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Prevention and Treatment of Athletic Injuries

Westfield High School
Houston, Texas

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Chapter 5

- Nutritional Considerations

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Nutrition Basics

- Six classes of nutrients:
 - Carbohydrates
 - Fats
 - Proteins
 - Vitamins
 - Minerals
 - Water

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Nutritional Considerations



- Vitamin Supplementation
 - More the better?
 - 100 RDA then take 10 Time that = 10 Times better athlete
 - Adverse effects if taken too much
 - A normal diet will supply all the nutrition you need

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Mineral Supplementation



- Calcium Deficiency:
 - if calcium intake is too low the body can take calcium from it's bones and teeth
 - a main cause of osteoporosis
 - Physical activity = retention of calcium in bones

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Mineral Supplementation



- Iron Deficiency
 - also known as anemia
 - Iron is needed to properly form hemoglobin
 - Cells can not get oxygen as well with anemia

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Mineral Supplementation



- Protein Supplementation
 - Often taken by athletes that are wanting to build muscle
 - should consume 1 to 1.5 grams of extra protein per kilogram of body weight
 - Eating a variety of foods, especially protein rich foods can easily meet these demands

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Mineral Supplementation



- Creatine Supplementation
 - Natural organic compound
 - also obtained by eating meat and fish
 - allows on the ability to increase intensity of workout
 - decreases recovery time between workouts
 - MUST increase water to offset cramping

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Other forms of Supplementation and Drugs During Exercise



- Sugars - beneficial if ingested before activity.
 - Each athlete is different - tolerance - bodily reactions

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Other forms of
Supplementation and Drugs 
During Exercise

- Caffeine: central nervous system stimulant
 - coffee - tea - carbonated drinks
 - increases alertness
 - increase fat usage during exercise = decrease depletion of glycogen stores
 - Be careful with dehydration

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Other forms of
Supplementation and Drugs 
During Exercise

- Alcohol
 - Diuretic!!!
 - Decreased bodily functions
 - depressant

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Other forms of
Supplementation and Drugs 
During Exercise

- Steroids
 - Severe side effects
 - gain not worth the cost
 - illegal in NCAA
 - Take notes from video

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What is the Better Pre-Game Meal? 

- Eggs
- Steak
- Baked Potato
- Sour Cream / Butter
- Bread
- Green Beans
- Iced Tea


- Grilled Chicken
- Dry Baked Potato
- Green Beans
- Bread
- Water
- Gatorade

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Pre Game Meal 

- Keep away from dairy products
- Keep away from caffeine
- Increase H2O intake, Electrolyte drink
- Non greasy foods
- Carbohydrate rich foods
- THINK more of the day before!!

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Body Composition 

- Percent of Lean body mass
- Avg.. College female = 20% to 25%
- Avg.. College Male = 12% to 15%
- Should not go below 3% for male and 12 % in females. WHY?
- Obesity implies excessive amount of body fat.

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Body Composition




- Obesity had been declared a major risk factor to heart attacks, adding it to a list that includes smoking, high blood pressure, high cholesterol and sedentary lifestyle.

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Body Composition




- Measuring body composition
 - hydrostatic or underwater weighing
 - measurement of electrical impedance
 - skinfold thickness measurements

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Body Composition




- Skinfold Measurement Sites:
 - Women
 - Triceps
 - Iliac Crest
 - Thigh

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Body Composition




- Skinfold Measurements Sites
 - Men
 - Thigh
 - Chest
 - Abdominal

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Methods of Weight Loss and Gain




- Basal Metabolic Rate
- Calories consumed
- Calories Burned
- The only way to maintain weight and maintain good health

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Eating Disorders




- Bulimia
 - Eating thousands of calories and then getting rid of them as fast as possible
 - induced vomiting
 - laxatives
 - teeth
 - liver damage
 - disrupt heart rhythm

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Eating Disorders




- Anorexia Nervosa
 - Distorted body image, major concern w/ weight
 - thinks they are fat, although already too thin
 - denial of hunger
 - abnormal amounts of exercise
 - highly secretive
 - referral to psychiatric help

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BEGIN TO STUDY



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