


Presentation Notes – Fat-Soluble Vitamins

Slide 1



Presentation Notes – Fat-Soluble Vitamins

Slide 2



Copyright

Copyright © Texas Education Agency, 2012. These Materials are copyrighted © and trademarked ™ as the property of the Texas Education Agency (TEA) and may not be reproduced without the express written permission of TEA, except under the following conditions:


- 1) Texas public school districts, charter schools, and Education Service Centers may reproduce and use copies of the Materials and Related Materials for the districts' and schools' educational use without obtaining permission from TEA.
- 2) Residents of the state of Texas may reproduce and use copies of the Materials and Related Materials for individual personal use only, without obtaining written permission of TEA.
- 3) Any portion reproduced must be reproduced in its entirety and remain unedited, unaltered and unchanged in any way.
- 4) No monetary charge can be made for the reproduced materials or any document containing them; however, a reasonable charge to cover only the cost of reproduction and distribution may be charged.

Private entities or persons located in Texas that are **not** Texas public school districts, Texas Education Service Centers, or Texas charter schools or any entity, whether public or private, educational or non-educational, located **outside the state of Texas** *MUST* obtain written approval from TEA and will be required to enter into a license agreement that may involve the payment of a licensing fee or a royalty. For information contact: Office of Copyrights, Trademarks, License Agreements, and Royalties, Texas Education Agency, 1701 N. Congress Ave., Austin, TX 78701-1494; phone 512-463-7004; email: copyrights@tea.state.tx.us.

Copyright © Texas Education Agency, 2012. All rights reserved. 2

Presentation Notes – Fat-Soluble Vitamins

Slide 3



Fat Soluble Vitamins

- Are absorbed and transported by fat
- Excess vitamins are stored in the liver
- Body draws on stored vitamins when needed
- Large amounts can harm the body
- People who take vitamin supplements are advised to use caution

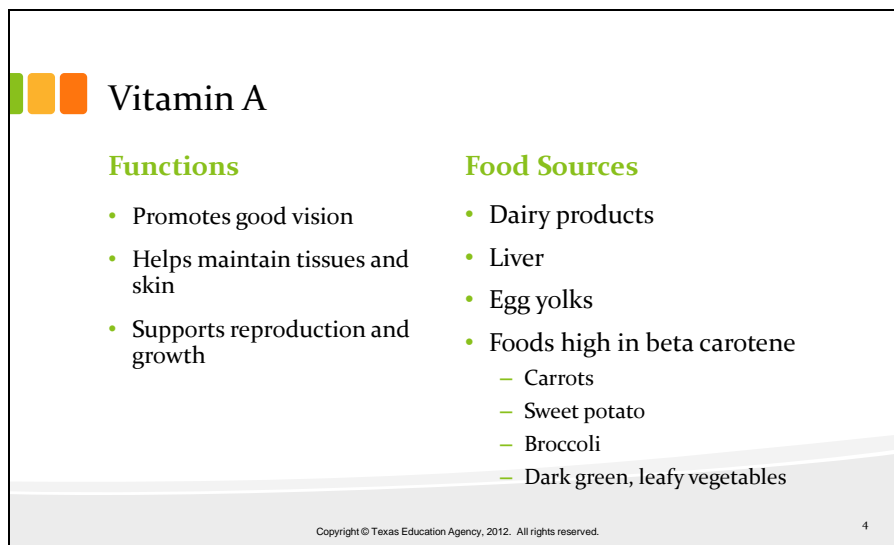
Copyright © Texas Education Agency, 2012. All rights reserved.

3

Fat soluble vitamins include Vitamin A, D, E, and K.

Presentation Notes – Fat-Soluble Vitamins

Slide 4



The slide features a title 'Vitamin A' with a decorative graphic of three colored squares (green, orange, red) to its left. Below the title are two columns of text: 'Functions' and 'Food Sources', each with a bulleted list. The 'Functions' list includes promoting vision, maintaining skin, and supporting reproduction. The 'Food Sources' list includes dairy products, liver, egg yolks, and various vegetables like carrots, sweet potatoes, and leafy greens. At the bottom, there is a copyright notice for the Texas Education Agency and a small number '4'.

Vitamin A

Functions

- Promotes good vision
- Helps maintain tissues and skin
- Supports reproduction and growth

Food Sources

- Dairy products
- Liver
- Egg yolks
- Foods high in beta carotene
 - Carrots
 - Sweet potato
 - Broccoli
 - Dark green, leafy vegetables

Copyright © Texas Education Agency, 2012. All rights reserved. 4

Deficiencies and Excesses

Effects of getting too little

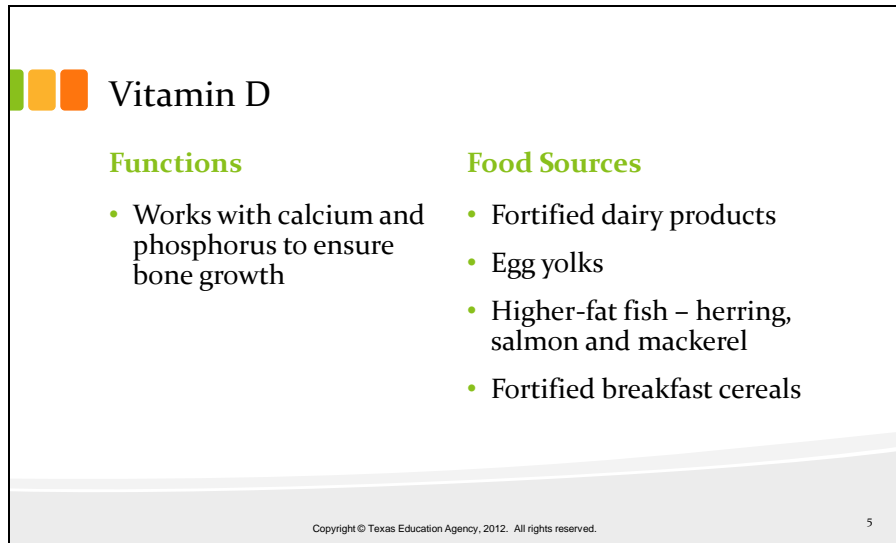
- Night-blindness
- Dry corneas

Effects of getting too much

- Birth defects
- Liver problems
- Reduced bone density
- Skin discoloration
- Hair loss
- Dry skin

Presentation Notes – Fat-Soluble Vitamins

Slide 5



The slide features a title 'Vitamin D' with a decorative graphic of three colored squares (green, orange, red) to its left. Below the title, there are two columns of text. The left column is headed 'Functions' and contains one bullet point. The right column is headed 'Food Sources' and contains three bullet points. At the bottom of the slide, there is a copyright notice and a small number '5'.

Vitamin D

Functions

- Works with calcium and phosphorus to ensure bone growth

Food Sources

- Fortified dairy products
- Egg yolks
- Higher-fat fish – herring, salmon and mackerel
- Fortified breakfast cereals

Copyright © Texas Education Agency, 2012. All rights reserved. 5

Deficiencies and Excesses

Effects of getting too little

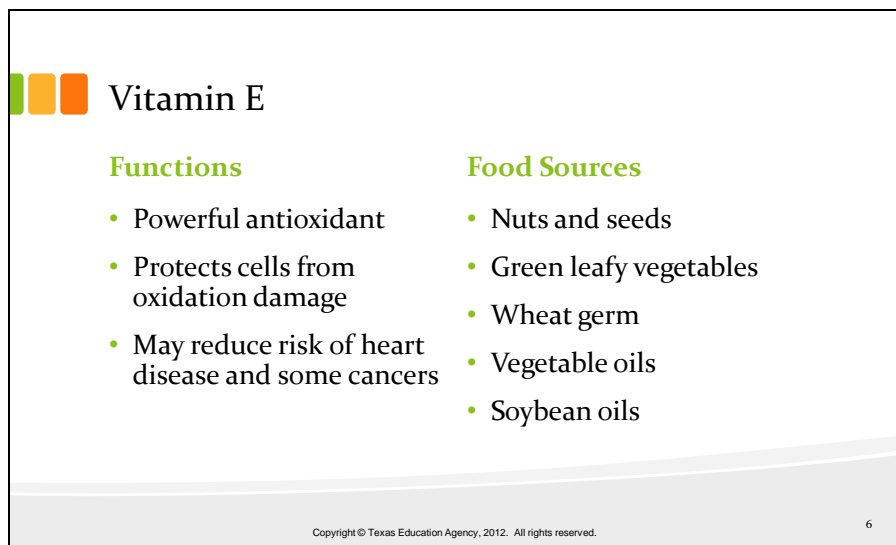
- Rickets
- Osteomalacia (softening of the bone)

Effects of getting too much

- Dehydration
- Vomiting
- Decreased appetite
- Irritability
- Constipation
- Fatigue
- Kidney stones

Presentation Notes – Fat-Soluble Vitamins

Slide 6



Vitamin E

Functions	Food Sources
<ul style="list-style-type: none">• Powerful antioxidant• Protects cells from oxidation damage• May reduce risk of heart disease and some cancers	<ul style="list-style-type: none">• Nuts and seeds• Green leafy vegetables• Wheat germ• Vegetable oils• Soybean oils

Copyright © Texas Education Agency, 2012. All rights reserved. 6

Deficiencies and Excesses

Effects of getting too little

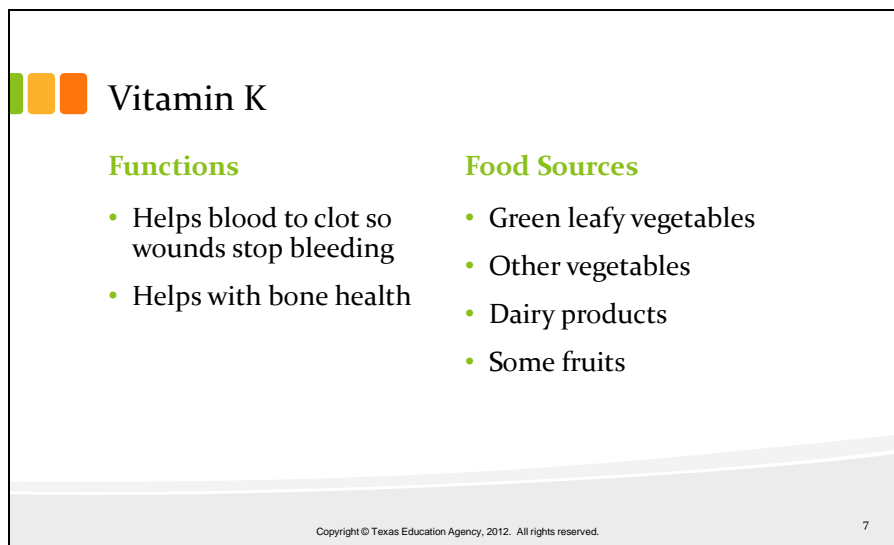
- Mild anemia (low red blood cell count) in newborn infants

Effects of getting too much

- No known effects

Presentation Notes – Fat-Soluble Vitamins

Slide 7



Vitamin K

Functions

- Helps blood to clot so wounds stop bleeding
- Helps with bone health

Food Sources

- Green leafy vegetables
- Other vegetables
- Dairy products
- Some fruits

Copyright © Texas Education Agency, 2012. All rights reserved. 7

Deficiencies and Excesses

Effects of getting too little

- Susceptibility to bleeding because blood does not clot properly

Effects of getting too much

- No known effects

Presentation Notes – Fat-Soluble Vitamins

Slide 8

 Questions?

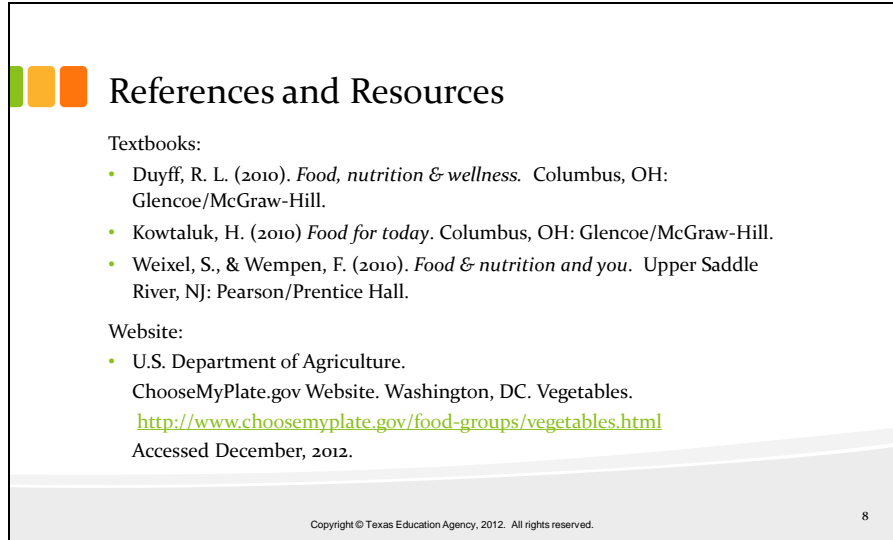


Copyright © Texas Education Agency, 2012. All rights reserved.

15

Presentation Notes – Fat-Soluble Vitamins

Slide 9



References and Resources

Textbooks:

- Duyff, R. L. (2010). *Food, nutrition & wellness*. Columbus, OH: Glencoe/McGraw-Hill.
- Kowtaluk, H. (2010) *Food for today*. Columbus, OH: Glencoe/McGraw-Hill.
- Weixel, S., & Wempen, F. (2010). *Food & nutrition and you*. Upper Saddle River, NJ: Pearson/Prentice Hall.

Website:

- U.S. Department of Agriculture.
ChooseMyPlate.gov Website. Washington, DC. Vegetables.
<http://www.choosemyplate.gov/food-groups/vegetables.html>
Accessed December, 2012.

Copyright © Texas Education Agency, 2012. All rights reserved. 8