

Nutrition for Individual Needs

Chapter 6
Lesson 3

Nutrient Needs

- Nutrient & energy needs vary in relation to gender, activity level, & stage of life
- Athletes need same nutrients, just need more calories from nutrient-dense foods to maintain weight & energy

Athletes

- Water is the best source of fluid to replenish fluid balance
- Eat 3 to 4 hours before event so food can get through the stomach – choose meal high in carbohydrates & low in fat & protein
- Carbohydrates are stored in the body in the form of glycogen
- Carbohydrate loading (CC runners) – storing extra glycogen in the muscle before strenuous exercise – high carb diet several days ahead stores glycogen in the muscles & practice light for 2 days before event so glycogen is not depleted

Hydration

- Lose fluids through perspiration, breathing, and waste elimination
- Must be replaced to avoid dehydration and heatstroke
 - Can lead to imbalance of electrolytes, minerals that help maintain the body's fluid balance – sodium, chloride, & potassium
 - Must take in as much water & electrolytes as you lose

How much?

- Drink 16 – 24oz two to three hours before a heavy workout
- Drink 6 – 12 oz every 15 to 20 minutes during heavy workouts
- Drink 16 oz of fluid for every pound of body weight lost through sweat → rehydration, restoring lost body fluids

Anabolic Steroids

- Use of steroids or the use of other bodybuilding drugs is not healthy
- Have dangerous side effects ranging from acne and breast development in men to heart attacks and liver cancer
- Use is illegal

Vegetarianism

- A person who eats mostly or only plant foods
- Can be to religious or cultural reasons
- Can be to concern for environment or how food animals are raised or slaughtered
- Or merely for health reasons
- Cut out saturated fats & cholesterol that can reduce risk of cardiovascular disease & some cancers

Vegetarianism

- Lacto-ovo vegetarianism – eat dairy foods (lacto) and eggs (ovo) in addition to plant source foods
- Lacto vegetarianism – eat dairy foods in addition to plant source foods
- Ovo vegetarianism – eat eggs & plant source foods – may use soy milk & soy cheese instead of dairy foods
- Vegan – plant source foods only – fortified soy milk & soy cheese instead of dairy foods

Vegetarianism

- **Must eat a variety of incomplete proteins to attain complete protein over the course of the day**
- **Must eat adequate & various nutrient-dense foods to get vitamins & minerals normally found in meats**

Dietary Supplements

- **A non-food form of one or more nutrients**
- **May contain vitamins, minerals, protein, or herbs**
- **Pills, capsules, powders, & liquids**
- **First must try to get nutrients by eating healthy**
- **A health care provider may recommend if have a specific lifestyle or medical condition**

Dietary Supplements

- **Some situations that benefit from NS:**
 - **Pregnant or nursing**
 - **Illnesses that affect appetite & nutrient absorption**
 - **Iron for women who lost blood during menstruating**
 - **Women during menopause to prevent osteoporosis → calcium**
 - **Elderly adults that do not eat correctly**
 - **If medications interfere with nutrient absorption**

Risks of Dietary Supplements

- **Megadoses – very large amounts that are an unnecessary cost & danger**
 - **Excess amounts of fat-soluble vitamins (A,D,E, & K) can be stored in the body & become toxic**
 - **Excess amounts of water-soluble vitamins can stress the kidneys**

Risks of Dietary Supplements

- **Herbal supplement – chemical substance from plants that may be sold as a dietary supplement**
 - **Often claim to be “natural”**
 - Are not based on conclusive scientific evidence
 - Labeling is not regulated
 - If something is found to be dangerous then the government bans it
 - Ephedra was banned

Health Foods

- **“health food” has no legal definition – can be a scam**
- **Common sold health foods:**
 - Brewer’s yeast
 - Lecithin
 - Honey
 - Alkaline salts
 - **Organic foods→all foods are organic**
 - some foods are organically grown→no pesticides or fertilizers

Nutrition Throughout the Life Span

- **Children & teens need more calories than less active adults**
- **Nutrition for Infants & Children**
 - **Breastfeeding is best**
 - **If unable to breastfeed → fortified formula provides nutrients**
 - **Baby is eventually introduced to solid foods**
 - **First cereal grains, then vegetables & fruits, then meats/poultry**

Nutrition Throughout the Life Span

- **After a child’s first birthday, whole milk is introduced**
 - **Fats in whole milk provide essential nutrients for child’s nervous system**
- **Between 2nd & 5th birthday**
 - **Whole milk should gradually be replaced with lowfat or nonfat milk**
 - Still meets Vitamin D & calcium needs
 - Reduces fat intake

Nutrition for Older Adults

- **Should still follow the Dietary Guidelines for Americans but may be advised to follow a special diet due to a specific health problem**
 - **May need to take a dietary supplement**
 - Medications may interfere with nutrient absorption
 - May need calcium or vitamin D for bone density
 - **May need to limit sugar – late onset diabetes**

Nutrition During Pregnancy

- **Developing fetus depends on mother for needs**
- **Avoid harmful substances → tobacco, alcohol, & other drugs**
- **Important to take a multivitamin & mineral supplement**
- **Increase intake in foods containing folate, iron, calcium**

Nutrition During Pregnancy

- **Folate (folic acid)**
 - **Is a B vitamin**
 - **can prevent spinal defects**
 - **Fruits, dark green leafy vegetables, & fortified grain products**
- **Iron**
 - **Need this mineral due to increased blood volume**
 - **Helps build and renew hemoglobin (O₂ carrying substance)**
 - **Meat, poultry, fish, dark green leafy vegetables, and enriched grain products**

Nutrition During Pregnancy

- **Calcium**
 - **Helps build the bones & teeth**
 - **Replaces calcium taken from the mother's bones**
 - **Dairy products, dark green leafy vegetables, canned fish with edible bones, and calcium-fortified cereals and juices**

