

## **Multivitamin/Mineral Supplements**

### **Objective:**

At the end of this lesson, the student will be able to determine whether he or she needs to take a multivitamin/mineral supplement and to describe how to choose a supplement.

### **Tools:**

Bottle of generic multivitamin/mineral supplement

Clear plastic cup

Household vinegar

Handout: Multivitamin/Mineral Supplement Facts

Handout: Do You Need a Multivitamin/Mineral Supplement?

(<http://www.eatright.org/Public/NutritionInformation/9211835.cfm>)

### **Lesson:**

The best way to get the vitamins and minerals you need each day is from the foods you eat. In addition to vitamins and minerals, foods provide energy and other substances that are beneficial to health. It is not possible to pack these beneficial substances from foods into supplements.

There are some cases, however, when taking a supplement will be a good idea. And, it won't hurt most people to take a multivitamin/mineral supplement that supplies 100 percent of the Recommended Dietary Allowances (RDAs).

Discuss the reasons supplements may be needed using the "Multivitamin/Mineral Supplement Facts" Handout:

- If you skip meals, are on a fad diet, or eat fewer than the minimum servings from each of the food groups recommended for you by MyPyramid, you might benefit from a multivitamin/mineral supplement.
- If you are a vegan, that is you eat absolutely no meat, dairy, or other animal products, you might benefit from vitamin B<sub>12</sub> and/or calcium supplements.
- If you avoid specific types of food because of food allergies, food intolerances, or dislikes, you might benefit from supplements of specific nutrients these foods provide.

- If you are a woman who capable of becoming pregnant, you will benefit from a folate supplement. {In fact, it is a good idea for women who may become pregnant to take a multivitamin/mineral with 100% of the RDA for folate. This will protect against having a baby with neural tube defects.}

Continue using the handout. Also, use the multivitamin/mineral supplement, cup, & vinegar to explain and demonstrate the following:

- It is important to choose a supplement that is of good quality, but it is not necessary to buy an expensive brand.
- When choosing a multivitamin/mineral supplement read the label to make sure it supplies 50-150% of the Daily Values for each nutrient.
- Look for USP on the label. This is considered a seal of approval for supplements. USP (U.S. Pharmacopeia) is a nonprofit testing organization that tests vitamin and mineral supplements for strength, quality, purity, and dissolution. It has been operating since 1820.
- To test the absorbability of a supplement, place it in a container (cup) and cover it with household vinegar. Stir the solution every few minutes, if desired. The pill should disintegrate, and may completely dissolve, within one hour. If it does not disintegrate in the vinegar, it may not disintegrate in the stomach, meaning it will pass through undigested. {This test is only a rough approximation of what happens in the stomach.}

Continue using the handout to discuss cautions about supplements:

- Think about supplements as though they are medicine. It is important not to take too many supplements. It is easier to ingest toxic amounts of nutrients from supplements than it is from food, and taking too many high-dose supplements can cause the nutrients to interfere with one another.
- Taking supplements can give people a false sense of security. They may think that the supplements will cover their nutrient needs and that they do not have to make good food choices. In addition, they may think that supplements will cure their medical illnesses.
- You do not need to take supplements because the food supply is inadequate; the soil in which food is grown and the food supply provide adequate nutrients. Supplements will not provide energy, enhance athletic performance, build lean tissue, reduce stress, or prevent diseases.

### Evaluation:

After the lesson, the students will complete the quiz "Do You Need a Multivitamin/ Mineral Supplement?" Students will write a short essay that (1) discusses whether or not they think they need to take a supplement, (2) cites their quiz results and lesson discussion to support their assessment, and (3) explains how to choose a supplement.

### References:

American Dietetic Association - Do You Need a Multivitamin/Mineral Supplement?

[http://www.eatright.org/Public/NutritionInformation/92\\_11835.cfm](http://www.eatright.org/Public/NutritionInformation/92_11835.cfm)

Bauer J. (2003). *The Complete Idiot's Guide to Total Nutrition, 3<sup>rd</sup> edition*. Alpha Books: Indianapolis, IN.

Whitney E and Rolfes S. (2005). *Understanding Nutrition, 10<sup>th</sup> edition*. Thomson/ Wadsworth: Belmont, CA.

*This lesson was developed by Rebecca Kelly, PhD, RD, LD. Assistant Professor of Culinary Arts at Mississippi University for Women. July 26, 2005.*

### **Who Are The People That Need Supplements?**

- People who do not eat enough (< 1200 calories/day) need a multivitamin/mineral supplement
- People who eat all-plant diets (vegans) need vitamin B<sub>12</sub> and calcium
- People with lactose intolerance, milk allergies, or not enough dairy need calcium
- People with known nutrient deficiencies need those specific nutrients
- Infants need iron & fluoride
- Women of capable of becoming pregnant need folate
- Women who bleed excessively during menstruation need iron
- Pregnant women need iron
- Elderly people need vitamin D

### **How To Choose Supplements**

- First, improve the diet by making more nutritious food choices
- If nutrients needs cannot be met from the diet, take a

**multivitamin/mineral supplement with 50-150% of the Daily Values for each nutrient**

- **Look for USP, which means US Pharmacopeia, on the label**
- **USP sets standards for quality, strength, and purity**
- **A supplement should completely disintegrate within 30-45 minutes**
- **Local or store brands may be just as good as nationally advertised brands.**

### **Reasons People Need To Be Careful About Supplements**

- **Risk of toxicity**
  - **It is easier to get too much of a nutrient from supplements compared to nutrients in food**
  - **Flavored chewable supplements entice children to eat supplements like candy**
- **People may think a supplement will treat their illnesses instead of getting medical help**
- **People eat poor diets because they believe supplements will cover their nutrient needs**
- **Nutrients in pure concentrated forms are more likely to interfere with absorption of other nutrients compared to nutrients in foods**

### **Claims About Supplements That Are Not True**

- **The food supply and soil in which food is grown do not contain enough nutrients**
- **Supplements can provide energy**
- **Supplements can enhance athletic performance or build lean tissue**
- **Supplements will help one to cope with stress**
- **Supplements can prevent, treat, or cure conditions ranging from the common cold to cancer**