	595	700	805	875
Running (10 mph [16 kph])	625	765	900	1,035	1,125
Skating (ice or roller)	262	297	350	403	438
Skiing (cross-country)	525	595	700	805	875
Skiing (downhill)	450	510	600	690	750
Soccer	405	459	540	575	621
Softball (fastpitch)	210	238	280	322	350
Swimming (slow laps)	240	272	320	368	400
Swimming (fast laps)	420	530	630	768	846
Tennis	315	357	420	483	525
Volleyball	262	297	350	403	483
Walking	204	258	318	372	426
Weight training	352	399	470	541	558



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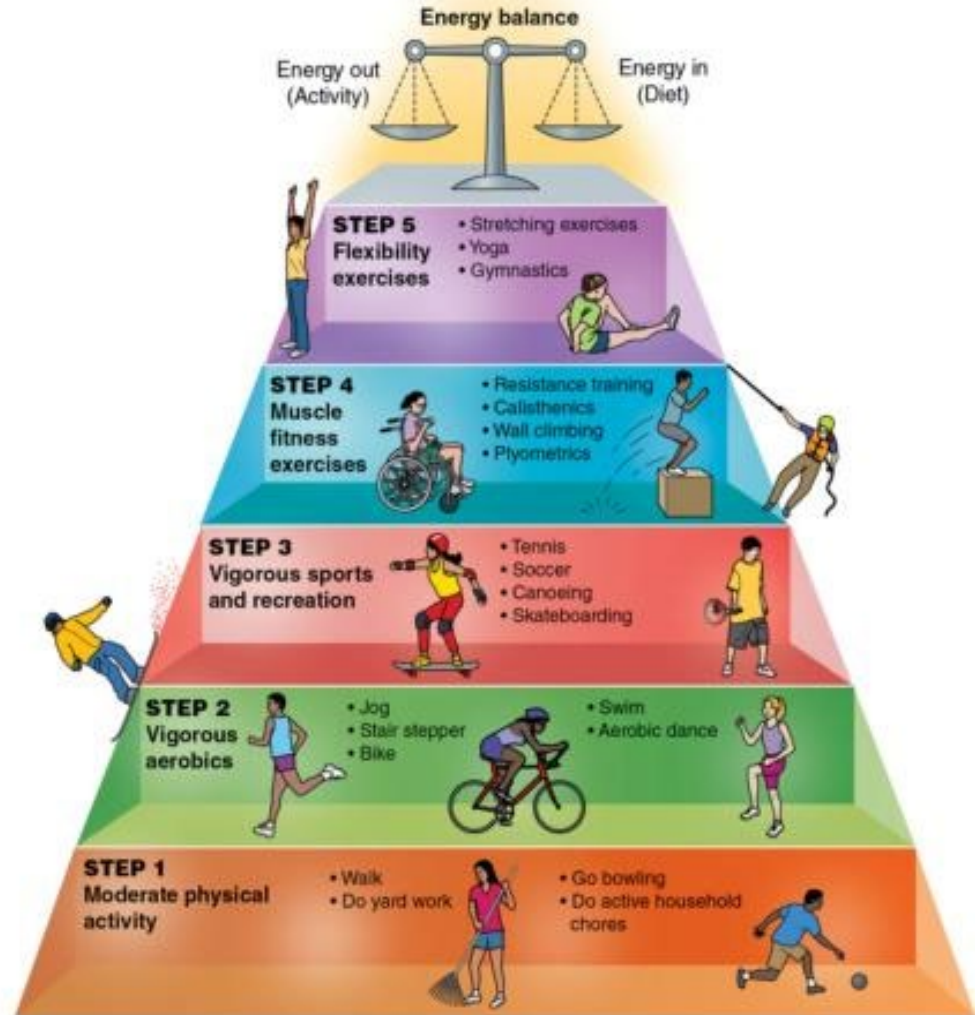
CALORIC REQUIREMENTS FOR MODERATE ACTIVE LIFESTYLE

- Physical Activity Pyramid has five tiers to achieve the ideal balance. From the base to the top of the model is moderate physical activity, vigorous aerobics, vigorous sport and recreation, muscle fitness exercise, and flexibility exercises.
 - **Moderate physical activity** is utilized in the long term of controlling fat accumulation
 - **Vigorous aerobics** is more intense than moderate activities, it is continuous leading to a slightly higher caloric expenditure
 - **Vigorous sport and recreation** is even more intensity of activity and allows for more calories to be burned due to the increase in time spent on it
 - **Muscle fitness exercises** see more caloric burn due to the type of exercise; it is a dense workout and even after a workout continues to help burn calories due to the body needing to rebuild the muscles, using energy to do so
 - **Flexibility exercises** are not a high-calorie burner type exercise, but they burn more calories than just resting and are a necessary need for overall fitness



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Physical Activity Pyramid



For teens, at least 60 minutes of moderate- to vigorous-intensity physical activity is recommended each day. Activities from the pyramid can be combined to meet this recommendation.



Avoid inactivity



CHECK ON UNDERSTANDING



1. _____ is the stage of the physical activity pyramid that burns the most calories.
2. A calorie and a Kcal are the same thing? (T/F)
3. It's safe to say that the more you weigh, the more calories you burn during exercises and activities? (Yes or No)



NUTRITION FOR THE CADET: HEALTHY EATING PATTERNS FOR A CADET

Objectives:

Cadets will be able to

- List & define the 3 stages in the Slogan of the CDC for establishing healthy eating habits; Reflect, Replace & Reinforce.
- Use the USDA has tools for aiding in improving healthy eating
- Define discipline in the matter of healthy eating
- List the main concepts of The Definite Dozen with explanations
- Understand the Principle of Reinforcement

Essential Question:

How do we master a healthier eating habit?



Reflect, Replace, and Reinforce

The CDC has a three-stage slogan of Reflect, Replace, and Reinforce.

- **Stage One: Reflect**

- Make a list of eating/snacking habits like a food diary
- Annotate habits such as eating too quickly, eating when not hungry, dessert intake, and skipping meals
- Identify the unhealthy habits
- Create a list of cues of when you may be triggered to eat, (examples: opening the refrigerator or cabinet when not hungry, seeing food on a counter and partaking, feeling bored or tired and just grabbing food)
- Ask questions according to your cue list about avoiding bad food and seeking healthy food



Reflect, Replace, and Reinforce

- **Stage Two: Replace**
 - Replace unhealthy habits with healthier ones
 - Eat slower
 - Eat only when hungry
 - Plan well-balanced meals.
- **Stage Three: Reinforce**
 - The mental health and integrity portion of the guidance
 - Be patient with oneself, the change isn't instantaneous
 - Forgive oneself if missteps take place
 - Take it one day at a time towards progress





www.ChooseMyPlate.gov

- www.ChooseMyPlate.gov
- **Free online** digital planner
- Information on healthy eating
- Takes the individual's information and creates a ChooseMyPlate meal plan
- Generates a PDF of how many calories and what category intake amounts are needed with spots a person can fill in if they reached the target or not



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ChooseMyPlate Website



MyPlate Plan
Find your Healthy Eating Style

Everything you eat and drink matters. Find your healthy eating style that reflects your preferences, culture, traditions, and budget—and maintain it for a lifetime! The right mix can help you be healthier now and into the future. The key is choosing a variety of foods and beverages from each food group—and making sure that each choice is limited in saturated fat, sodium, and added sugars. Start with small changes—“MyWins”—to make healthier choices you can enjoy.

Food Group Amounts for 2,200 Calories a Day

Fruits	Vegetables	Grains	Protein	Dairy
2 cups	3 cups	7 ounces	6 ounces	3 cups
Focus on whole fruits	Vary your veggies	Make half your grains whole grains	Vary your protein routine	Move to low-fat or fat-free milk or yogurt
Focus on whole fruits that are fresh, frozen, canned, or dried.	Choose a variety of colorful fresh, frozen, and canned vegetables—make sure to include dark green, red, and orange choices.	Find whole-grain foods by reading the Nutrition Facts label and ingredients list.	Mix up your protein foods to include seafood, beans and peas, unsalted nuts and seeds, soy products, eggs, and lean meats and poultry.	Choose fat-free milk, yogurt, and soy beverages (soy milk) to cut back on your saturated fat.

Limit Drink and eat less sodium, saturated fat, and added sugars. Limit:

- Sodium to **2,300** milligrams a day.
- Saturated fat to **24** grams a day.
- Added sugars to **55** grams a day.

Be active your way: Children 6 to 17 years old should move **60 minutes** every day. Adults should be physically active at least **2 1/2 hours** per week.

MyPlate Plan

Write down the foods you ate today and track your daily MyPlate, MyWins!

Food group targets for a 2,200-calorie* pattern are:	Write your food choices for each food group	Did you reach your target?	
Fruits 2 cups 1 cup of fruits counts as • 1 cup raw or cooked fruit; or • 1/2 cup dried fruit; or • 1 cup 100% fruit juice.	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	Limit Limit: • Sodium to 2,300 milligrams a day. • Saturated fat to 24 grams a day. • Added sugars to 55 grams a day. <input type="checkbox"/> Y <input type="checkbox"/> N Activity Be active your way: Adults: • Be physically active at least 2 1/2 hours per week. Children 6 to 17 years old: • Move at least 60 minutes every day. <input type="checkbox"/> Y <input type="checkbox"/> N
Vegetables 3 cups 1 cup vegetables counts as • 1 cup raw or cooked vegetables; or • 2 cups leafy salad greens; or • 1 cup 100% vegetable juice.	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	
Grains 7 ounce equivalents 1 ounce of grains counts as • 1 slice bread; or • 1 ounce ready-to-eat cereal; or • 1/2 cup cooked rice, pasta, or cereal.	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	
Protein 6 ounce equivalents 1 ounce of protein counts as • 1 ounce lean meat, poultry, or seafood; or • 1 egg; or • 1 Tbsp peanut butter; or • 1/4 cup cooked beans or peas; or • 1/2 ounce nuts or seeds.	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	
Dairy 3 cups 1 cup of dairy counts as • 1 cup milk; or • 1 cup yogurt; or • 1 cup fortified soy beverage; or • 1 1/2 ounces natural cheese or 2 ounces processed cheese.	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	
MyWins Track your MyPlate, MyWins _____ _____			<small>* This 2,200-calorie pattern is only an estimate of your needs. Monitor your body weight and adjust your calories if needed.</small>

Center for Nutrition Policy and Promotion
January 2016
USDA is an equal opportunity provider and employer.

<https://www.choosemyplate.gov/resources/MyPlatePlan>



Discipline to Establish Patterns

- To establish a pattern in healthy/healthier eating, an individual must create a sense of discipline.
 - **Discipline** is learning to be obedient, training oneself to improve on a skill or regimen and stick to it
 - Research how to safely, effectively, and realistically achieve their desired goal.





Definite Dozen

To establish any change in behavior is heavily rooted in psychology. The Definite Dozen, developed by Pat Summitt, is a competitive principle mostly related to sports performance but can be utilized as productive steps to developing a disciplined eating habit pattern.

1. **Respect yourself and others-** an individual cannot have self-respect without giving respect to others.
2. **Take full responsibility-** be candid as possible in accountability, there are no shortcuts to success
3. **Develop and demonstrate loyalty-** be loyal to yourself and don't cheat. i.e. in your food journals or diaries. Seek out quality people to be around to support you

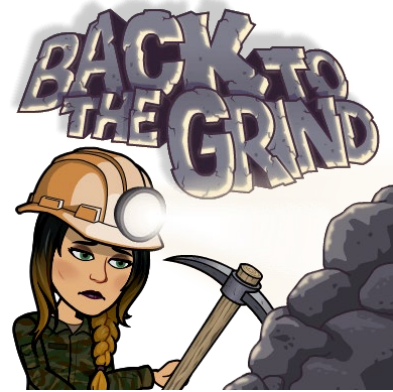




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Definite Dozen

4. **Learn to be a good communicator-** listen to input and give honest feedback when it comes to the topics of accolades, discipline, downfalls, struggles, and other accountable factors to a supportive person or group
5. **Discipline yourself, so no one has to-** if you have an accountability partner or group be truthful with yourself and them
6. **Make hard work your passion-** do the hard stuff first, plan your work & work your plan, do not eat dessert first.
7. **Don't just work hard, work smart-** Focus on your strengths to minimize your weaknesses
8. **Put the team before you-** in group success there is individual success. Your team can be family, friends, and champions for you in your life





Definite Dozen

9. **Make winning an attitude-** positive attitude is a choice
10. **Be a competitor-** be the best you that you can be daily. Win!
11. **Change is a must-** Push yourself to places you haven't' been before
12. **Handle success like you handle failure** – you can't always control what happens, but you can control how you handle it. Learn from failure. Continue to seek new goals





Reinforcement

- The *why* to institute positive eating patterns is following the principles of reinforcement
- The **principle of reinforcement** is rooted in rewards and punishments for doing an action correctly. If you achieve a goal, give yourself a (non-food) reward to celebrate. If you fail to achieve a goal, continue working until you eventually reach it. This is called *positive* and *negative reinforcement*.
- Punishment is related to reinforcement. You might punish yourself by denying a pleasurable event when you fail to reach your goal





CHECK ON UNDERSTANDING



1. Name the CDC three-stage slogan
2. Changing pattern of eating healthy is an easy task for everyone (T/F)
3. ChooseMyPlate is a costly resource for changing eating patterns (Yes/No)
4. What trait is key to establishing patterns in healthier eating?



NUTRITION FOR THE CADET: READING NUTRITION LABELS

Objectives:

Cadets will be able to

- Define each indicator found on labels and what information each of the 6 indicators holds

Essential Question:

How to read food labels correctly to plan accordingly



Reading Nutrition Labels

- Nutrition labels in common terms are **food labels**, nutritional information that appears in the food that is packaged that is regulated by the United States of Department of Agriculture (USDA).
 - **Servings** are the number of servings that the serving size is and how many servings per container.
 - **Calories** category breaks down how many calories the serving is and usually how many calories are from fat.
 - **Nutrients that should be limited** section are comprised of written in percentages of the daily value, these usually include total fat, saturated fat, trans-fat, cholesterol, and sodium percentages.
 - **Carbohydrate and protein** sections guided by the daily percentages values include fiber, sugars, proteins, and total carbohydrate quantities.
 - **Micronutrients** specify the percentages of vitamins and minerals.
 - Footnote gives the variance of the difference of percentages based on a 2,000 calorie and 2,500 calorie diets to try to give as much information and specification as possible



Reading Nutrition Labels

1. Serving Information



2. Calories



3. Nutrients



Nutrition Facts	
4 servings per container	
Serving size	1 cup (227g)
Amount per serving	
Calories	280
	% Daily Value*
Total Fat 9g	12%
Saturated Fat 4.5g	23%
<i>Trans</i> Fat 0g	
Cholesterol 35mg	12%
Sodium 850mg	37%
Total Carbohydrate 34g	12%
Dietary Fiber 4g	14%
Total Sugars 6g	
Includes 0g Added Sugars	0%
Protein 15g	
Vitamin D 0mcg	0%
Calcium 320mg	25%
Iron 1.6mg	8%
Potassium 510mg	10%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

4. Quick Guide to percent Daily Value (%DV)

- 5% or less is **low**
- 20% or more is **high**



Serving Information

- Number of Servings
- Size of servings

4 servings per container

Serving size 1 cup (227g)



Calories

- How many calories per serving
- Learn your estimated calorie requirements at:

<https://www.choosemyplate.gov/resources/MyPlatePlan>

Amount per serving

Calories

280



Nutrition

- Nutrients to get less of:
 - Saturated Fat
 - Sodium
 - Added Sugars
- Nutrients to get more of
 - Dietary Fiber
 - Vitamin D
 - Calcium
 - Iron
 - Potassium

Total Fat 9g	12%
Saturated Fat 4.5g	23%
<i>Trans Fat</i> 0g	
Cholesterol 35mg	12%
Sodium 850mg	37%
Total Carbohydrate 34g	12%
Dietary Fiber 4g	14%
Total Sugars 6g	
Includes 0g Added Sugars	0%
Protein 15g	
<hr/>	
Vitamin D 0mcg	0%
Calcium 320mg	25%
Iron 1.6mg	8%
Potassium 510mg	10%



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Percent Daily Value

- Percentage of the Daily Value for each nutrient in a serving of the food
- Expressed in grams, milligrams or micrograms
- For 'good' nutrients, you want a high %
- For 'bad' nutrients, you want a low %

	% Daily Value*
Total Fat 9g	12%
Saturated Fat 4.5g	23%
<i>Trans</i> Fat 0g	
Cholesterol 35mg	12%
Sodium 850mg	37%
Total Carbohydrate 34g	12%
Dietary Fiber 4g	14%
Total Sugars 6g	
Includes 0g Added Sugars	0%
Protein 15g	
Vitamin D 0mcg	0%
Calcium 320mg	25%
Iron 1.6mg	8%
Potassium 510mg	10%



CHECK ON UNDERSTANDING



1. If a bag of chips contains 3 servings and a serving is 160 calories, how many calories are you eating if you eat the whole bag?
2. Who regulates food labels?
3. Is saturated fat healthy for you? How about dietary fiber?
How can you tell from the nutrition label?



NUTRITION FOR THE CADET: FAD DIETS, SUPPLEMENTS AND PRESERVATIVES

Objectives:

Cadets will be able to

- Define Fad diets, compare them to healthy balanced diets
- Understand what dietary supplements are and what is in them
- Define and understand performance enhancing drugs such as anabolic steroids, peptide hormones, and diuretics; explain the health risks of all.

Essential Question:

What are the surface facts on fad diets, supplements and performance enhancing drugs?



Fad Diets

Fad Diets:

- Popular diets
- Not always rooted in scientific evidence
- Widespread in North America
- Purport to shed excess pounds, easily
- Dietary restrictions
- Often not nutritionally sound
- May cause health issues or long-term problems.





Fad Diets

Examples of Fad Diets:

- **South Beach Diet** a low-carb diet,
- **Gluten-Free** is a wheat, barley or rye free diet
- **Macrobiotic diet** which is rooted in the philosophy of Yin and Yang in Buddhist culture and is very low-calorie it poses a risk to starvation





Dietary Supplements

Dietary supplements are manufactured products intended to supplement the diet when taken by mouth.

- Supplements include vitamins, minerals, amino acids, botanical products, and herbs, as well as additives such as enzymes, glandulars, organ tissues, and metabolics.
- These types of substances can be pills, capsules, tablets, powders, and liquids
- they are labeled as a food type/supplement, and cannot be labeled as drugs
- they are regulated under the Dietary Supplement Health and Education Act (DSHE) of 1994.
- There are literally thousands of dietary supplements for various reasons: to build stronger bones, regulate blood sugar, and maintain bowel reliability, etc.



Performance Enhancing Drugs

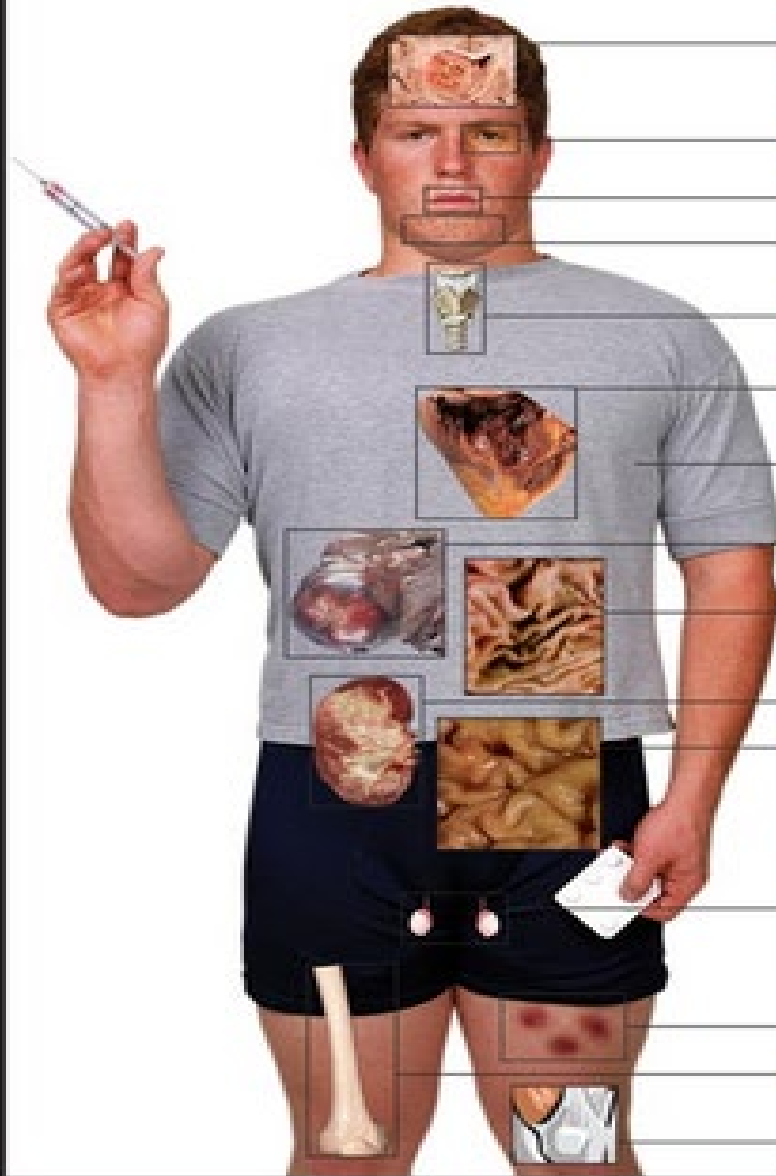
Performance enhancing drugs sometimes sold under the guise of food supplements, but they can have serious side effects

- Mostly used to improve physical appearance
- **Anabolic Steroids** have a slew of health complications including liver and kidney problems, enlarged heart, high blood pressure, risk of stroke and heart attack, hair loss, acne, and mood swings and aggression
- **Peptide Hormones/ Growth Hormones (GH)**, the side effect are serious and are long term or irreversible, such as **myocardial ischemia** (artery disease, plaque buildup in the artery), **myocardial infarction** (complete blockage in the artery, heart attack) and **angina** (chest pain) due to use.
- **Diuretics** will cause a suppressed immune system, causes thermal regulation to be out of balance, bone loss, electrolyte imbalance, and fatigue. Can lead to malnutrition, stunted growth, and hyperthermia.



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STEREROIDS



HARMFUL EFFECTS

BRAIN CANCER
DEPRESSION
VIOLENT
BEHAVIOR

YELLOWING OF
EYES AND SKIN

BAD
BREATH

SEVERE
ACNE

DEEPENING OF
VOICE (WOMEN)

HEART ATTACK
STROKE

DEVELOPMENT
OF BREASTS

BREAST
REDUCTION
IN WOMEN

LIVER TUMORS
LIVER CANCER

NAUSEA &
VOMITING

KIDNEY
DISEASE

ABDOMINAL PAIN
DIARRHEA

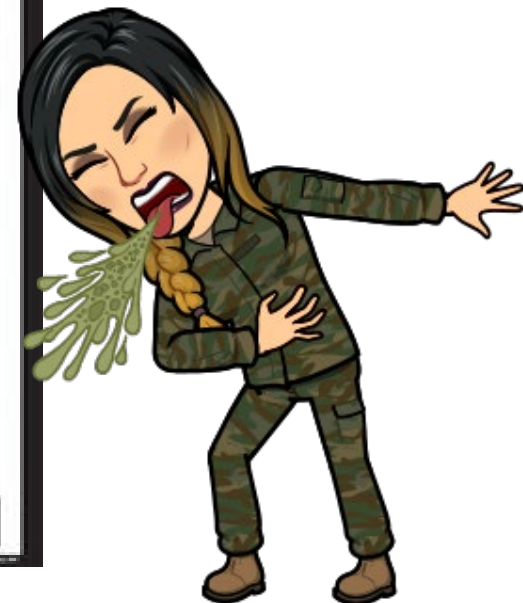
IN MEN:
TESTICULAR
SHRINKAGE
IMPOTENCE

IN WOMEN:
IRREGULAR
MENSTRUAL
CYCLES

BRUISING
INFECTIONS
(FROM INJECTIONS)

STUNTED
GROWTH

WEAK
TENDONS

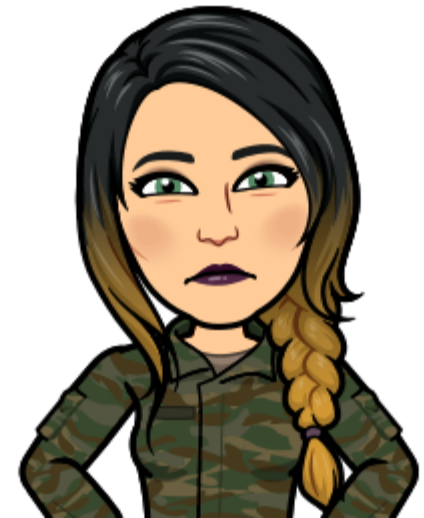




Peptide Hormones

- Peptides include the hormone oxytocin, glutathione (stimulates tissue growth), melittin (honeybee venom), the pancreatic hormone insulin, and glucagon (a hyperglycemic factor).
- Peptides build muscle mass and reduce body fat
- Body builders use them to bulk up. They don't have as many side-effects as anabolic steroids
- They are illegal without a doctor's prescription, but widely abused

**Go see
a doctor.**





Preservatives

- **Preservatives** are non-nutrients
- May be harmful: toxins, cholesterols, and additives that are dyed
- Can be beneficial: antioxidants
- Manufacturers of foods have to add preservatives to food to give them a shelf life and prevent items from spoiling too quickly
- Often-used preservatives are sodium (salt) and sugars



CHECK ON UNDERSTANDING



1. Fad diets are highly effective and safe (T/F)
2. Anabolic steroids are usually used to improve _____.
3. Diet pills, laxatives, and enemas are all d_____.



NUTRITION FOR THE CADET: NUTRITION FOR PT TESTS, COMPETITIONS, AND FITNESS TESTS

Objectives:

Cadets will be able to

- Understand Carbo-loading and High Protein diets, explain their effectiveness or ineffectiveness.

Essential Question:

How do you select the correct nutrition plan for the correct exercise plan in order to improve performance in fitness tests?



Nutrition For PT Tests, Competitions, And Fitness Tests

- **Glycogen loading or Carbohydrate loading:**
 - increase carbohydrate intake to store the energy in the body before a prolonged, endurance, or high-performance activity. This practice is widely used by distance runners, cyclists, and for exercises that take several hours
- **Protein diets** do not ultimately increase performance or endurance
- **Fat-loading** is the same principle of carbo-loading, but with fat substances. It doesn't work.





CHECK ON UNDERSTANDING



1. Carbohydrate loading is also known as _____.
2. High Protein diets are more beneficial than carbo-loading before exercise. (T/F)
3. Explain why carbohydrate loading works.



NUTRITION FOR THE CADET: HYDRATION

Objectives:

Cadets will be able to

- Understand the anatomical importance of factors relating to hydration, dehydration, and hyponatremia
- Explain the similarities and differences between heat stroke and heat exhaustion

Essential Question:

In what ways is hydration a basic necessity for health and function of the body?



Hydration

- **Antidiuretic hormone (ADH)**, also known as **arginine vasopressin**, is a hormone secreted from the pituitary glands in the brain
- ADH function is to regulate water and electrolyte balance in the blood by controlling how much water is excreted in urine
- Hydration is completely controlled by ADH, ensuring the blood is not saturated or dehydrated with water. It also conserves water.
- It is important to maintain hydration levels but when there is an endurance exercise, activity, or high-performance challenge an individual should prepare for this by regularly drinking water days before, during, and after the event





Hydration

- **Hydration** is the balance of water fluids in the blood and body
- **Dehydration** is water loss in the body or a harmful reduction in the amount of water in the body
- The output of water through basic body functions is completed through evaporation from the skin, respiratory tract, kidneys, and large intestines
- During exercise, the amount of water being expelled is determined by environmental temperature, body size, and metabolic rate
- **Hyponatremia** is when the blood sodium levels drop below normal ranges of 136 to 143 millimoles per liter





Heat Exhaustion

I'm
Pooped.



- Lack of replenishing water to balance the body can lead to **heat exhaustion**
- Symptoms are fatigue and weakness, excessive sweating, nausea or vomiting, a rapid, weak pulse, and heat cramps
- Treatment is to get to a cooler place, drink water if fully conscious, take a cool shower or use a cool compress



Heat Stroke

- **Heatstroke** is a very serious medical condition
- The body completely fails to maintain body temperature
- Symptoms are high fever (>103 degrees), headache, cessation of sweating, nausea or vomiting, a rapid, strong pulse, confusion, unconsciousness. Can lead to death.
- Treatment: Call 911/seek medical care, reduce body temperature any way you can





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HEAT EXHAUSTION



Cool, Pale,
Clammy Palms



Rapid, Weak
Pulse

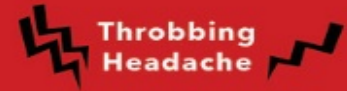
Muscle
Cramps



TREATMENT OPTIONS

Get to a cooler, air conditioned area
Drink water if fully conscious
take a cool shower
use a cool Compress

HEAT STROKE



Sweating
Stops



Temperature
Over 103 deg.



Rapid, Strong
Pulse

Loss of
Consciousness



CALL 9-1-1 Immediately

Reduce Temperature Until
Emergency Services Arrive

STAY SAFE
DRINK WATER
TAKE A BREAK
AVOID PEAK TEMPS
WORK IN TEAMS
WEAR SUNSCREEN



CHECK ON UNDERSTANDING



1. Explain the differences between Heat Exhaustion and Heatstroke.
2. What does ADH stand for?
3. Define dehydration.