

Heart Disease- Learn to Love Your Heart

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Goals

- Learn more about heart disease for yourself and for your students
- Learn the process of heart disease
- Become better information sources for students
- Advocate for healthier change for students
- Stimulate interest in healthy heart lifestyles for yourself and for your students

Quiz

- For leading causes of death for males, heart disease ranks ____ ?
- 3rd
- 5th
- 1st
- 6th

Quiz

- For leading causes of death for females, heart disease ranks ____ ?
- 4th
- 1st
- 2nd
- 3rd

Heart Disease

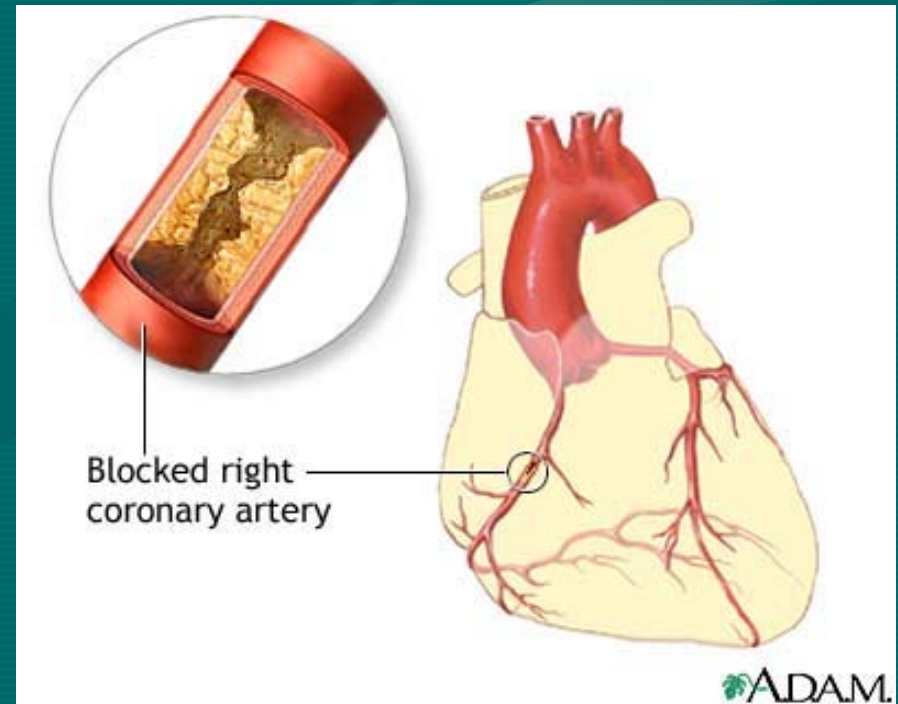
- Over 780,000 people have their first heart attack every year
 - Another 445,000 people have a repeat heart attack
- Over 630,000 people die every year from heart disease
 - >25% of all deaths
 - Number one cause of death for both men and women
 - Heart disease will cost more than \$310 billion in 2010

Different Names-Same Thing

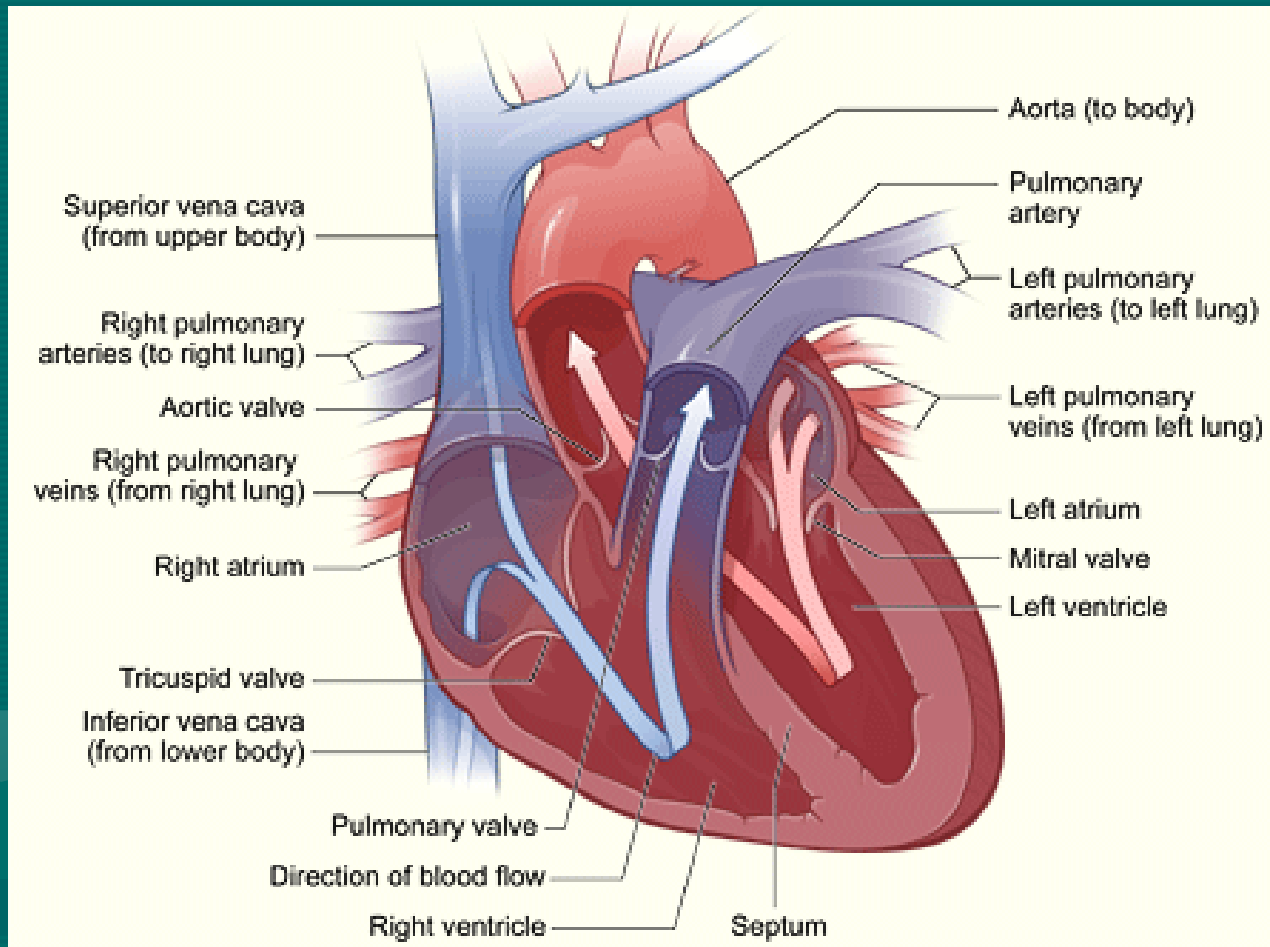
- Heart Disease=Coronary Artery Disease (CAD)
 - Arteries to heart get blocked (atherosclerosis)
 - Reduces blood flow to the heart
 - Cut down on oxygen

→Heart attack!

Heart cells start to die
from lack of blood



Anatomy of Heart



*http://www.nhlbi.nih.gov/health/dci/images/heart_interior.gif

Young people are fine-not!

- The process of heart disease starts in young children and teenagers
- In a study provided by Wissler looking at autopsies of young people, he found that:
 - All U.S. teenagers had fatty streaks (pre-plaque) in some segment of their arterial system
 - Obesity, smoking and hypertension had the biggest effect on developing artery blockages (plaques) in young adults
 - Ten percent of the individuals in this study had advanced blockages of arteries

Common Signs of a Heart Attack

- Chest Pain
- Pain or discomfort in the jaw, neck, or back
- Feeling weak, light-headed, or faint
- Pain or discomfort in arms or shoulder
- Shortness of breath

*40% of deaf individuals in one study could not think of a single symptom of a heart attack!

Danger, danger, ahead!

- How many will die in 4 hours after their heart attack starts?



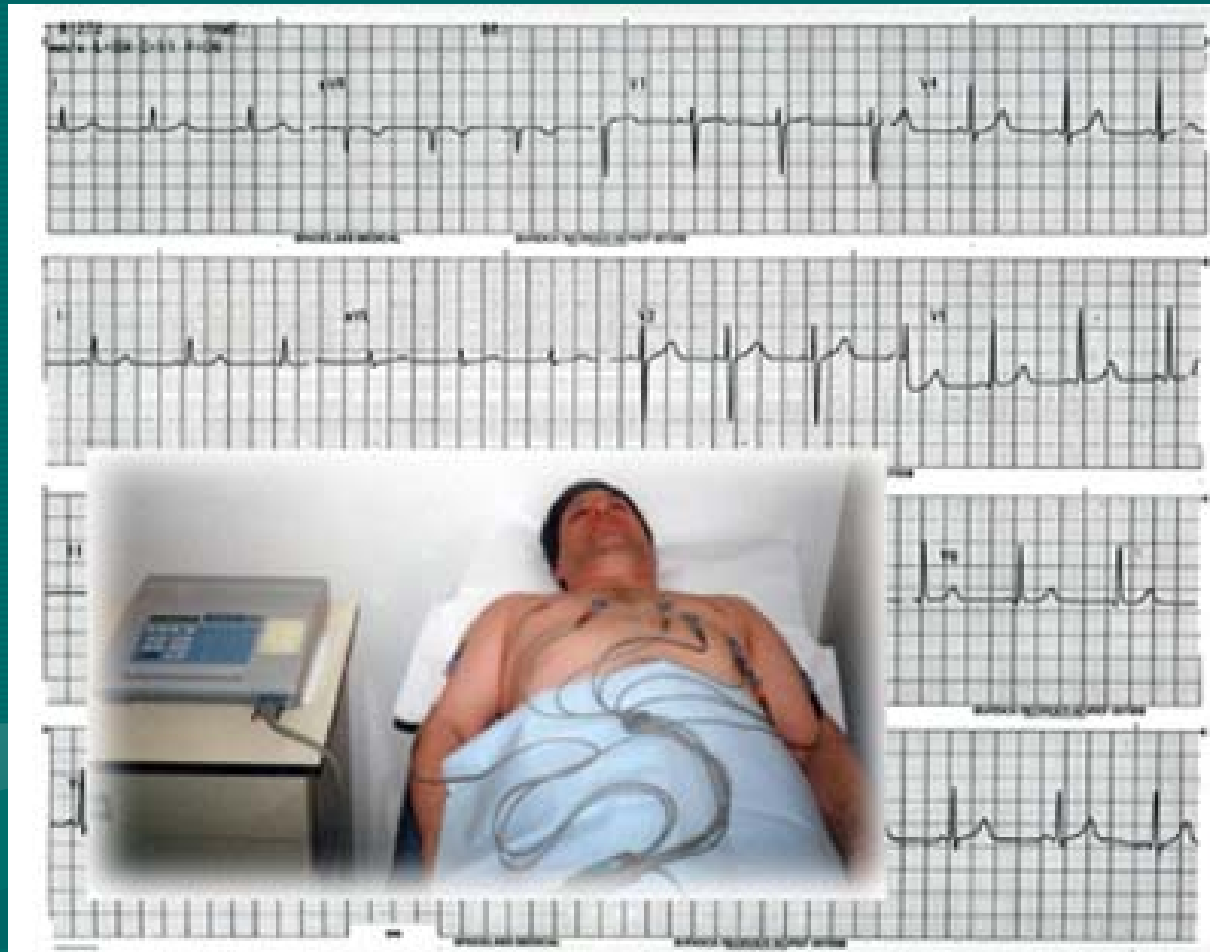
Calling 9-1-1

- For best survival, call 911 if you are experiencing symptoms of a heart attack
 - 47% of people who die of a heart attack never make it to the hospital
 - Early action is the key to saving many of them!
- Yet, 39% of deaf individuals in one study would not call 911 even if they were having symptoms of a heart attack!

Testing

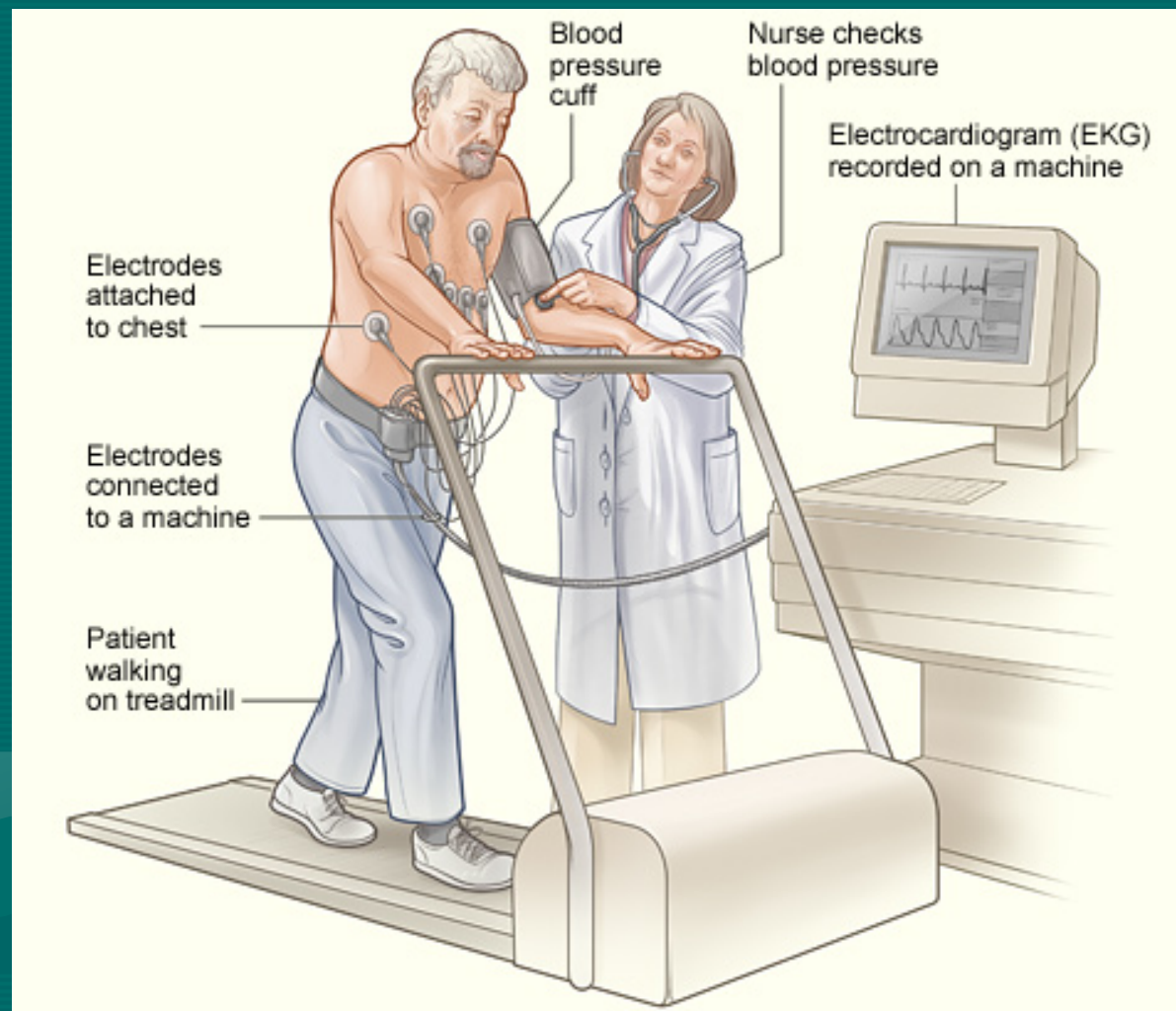
- Electrocardiogram (EKG)
- Echocardiogram
- Stress tests
- Chest X-ray
- Cardiac catheterization/angiogram

EKG



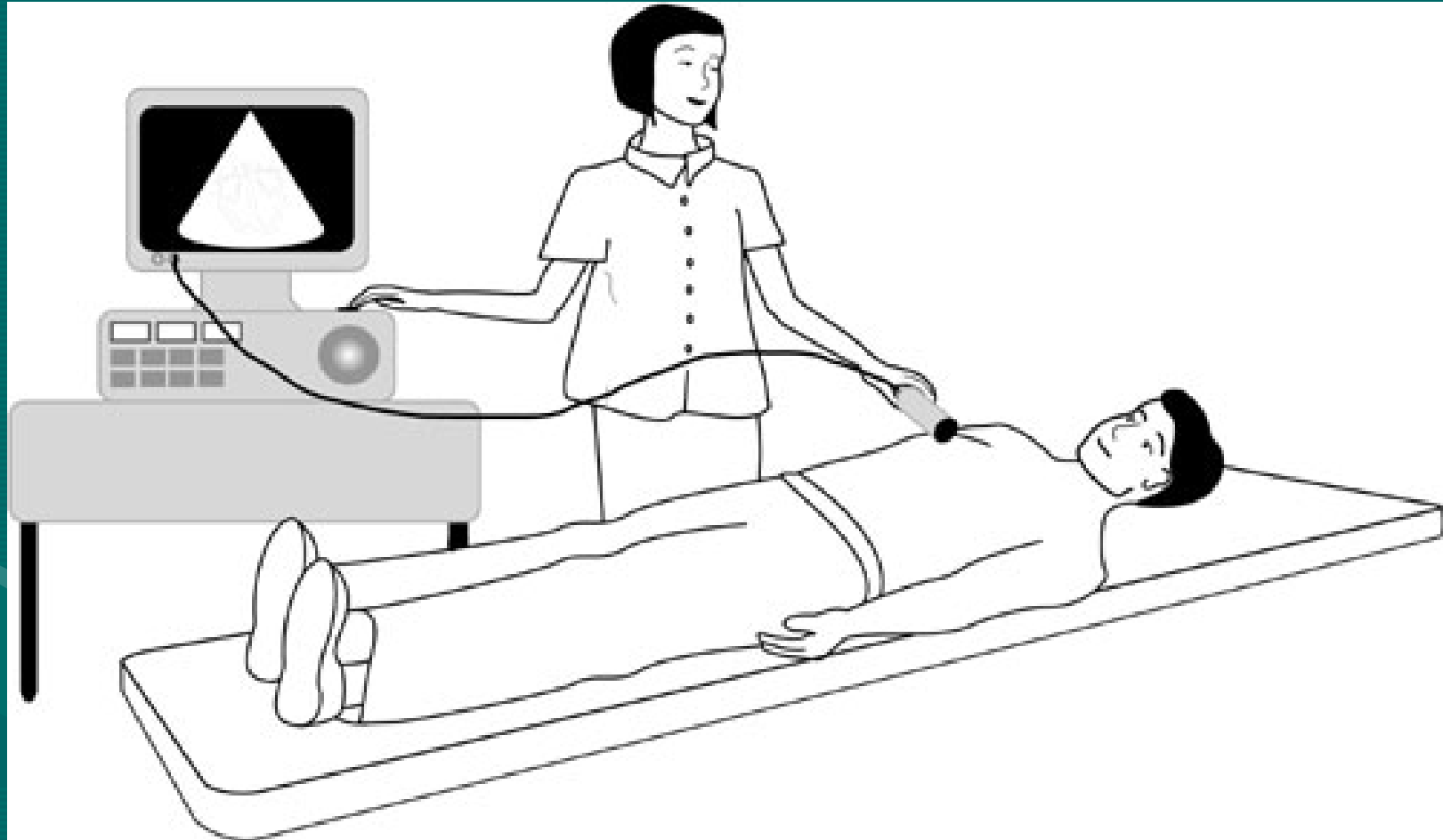
*<http://www.aaccweb.com/images/EKG.jpg>

Treadmill Stress Test



*http://www.nhlbi.nih.gov/health/dci/images/stress_test.jpg

Echocardiogram



*<http://www.sads.org.uk/Echocardiogram.jpg>

Nuclear Imaging Stress Test



*<http://www.jorgegomezamadormd.com/assets/images/EchoTest02.jpg>

Risk Factors

- High blood pressure
- High cholesterol
- Smoking
- Obesity
- Diabetes
- No exercise
- Family History
- Increasing age

High Blood Pressure (Hypertension)

- Blood Pressure (systolic/diastolic)
- Normal → 120/80 or less
- Pre-high blood pressure → 130-139/80-89
- High blood pressure → 140/90 or more

*High blood pressure for those who have heart failure, diabetes or kidney failure begins at 130/80

Quiz Time

- What percentage of Americans do not know they have high blood pressure?
- 31.6%

High Blood Pressure in Children

- No single cut off for blood pressure for children
 - Depends on height of child
 - Those with a blood pressure in the 95% range or higher have high blood pressure

Examples:

8 year old child who is of average height

50% in BP

99/59

95% in BP

118/78

* BP Guidelines for Children

http://www.nhlbi.nih.gov/guidelines/hypertension/child_tbl.pdf

Blood Pressure

- Recommendations:
 - Exercise
 - Cut back on salt in foods (goal is <2000 mg of sodium daily)
 - Eat more fresh fruits, vegetables, whole grains, low fat dairy and lean protein
 - Avoid or lose additional body weight



Ex. Campbell's Classic
Chicken Noodle Soup
contains 1,780 mg of sodium

http://www.pollsb.com/photos/o/26195-campbell_s.jpg

DASH Diet

Follow the DASH diet to potentially lower your blood pressure.



© ADAM, Inc.

<http://graphics8.nytimes.com/images/2007/08/01/health/adam/19226.jpg>

DASH

- Heart healthy diet
- Proven in studies
- Lowers your blood pressure

DASH Diet

- Key points to the diet (servings per day)
 - Grains are encouraged to be whole grains (7-8 servings)
 - Eat more vegetables and fruits (4-5 servings of each)
 - Eat low fat or fat free dairy instead of fatty forms of dairy (2-3 servings)
 - Eat less meat
 - Eat lean or low fat protein such as fish or chicken breast (2 or less servings)
 - Nuts, beans or seeds (~1 serving daily)
- Website for DASH diet plan and information can be found at:
<http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm>

Cholesterol

Desired Levels (varies with those with other medical issues)

- Total cholesterol: Less than 200 mg/dL
- Low Density Lipoprotein (LDL) cholesterol ("bad" cholesterol): Less than 130 mg/dL
- High Density Lipoprotein (HDL) cholesterol ("good" cholesterol): 40 mg/dL or higher (50 mg/dL or higher for women)
- Triglycerides: Less than 150 mg/dL

Quiz

- What percentage of children aged 12-19 years old had abnormal cholesterol levels?
 - A. 5%
 - B. 10%
 - C. 20%
 - D. 50%

Cholesterol

- Obese or overweight children should have their cholesterol checked
 - May help capture early cases of high cholesterol
 - May encourage a healthier lifestyle
- For adults, a cholesterol test is recommended every 5 years if healthy

Improve Cholesterol Numbers

- Exercise
- Lose weight
- Limit animal fats and protein
- Use healthy oil for cooking (canola or olive)

*Avoid trans-fats!

– Includes partially hydrogenated or hydrogenated oils

Quiz

- Smoking cigarettes can increase your risk for heart disease by _____ ?
 - A. 25%
 - B. 75%
 - C. 400%
 - D. 1,000%

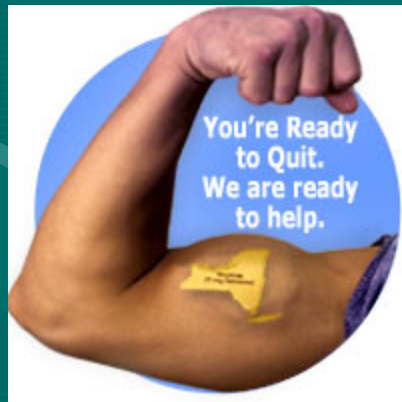
Smoking

- Increases blood pressure (nicotine)
- Increases clots in the blood
- Increases clogging of arteries (atherosclerosis)
- Increases carbon monoxide (decreases oxygen to heart)

* Risks can still happen if your family or friends smoke around you!

Smoking

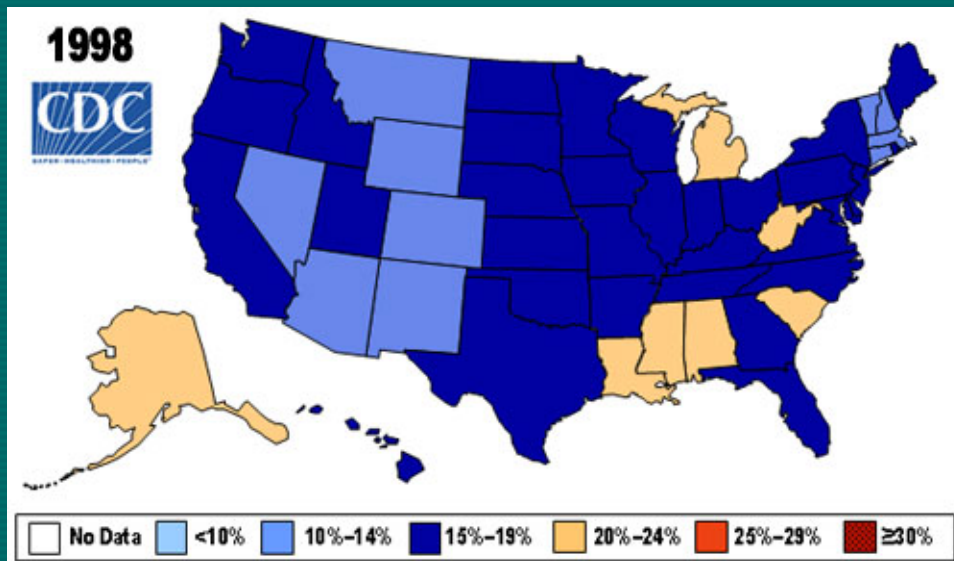
- Not smoking is the biggest thing you can do to protect your heart!
- For those who smoke, by stopping, your heart risk go down quickly afterwards.



Call 1-866-NY-QUITS
(1-866-697-8487)

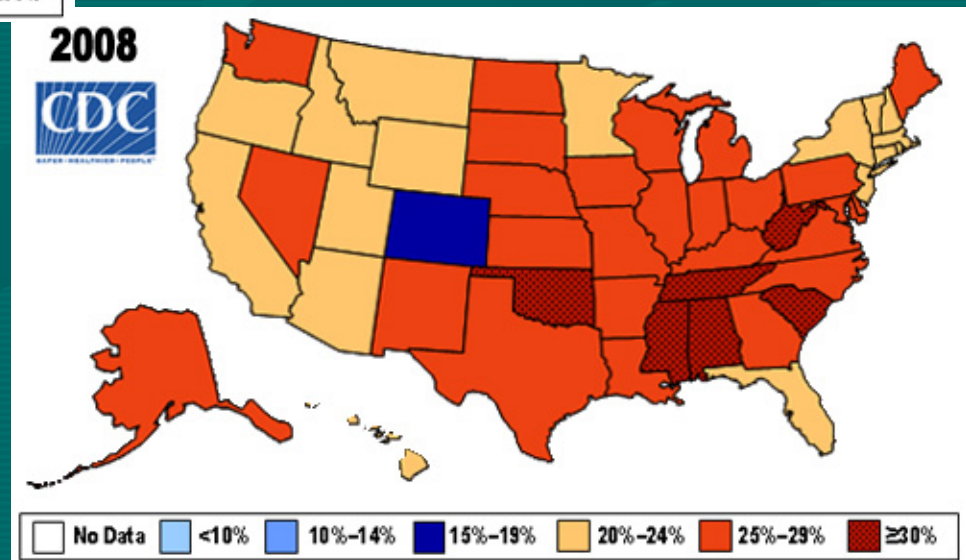
Obesity Epidemic

In 1998, only 7 states had obesity rates of higher than 20%



In 2008, 6 states had obesity rates of higher than 30%!

<http://www.cdc.gov/obesity/data/trends.html>



Obesity is an epidemic for children too!

- Child obesity is increasing fast
- 1/3 of all children are obese or overweight
- For first time in recent history, today's children will likely live shorter than parents due to weight issues

Quiz

- What percentage of obesity in children is caused by a medical condition or illness?
 - A. 1%
 - B. 10%
 - C. 25%
 - D. 50%

Common childhood obesity causes

- Poor eating habits or food choices
- Overeating
- Not enough exercise (i.e. couch potato)
- Family history of obesity
- Medications (i.e. psychiatric medications)
- Stressful life events or changes (i.e. parent's divorce or abuse)
- Family and peer problems
- Low self-esteem

Dangers of Obesity

- Lowers HDL (good cholesterol)
- Raises triglycerides (fatty parts of the blood)
- Raises risk of diabetes
- Raises LDL (bad cholesterol)
- Raises blood pressure

Am I obese?

- Body Mass Index (BMI)- Measurement tool to see how fat a person is by using their weight and height
 - Calculation= weight (kilograms) / [height (meters)]²

Body Mass Index	Weight Status
Under 18.5	Underweight
18.5 to 24.9	Normal Weight
25.0 to 29.9	Overweight
Above 30	Obese

Weight in Pounds

	120	130	140	150	160	170	180	190	200	210	220	230	240	250
4'6"	29	31	34	36	39	41	43	46	48	51	53	56	58	60
4'8"	27	29	31	34	36	38	40	43	45	47	49	52	54	56
4'10"	25	27	29	31	34	36	38	40	42	44	46	48	50	52
5'0"	23	25	27	29	31	33	35	37	39	41	43	45	47	49
5'2"	22	24	26	27	29	31	33	35	37	38	40	42	44	46
5'4"	21	22	24	26	28	29	31	33	34	36	38	40	41	43
5'6"	19	21	23	24	26	27	29	31	32	34	36	37	39	40
5'8"	18	20	21	23	24	26	27	29	30	32	34	35	37	38
5'10"	17	19	20	22	23	24	26	27	29	30	32	33	35	36
6'0"	16	18	19	20	22	23	24	26	27	28	30	31	33	34
6'2"	15	17	18	19	21	22	23	24	26	27	28	30	31	32
6'4"	15	16	17	18	20	21	22	23	24	26	27	28	29	30
6'6"	14	15	16	17	19	20	21	22	23	24	25	27	28	29
6'8"	13	14	15	17	18	19	20	21	22	23	24	25	26	28

Underweight
 Healthy Weight
 Overweight
 Obese

*<http://www.bccancer.bc.ca/NR/rdonlyres/78AA6E86-1524-429F-95A1-A81976DC6711/27112/BMI4.gif>

Obesity

- Eat smaller portions
- Don't skip meals (especially breakfast!)
- Exercise
- Avoid sweet drinks (soda, juice, sweet tea)
- Avoid fast foods or processed foods

What to do?

- Make slow changes to diet so it is easier to change
- Plan ahead to eat better (bad choices are usually due to eating at the spur of the moment)
- Avoid the “clean plate club”
 - Eat only to stop hunger not to feel full
- Make your calories worth it!
 - Eat nutritionally rich foods not nutritionally poor low calorie foods
- Get moving!!!
 - Walk more and start a fun physical activity

What to do?

- Rethink what your family and child eats at school
- Eat together as a family (instead of while watching television or at the computer)
- Avoid food as a reward or punishment
- Snacks should be small and healthy
- If necessary, consider a support group (e.g., Weight Watchers)

Other Important Info

- First degree relatives (mother, father, brother(s) or sister(s) with heart disease
 - Second degree relatives
- History of Premature Heart Disease in Family:
 - Men (less than 55 years old)
 - Women (less than 65 years old)

*Learn about your family history so you and your doctor can be aware to protect yourself.

Prevention of Heart Disease for Children

- Children should be taught to eat healthy
- Create passion about healthy foods!
 - Jamie Oliver's Food Revolution
 - <http://www.jamieoliver.com/campaigns/jamies-food-revolution>
- Implement healthy choices in school areas
- Start gardening clubs
- Demonstrate different types of foods by cooking displays

Prevention of Heart Disease for Children

- Set up health clubs (similar to science or robot clubs)
- Encourage every child to become involved in sports or physical activity
- Keep physical education and recess as a daily school event
 - John Ratney, MD- *Spark*
 - Encourages physical activity to boost brain power of students in a school

Questions?

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References

- Heart Disease and Stroke Statistics—2006 Update. American Heart Association; 2005.
- <http://www.cdc.gov/HeartDisease/prevention.htm>
- http://www.cdc.gov/DHDSP/library/fs_cholesterol.htm
- <http://www.cdc.gov/alcohol/>

Exercise

- Over 50% of American adults do not get enough physical activity to provide health benefits.
 - Over 25% of adults are not active at all in their leisure time.
- * Recommendation is that all adults should accumulate at least 30 minutes of moderate-intensity physical activity on five or more days of the week

Alcohol

- Raises triglycerides (fatty parts of blood)
- Raises blood pressure
- Heavy alcohol use:
 - Men: more than two drinks per day on average
 - Women: more than one drink per day on average for women
 - Binge drinking
- 5% of population drink heavy every day while 15% of population binge drink