

# NUTRITIONAL NEEDS OF INDIVIDUALS AND FAMILIES ACROSS THE LIFESPAN

## Nutrition Issues and Adolescents

### Lesson Grade Levels: 9-12

**Concept:** Sources of Nutrition Information

**Comprehensive Standard:** 6.2 Evaluate the nutritional needs of individual and families in relation to health and wellness across the lifespan

**Technical Standard:** 6.2.4 Evaluate sources of food and nutrition information that contribute to wellness

#### LESSON COMPETENCIES:

- Identify criteria for determining reliable sources of nutrition and health information
- Distinguish between valid sources of nutrition information and nutrition misinformation

#### Anticipated Behavioral Outcomes:

- Students use reliable sources of nutrition and health information based on sound scientific research.

#### Resources Needed:

- Copy of *Believe It Or Not* transparency
- Copies of all handouts for students
- News items, brochures, magazine articles, etc. providing nutrition/health information – enough for one for each student
- Internet access

#### References for teachers and students:

**UPDATED** - The American Dietetic Association (ADA) ([www.eatright.org/](http://www.eatright.org/)) position paper, *Food and Nutrition Misinformation* (2006), (<http://www.eatright.org/ada/files/MIS.pdf>) contains the most recent position of the ADA on nutrition misinformation including how to recognize “junk science”. (This is a .pdf file.)

A fact sheet, “Nutrition on the Internet”, that discusses guidelines for evaluating nutrition websites, is available from the *Nutrition Information Resource Center* at *Clemson University*; this site also has links to many other federal nutrition sites. [http://www.clemson.edu/nutriweb/search\\_results.php?keywords=Internet&slink=1&sonline=1&slib=1](http://www.clemson.edu/nutriweb/search_results.php?keywords=Internet&slink=1&sonline=1&slib=1)

The *Quackwatch* website has a wide variety of information at [www.quackwatch.com](http://www.quackwatch.com). Another web site which offers links to nutrition information is *NutriWatch, Your Guide to Sensible Nutrition* at [www.nutriwatch.org](http://www.nutriwatch.org)

**NEW** The *Food and Drug Administration* ([www.fda.gov](http://www.fda.gov)) has a webpage to help students working on research projects and reports related to health issues to help them locate and use reliable and valid information. It contains links to many government

agencies that provide health and nutrition information (<http://vm.cfsan.fda.gov/~comm/students.html>). The site also has links to federal sources of information on nutrition and other health related areas.

**NEW** *Purdue University* has a series of seven lessons called “Understanding Nutrition Information” (<http://web.ics.purdue.edu/~eversb/understanding/index.html>). The lessons are interactive with video clips of nutrition claims and ads.

NEW – The *International Food Information Council* ([www.ific.org/](http://www.ific.org/)) Nov/Dec, 2001 article, “Beyond the Headlines: What Consumers Need to Know About Nutrition” <http://www.ific.org/foodinsight/2001/nd/nutrnewsfi601.cfm> , is an “easy read” and provides sound background information.

### **Background Information - Updated**

Food and nutrition misinformation can have harmful effects on the health and economic status of consumers. Consumers must be able to discriminate between credible sources of nutrition information and nutrition quackery.

Accurate nutrition information is the result of application of the scientific method that has survived replication and peer review. Nutrition misinformation consists of erroneous information, a misinterpretation of food and nutrition science. The danger of misinformation is that it may be harmful to health or be used to fuel food fads and health fraud (from the ADA position statement on *Food and Nutrition Misinformation*, <http://www.eatright.org/ada/files/MIS.pdf> 2006).

According to the *American Dietetic Association's* ([www.eatright.org/](http://www.eatright.org/)) *Nutrition and You: Trends 2002* survey, consumers receive nutrition information from a variety of sources. The media are consumers' primary source of nutrition information, with magazines (47%), television (34%), books (29%) and newspapers (28%) cited as the top media information sources. Other sources identified were doctors (31%), the Internet (21%), product labels (19%) and family & friends (18%). Dietitians (1%) and nutritionists (1%) were not frequently mentioned.

The Internet is becoming a popular source of nutrition and health information. According to a Harris Interactive poll, an estimated 100 million consumers sought health information on the Internet in the year 2000, up from 70 million in 1999 (*Wall Street Journal*, 12/29/00). Adolescents frequently use the Internet for health and nutrition information. Researchers in New York State in a study of 412 ethnically diverse 10<sup>th</sup> graders found that 96% of these adolescents used the Internet and 49% used it to obtain health information (Borzekowski, D.L. and Rikert, V. (2001). *Adolescent cyber surfing for health information: A new resource that crosses barriers. Archive of Pediatric Adolescent Medicine*, 155, 813-17).

### **Terms to know** (Definitions from Quackwatch website):

**Quackery** – the promotion of an unproven product or service. The operant word is promotion rather than intent.

**Quack** – generally defined as a pretender to special health-related skills

**Fraud** – an intentional perversion of truth for gain

**Unscientific** – contrary to scientific evidence

**Nonscientific** – not based on the scientific approach

**Faddism** – a generic term used to describe nutrition nonsense. Food faddists are characterized by exaggerated beliefs in the role of diet and nutrition in health and disease.

The *Food and Nutrition Science Alliance (FANSA)* (<http://www.ift.org/cms/?pid=1000610>) made up of the *American Dietetic Association*, *American Society for Clinical Nutrition*, *American Society for Nutritional Sciences*, *American College of Nutrition*, *American Society for Parenteral and Enteral Nutrition* and the *Institute of Food Technologists* has developed a list of ten “red flags” that signal bad nutrition advice. They are:

1. Recommendations that promise a quick fix. Strong warnings of the dangers of a single product or regimen
2. Claims that sound too good to be true
3. Simplistic conclusions drawn from a complex study
4. Ideas based on a single study
5. Dramatic statements that are not supported by reputable scientific organizations
6. Lists of “good” and “bad” foods
7. Recommendations made to help sell a product
8. Recommendations based on studies without a peer review
9. Recommendations from studies that ignore differences among individuals or groups

### **Learning Activities:**

#### **Middle School Level**

- Use the [Believe It or Not](#) transparency/handout to introduce the concept of nutrition misinformation. Ask students if they believe the headline or not. Discuss the following:
  - What words make you doubt the headline?
  - What further information do you need to determine if the claim is credible or not?
  - What do the abbreviations stand for? Would knowing what the abbreviations stand for be helpful in determining if the information is accurate?
  - Where do consumers see these types of headlines or claims? What sources of nutrition information can be trusted?
- Share the [Ten Red Flags That Signal Bad Nutrition Advice](#). Ask students to use this list to evaluate the claims on the [Believe It Or Not](#) handout. Define quackery for students; then ask them to determine if any of the headlines on the handout would likely be considered quackery and discuss why.

**NOTE TO TEACHER:** The following headlines are factual and were taken from press releases at the *Food and Drug Administration* and the *National Institute of Health*. The complete articles can be found at the following websites:

- “Issues Health Advisory on Puffer Fish from Florida”  
<http://www.fda.gov/bbs/topics/NEWS/2002/NEW00803.html>
- “Weight Loss Device Recalled”  
<http://www.fda.gov/bbs/topics/NEWS/NEW00646.html>
- “NIH Study Suggests Women May Need More Vitamin C”  
<http://www.nih.gov/news/pr/aug2001/niddk-13.htm>

### High School Level

- Share headlines and news items from a variety of nutrition information sources including newspapers, magazines, brochures, etc. Ask students to quickly review the item they received. Discuss the following:
  - Do you think the information presented is accurate? Why or why not?
  - Who is the author of the article? What are their credentials?
  - Are scientific studies cited? If so, what information is provided about the study?
  - Are “nutrition experts” or “medical professionals” quoted? If so, what qualifies them as a “nutrition expert” or “medical professional”?
  - How can consumers know if nutrition/health information is accurate?
- **NEW** Read the *International Food Information Council* ([www.ific.org/](http://www.ific.org/)) Nov/Dec, 2001 article, “Beyond the Headlines: What Consumers Need to Know About Nutrition”, (<http://www.ific.org/foodinsight/2001/nd/nutrnewsfi601.cfm>) **OR** the fact sheet, “Finding Reliable Nutrition Information on the Web” (<http://www.ext.colostate.edu/pubs/columnnnn/nn040818e.html>) from *Colorado State University Cooperative Extension Service*. After reading the article, ask students to read the articles beyond the headlines and identify issues that should be of concern to informed consumers.
- Complete the activity “*Trust Me – I’ve Got Credentials*”  
**NOTE TO TEACHER:** In SD, someone who identifies themselves as a nutritionist must be licensed so most are registered dietitians. This activity could be expanded to include a discussion of careers in nutrition such as a registered dietitian. The ADA website (see reference list) has a section on careers. Check on qualifications for the state of SD by contacting the SD *Department of Health* for the most current information
- **NEW sites** Using the criteria for website evaluation on the [Web Site Evaluation Form](#), ask students to compare information on dieting at two of the following sites:  
  
<http://www.a-personaldietitian.com/>  
  
[www.freedietlinks.com/faddiets.htm](http://www.freedietlinks.com/faddiets.htm)

[http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition\\_350\\_ENU\\_HTML.htm](http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_350_ENU_HTML.htm) (scroll down to the Fact Sheets – Popular Diets Reviewed, Parts 1 and 2)

[www.webterrace.com/fad/home.htm](http://www.webterrace.com/fad/home.htm)

**\*NEW** The *New York Times* has an archive of lesson plans with related news articles. Check out these lesson plans for use in this area:

**Good for You?** <http://www.nytimes.com/learning/teachers/lessons/20051101tuesday.html>  
**Investigating the Health Benefits of Chocolate**

In this lesson, students share opinions about nutrition. They then compare the nutritional values of a snack product claiming health benefits with a candy product. Learning is synthesized by reflecting on the responsibility of companies, individuals and the government in determining whether a product lives up to its claims. (November 1, 2005)

**Is That A Fact?**

<http://www.nytimes.com/learning/teachers/lessons/20050503tuesday.html>

**Finding Evidence to Support or Refute Commonly-Accepted Scientific Claims**

In this lesson, students investigate commonly-accepted scientific claims and gather evidence that supports or refutes them. They synthesize their learning by writing their own "Really?" columns modeled after those found in The New York Times weekly Science Times section. (May 3, 2005)

**NOTE TO TEACHER:** Be sure to visit these sites first to familiarize yourself with them. You may want to add additional sites of your choice relating to other nutrition issues such as eating disorders, supplements, etc.

## Believe It or Not?

- 1. Lose 10 Pounds in One Week with the New “Wonder Diet”*
- 2. Eating Kumquats Daily Helps Prevent the Common Cold*
- 3. FDA Issues Health Advisory on Puffer Fish from Florida*
- 4. Amazing New Supplement Boosts Athletic Performance*
- 5. NIH Study Suggests Women May Need More Vitamin C*
- 6. Grapefruit Has Negative Calories*
- 7. Doctor Identifies New Miracle Drug to Control Diabetes*
- 8. Eating Okra May Postpone Signs of Aging*

## Believe It or Not? Answer Key

- 1. *Lose 10 Pounds in One Week with the New “Wonder Diet” – Not Accurate***
- 2. *Eating Kumquats Daily Helps Prevent the Common Cold –Not Accurate***
- 3. *FDA Issues Health Advisory on Puffer Fish from Florida - Accurate***
- 4. *Amazing New Supplement Boosts Athletic Performance - Not Accurate***
- 5. *NIH Study Suggests Women May Need More Vitamin C - Accurate***
- 6. *Grapefruit Has Negative Calories – Not Accurate***
- 7. *Doctor Identifies New Miracle Drug to Control Diabetes – Not Accurate***
- 8. *Eating Okra May Postpone Signs of Aging – Not Accurate***



## **Ten Red Flags That Signal Bad Nutrition Advice\***

1. Recommendations that promise a quick fix
2. Strong warnings of the dangers of a single product or regimen
3. Claims that sound too good to be true
4. Simplistic conclusions drawn from a complex study
5. Ideas based on a single study
6. Dramatic statements that are not supported by reputable scientific organizations
7. Lists of “good” and “bad” foods
8. Recommendations made to help sell a product
9. Recommendations based on studies published without a peer review
10. Recommendations from studies that ignore differences among individuals or groups

\* The list of “Red Flags” was developed by the Food and Nutrition Science Alliance, FANSA, a partnership of four professional scientific societies: American Dietetic Association, American Society for Clinical Nutrition, American Society for Nutritional Sciences and the Institute of Food Technologists; it is guide for all health related sources of information.

## “Trust Me - I’ve Got Credentials” Nutrition Credentials

Name \_\_\_\_\_

**Directions:** Many people claim to be qualified to provide sound nutritional advice. However, some of them may have “questionable” credentials or no credentials at all. Using the article “Where To Get Professional Nutrition Advice” at [www.quackwatch.com/04ConsumerEducation/nutritionist.html](http://www.quackwatch.com/04ConsumerEducation/nutritionist.html) as a reference, determine which of the following individuals would be qualified to provide sound nutrition advice. If the individual can be a trusted source of nutrition information, state the reason(s) why.

<b>Individual</b>	<b>Trust them? or Beware?</b>	<b>Why? Or why not? Discuss educational background and credentialing requirements.</b>
<b>Medical doctor/physician</b>		
<b>Ph.D. in Nutrition Education</b>		
<b>Registered Dietician</b>		
<b>Certified Clinical Nutritionist</b>		
<b>Certified or Licensed Nutritionist</b>		
<b>Nutritional Consultant</b>		

## Web Site Evaluation Form

Name (s) \_\_\_\_\_ Website url \_\_\_\_\_

Evaluation of Web Documents	Indicators of the Criteria Found on the Website – list specific examples that address the questions
<p><b>Accuracy</b></p> <ul style="list-style-type: none"> <li>• Who wrote the page and can you contact the author?</li> <li>• What is the purpose of the document</li> <li>• Why was the website developed?</li> <li>• Is the author qualified to write this document?</li> </ul>	
<p><b>Authority</b></p> <ul style="list-style-type: none"> <li>• Who published the document?</li> <li>• Check the domain of the document, what institution publishes this document?</li> <li>• Does the publisher list their qualifications?</li> </ul>	
<p><b>Objectivity</b></p> <ul style="list-style-type: none"> <li>• What objectives does the page meet?</li> <li>• How detailed is the information?</li> <li>• Are any opinions or bias expressed by the author?</li> </ul>	
<p><b>Currency</b></p> <ul style="list-style-type: none"> <li>• When was the site produced?</li> <li>• When was it updated?</li> <li>• How up-to-date are the links?</li> </ul>	
<p><b>Coverage</b></p> <ul style="list-style-type: none"> <li>• Are links (if any) evaluated and do they complement the documents' theme?</li> <li>• Is it all images or a balance of images and text?</li> <li>• Is the information cited correctly?</li> </ul>	

Adapted from the *Five Criteria for Evaluating Web Pages* from the Cornell Library found at <http://www.library.cornell.edu/okuref/webcrit.html>