

# Alcohol and Nutrition

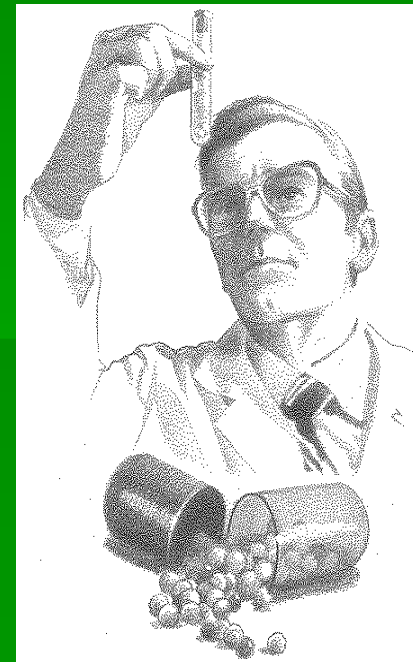
Amy Dailey



© 2008-2010 Food Fitness First,  
Inc. All rights reserved

# What is Alcohol?

- Ethyl Alcohol
- Ethanol



# How Alcohol Effects Living Things:

- Alcohol acts as lipid solvents.
- Kills cells.
- Toxic in small amounts.



# Alcohol

- Pleasing effect that people seek.
- Drug
- Modifies body functions.

# How Much Alcohol in Liquor?

- The amount of alcohol in distilled liquor is stated as proof.
- 100 proof liquor is 50% alcohol.
- 80 proof liquor is 40% alcohol.



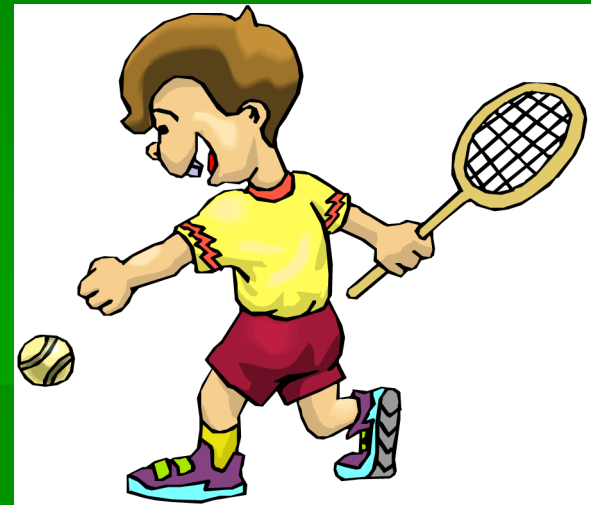
# How Much Alcohol in Wine & Beer?

- Wine is 8-14% alcohol.
- Beer is 4-6% alcohol.



# Calories in Alcohol

- Alcohol has empty calories, it is not used as a fuel source when consumed in large amounts.
- Alcohol has 7.1 kcal/g



# Alcohol in the Body

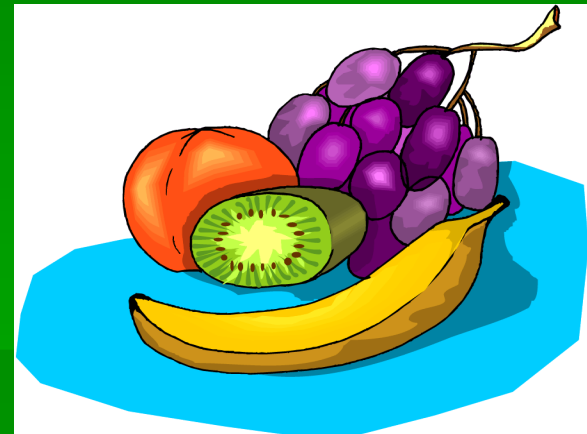
---

- Alcohol does not digest so it is quickly absorbed.
- About 20% is absorbed directly across the walls of an empty stomach and can reach the brain within a minute.



# Alcohol Absorption

- Alcohol is absorbed in the small intestine.
- Alcohol gets absorbed and metabolized before most nutrients.
- Alcohol can't be stored in the body, and it is potentially toxic.



# Malnutrition in Alcoholics

- Alcohol can replace food in the diet of moderate and heavy drinkers.
- The alcohol replaces the intake of adequate calories and nutrients.



© 2008-2010 Food Fitness First, Inc. All rights reserved

# Alcohol and Malnutrition

- The euphoria feeling that alcohol produces depresses appetite so many heavy drinkers tend to eat poorly and suffer from malnutrition.



# Alcohol and the Liver

- The digestive tract sends the alcohol in the blood to the liver via the veins.
- Liver cells can make enough enzymes to dispose some of the alcohol before it moves to the rest of the body.

# Alcohol and the Liver

---

- Alcohol affects the liver more than any other organ in the body.
- Alcohol metabolism permanently changes the liver's cell structure which impairs the liver's ability to absorb fat.

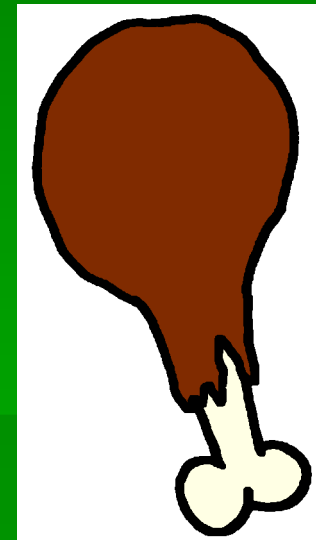
# Alcohol Breakdown

---

- The liver can process about 1/2oz of ethanol per hour.
- If more alcohol arrives at the liver than the liver can handle, the extra alcohol travels to all parts of the body.
- It circulates over and over the body until the liver is able to process it.

# Alcohol

- Alcohol also alters protein metabolism.
- Protein is important in the immune system.
- Eating more protein does not protect the drinker from protein depletion.



# Metabolism of Nutrients

---

- Chronic alcohol abuse interferes with the body's metabolism of nutrients
  1. Folate
  2. Thiamin
  3. Vitamin B6
- Diet does not correct these deficiencies caused by heavy alcohol consumption.



# Prescription Drugs and Alcohol:

- If a person takes drugs while drinking alcohol, the metabolism of the alcohol wins out over the metabolism of the drug.
- The drug will be handled later by the liver which eventually intensifies the effect of the drug.



# Alcohol and the Brain.

- The amount of alcohol in the breath and in the urine are in proportion to the amount still in the bloodstream and the brain.
- This is what is measured when a breathalyzer test is given.

# Alcohol's Effect on the Brain.

- When alcohol flows to the brain it first affects the reasoning and judgment part of the brain.
- Next, speech and vision centers become affected.
- Voluntary muscular control is then affected.
- Respiration and heart are the last to be affected. The conscious brain is completely subdued and the person usually passes out.

# Signs of Alcoholism

- Tolerance to alcohol.
- Withdrawal symptoms if the person tries to stop drinking.
- Impaired control.
- Loses interest in family, job, friends, or activities that they enjoy.



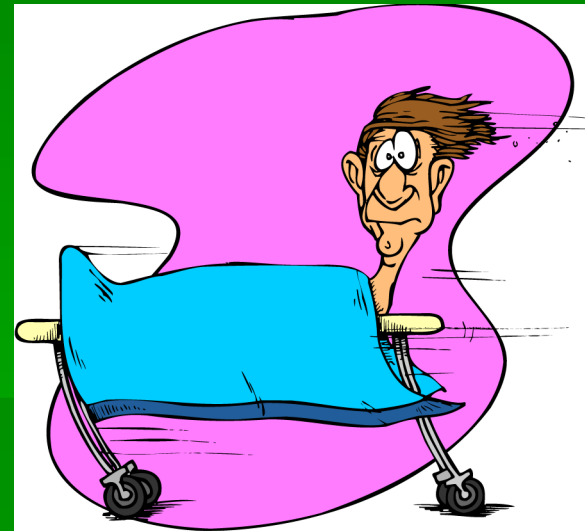
# Signs of Alcoholism

---

- Excessive time spent drinking, obtaining, or recovering from excessive drinking.
- Impaired ability.
- Person continues to drink despite physical hazards, medical, legal, psychological, family, employment, or school problems.

# Health Effects of Alcohol Consumption

- Arthritis
- Cancer
- Fetal Alcohol Syndrome
- Heart Disease
- Hyperglycemia
- Hypoglycemia
- Kidney Disease



# Health Effects of Alcohol Consumption

- Liver disease
- Malnutrition
- Nervous Disorders
- Obesity
- Psychological Disturbances



# Alcohol Myths

---

- Hard liquor is more harmful than wine and beer.
- Alcohol stimulates appetite.
- Drinking alcohol reduces the risk of heart disease.
- Alcohol is legal so it is not a drug.



# Alcohol Myths

---

- Beer and wine don't lead to addiction.
- Mixing different types of alcohol gives you a hangover.
- A shot of alcohol warms you up.
- Alcohol is a stimulant.

# References

- Mahan L., Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. United States of America: W.B. Saunders Company; 2000.
- Whitney E., Rolfes S. *Understanding Nutrition*. California: Wadsworth Publishing Company; 1999.