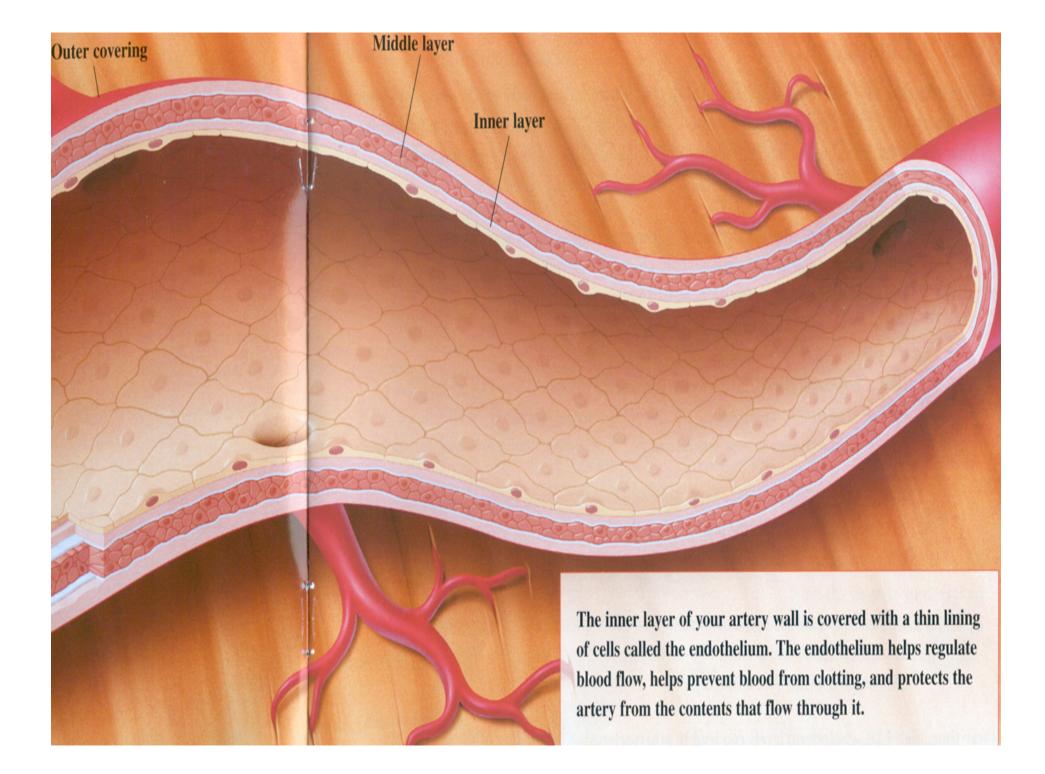
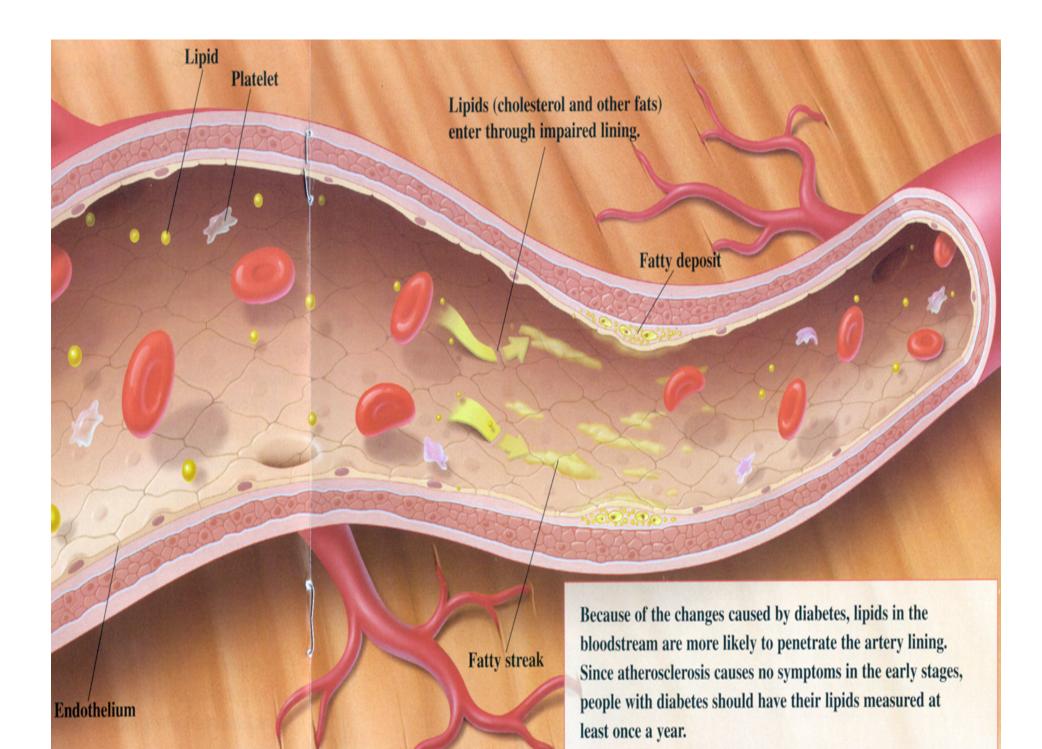
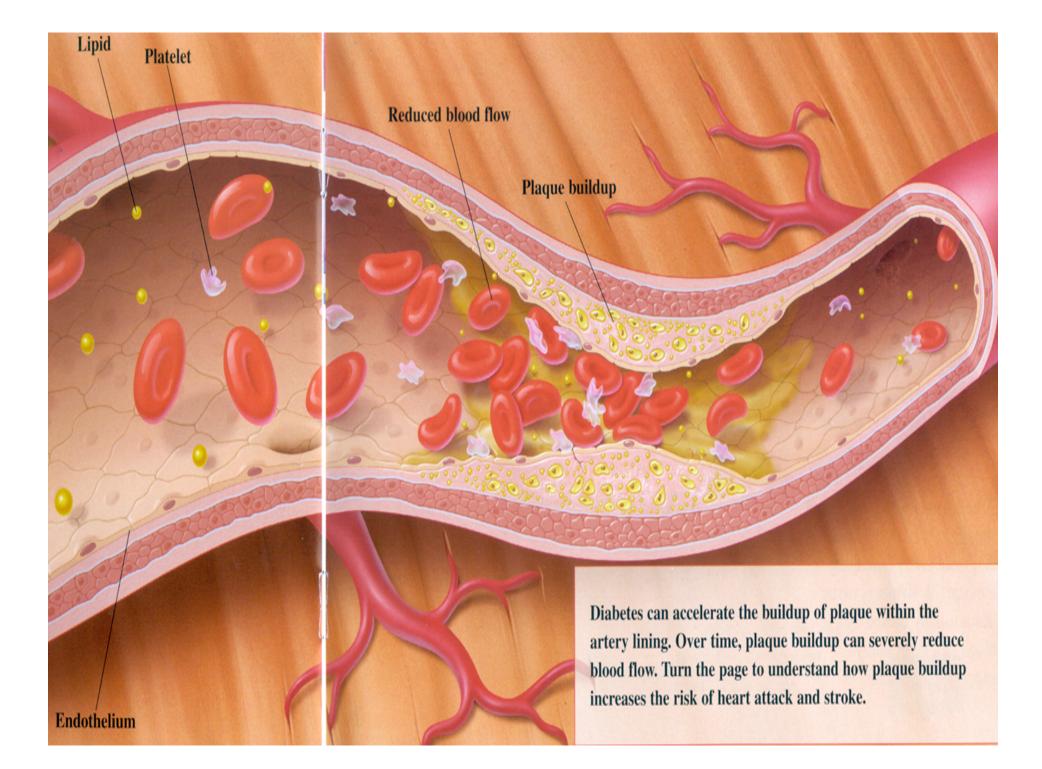
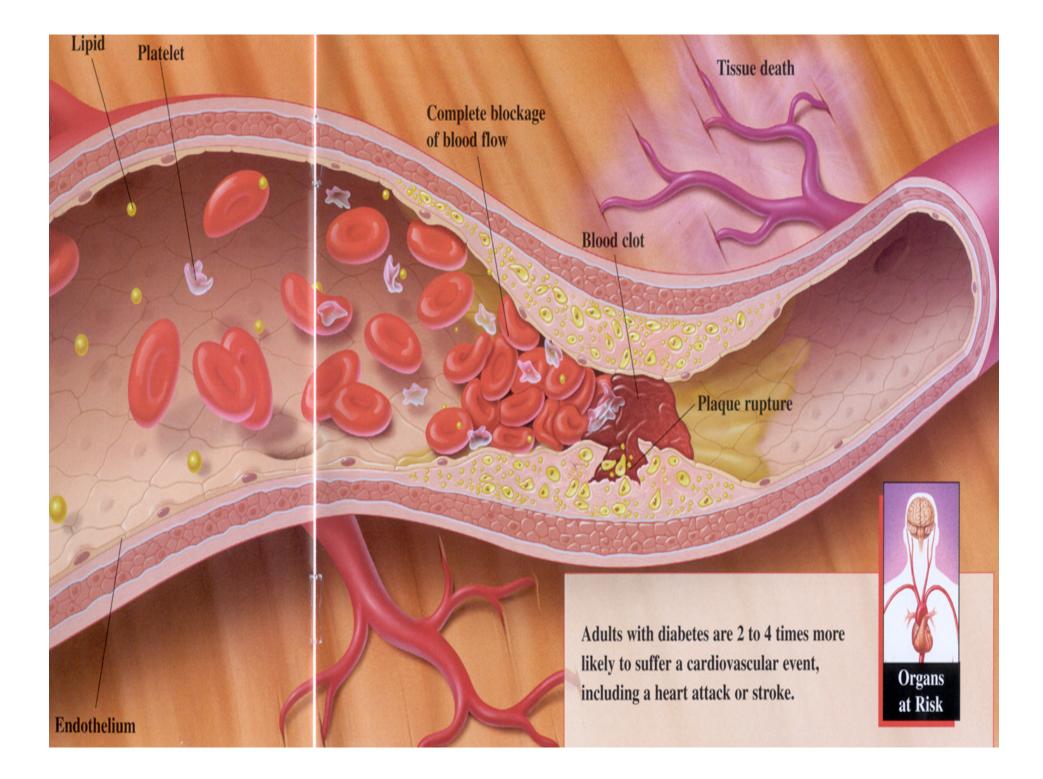


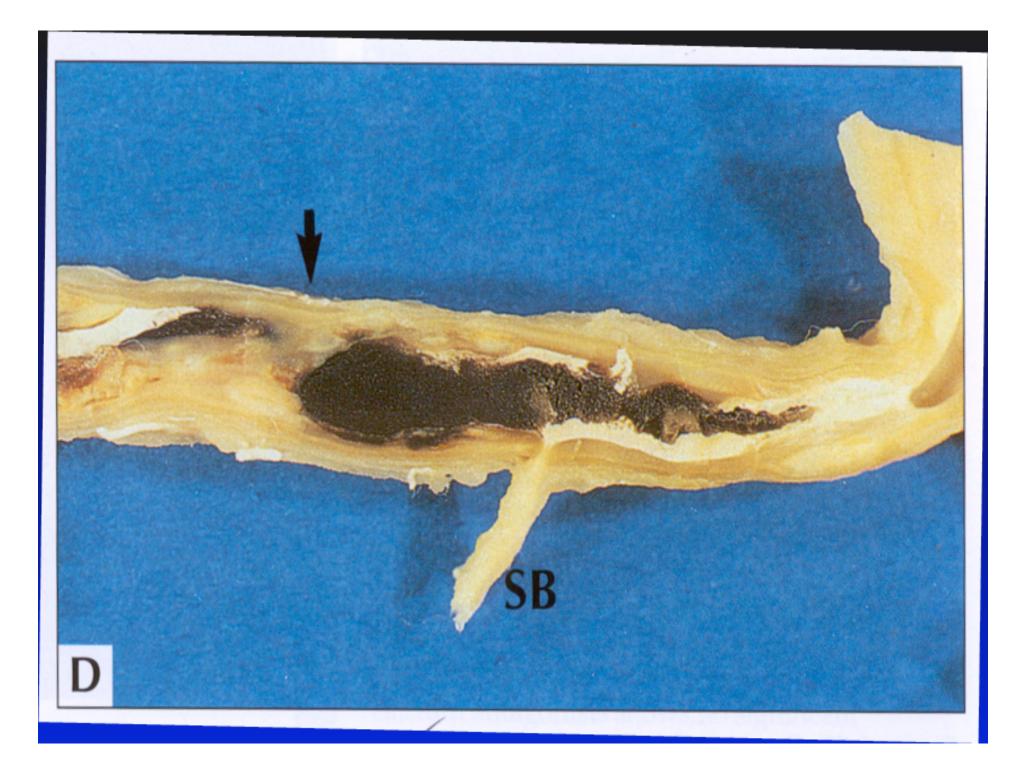
James F. Lichon RPh, DDS, NCCM

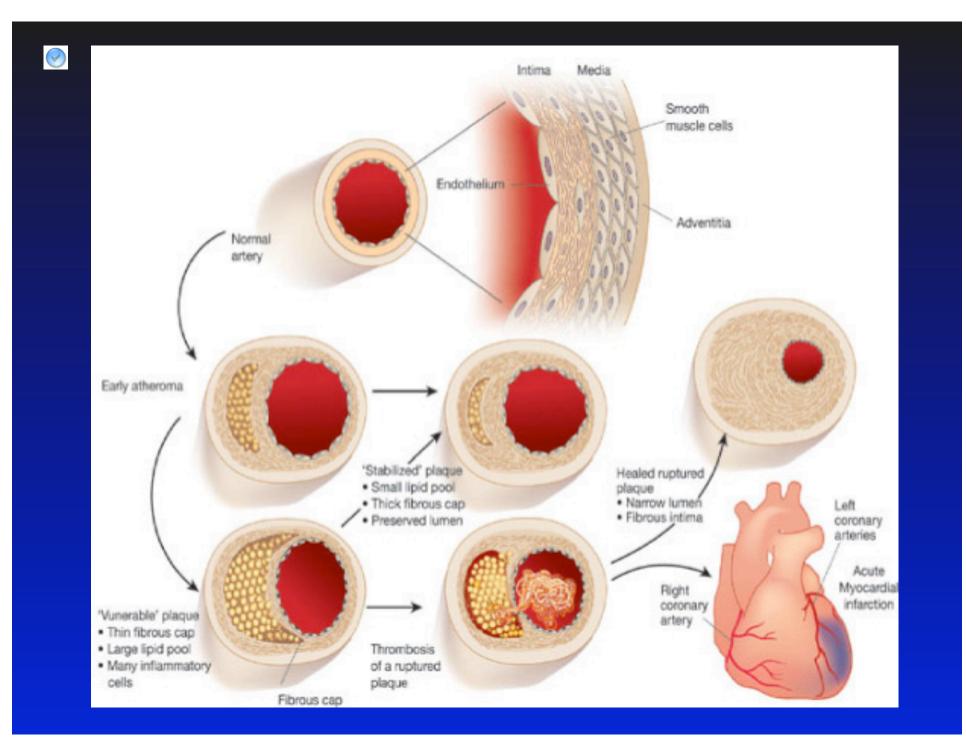








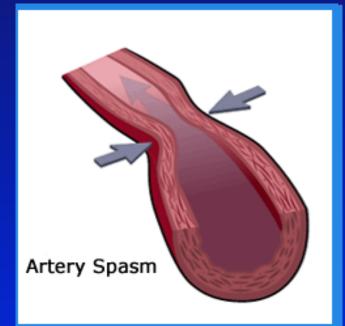




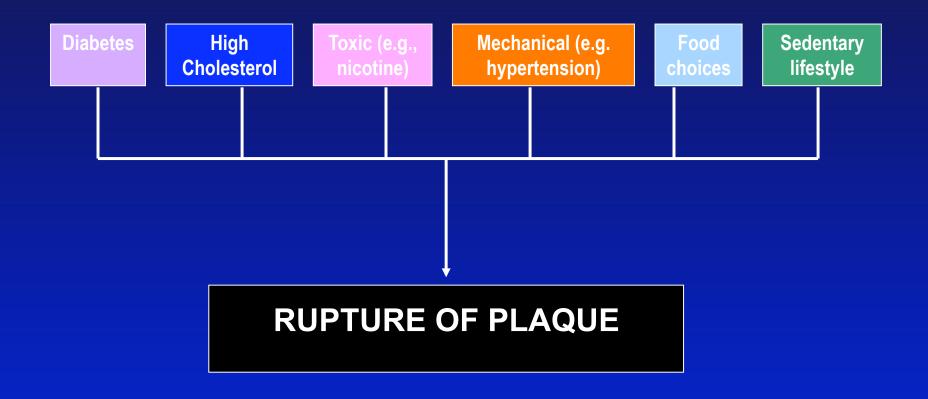
CORONARY ARTERY SPASM

 \bigcirc

- ENDOTHELIAL DYSFUNCTION
- LOW GRADE INFLAMMATION
- MAGNESIUM DEFICIENCY
- COCAINE AMPHETAMINES
- PRINZMETAL'S ANGINA
- HEART CATHERIZATION
- CIGARETTE SMOKING
- COLD
- STRESS

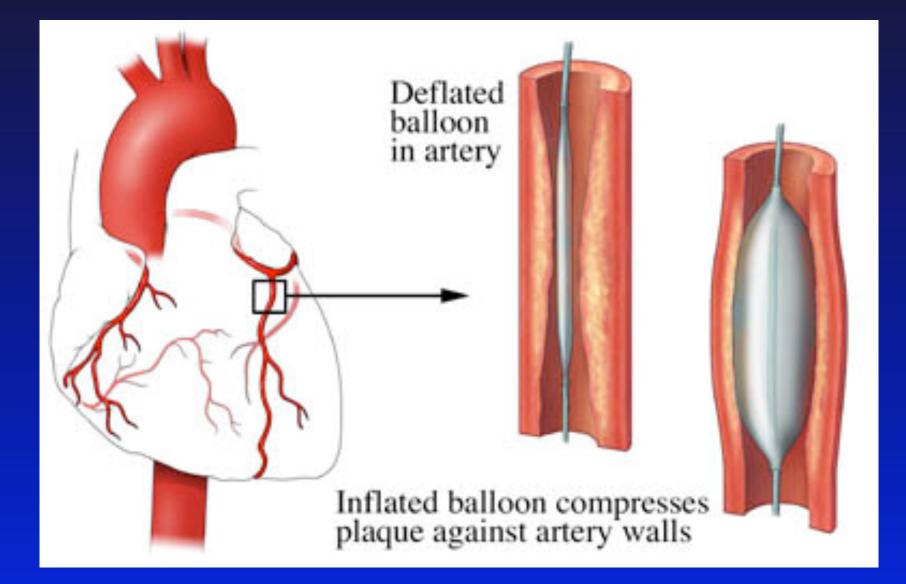


Risk Factors That Weaken The Fibrous Cap





BALLOON ANGIOPLASTY



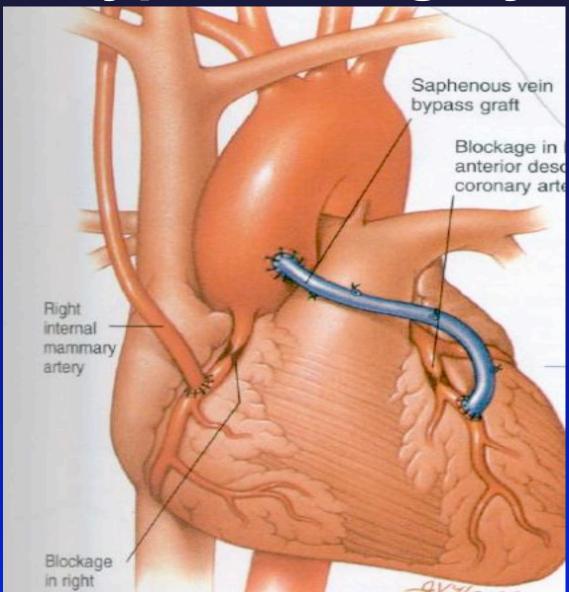
ADVERSE EFFECTS OF STENTS

- Arrhythmias
- Bleeding complications
- Acute access site pain with hypotension
- Thrombus (blood clot)
- Heart attack
- Coronary artery spasm
- Cardiac mortality—1%

Dental implications



Bypass Surgery

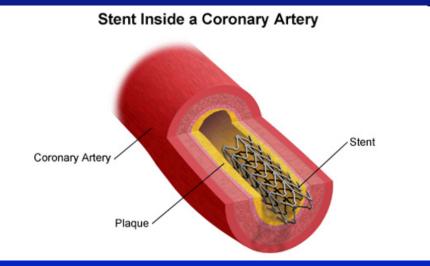




"Multiple studies show if you have one ruptured plaque you have many."



Steve Nissen M.D. Cleveland Clinic Dept. of Cardiology Neither coronary angioplasty, stents, nor cardiac bypass surgery is curative for coronary artery disease.





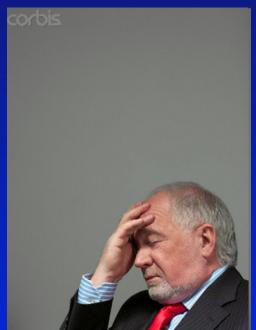
For patients that have had stent placement or open heart surgery, no dental appointment for 3 months.
For patients that have had a valve replacement, no dental appointment for 6 months.



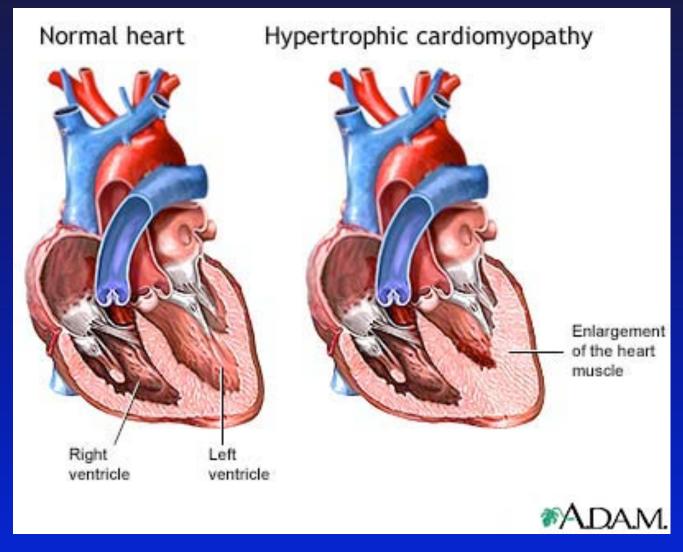
Depression

- 15% to 20% of post heart attack, stent, bypass patients have major depression
- 65% have one symptom of depression
- Under recognized or diagnosed--only 20-30% diagnosed
- May take one year to return to baseline

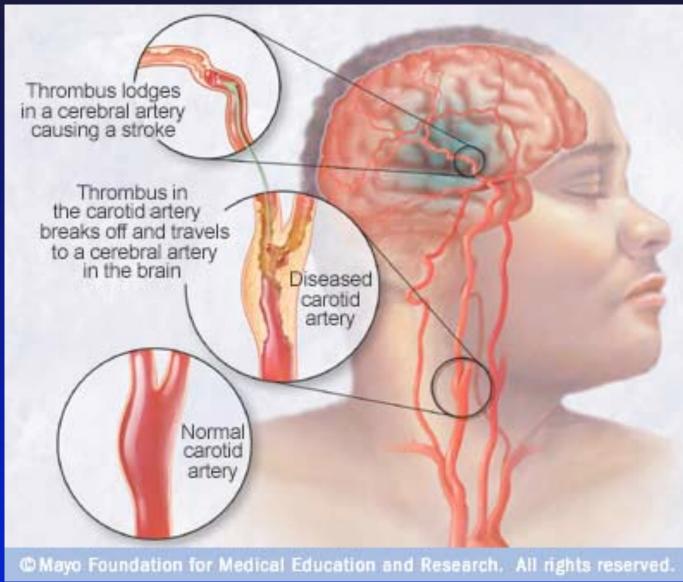
Dental Implications



SUDDEN CARDIAC DEATH IN YOUNG ATHLETES

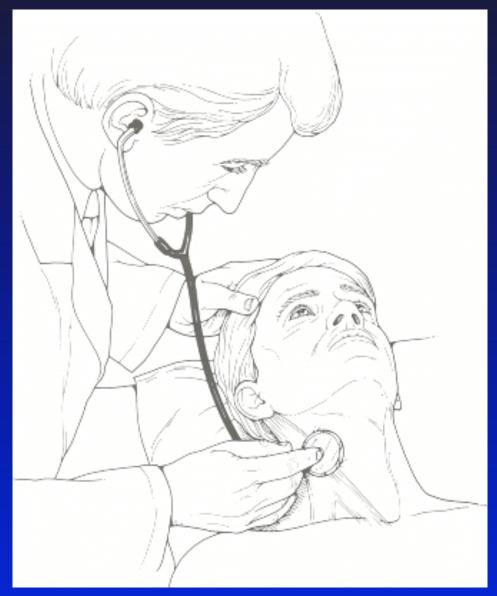


ISCHEMIC STROKE

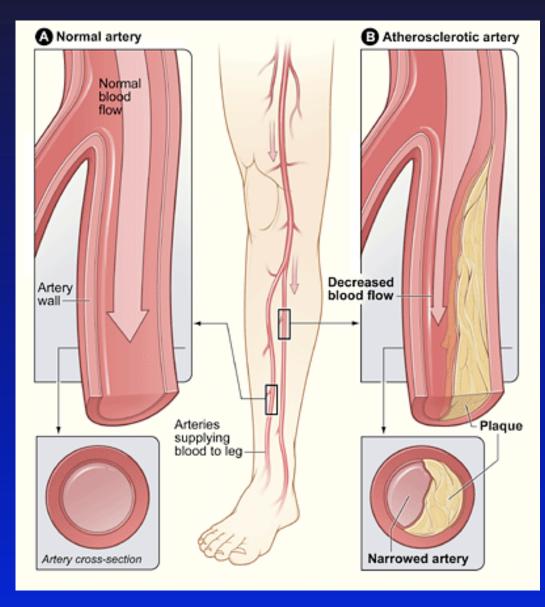




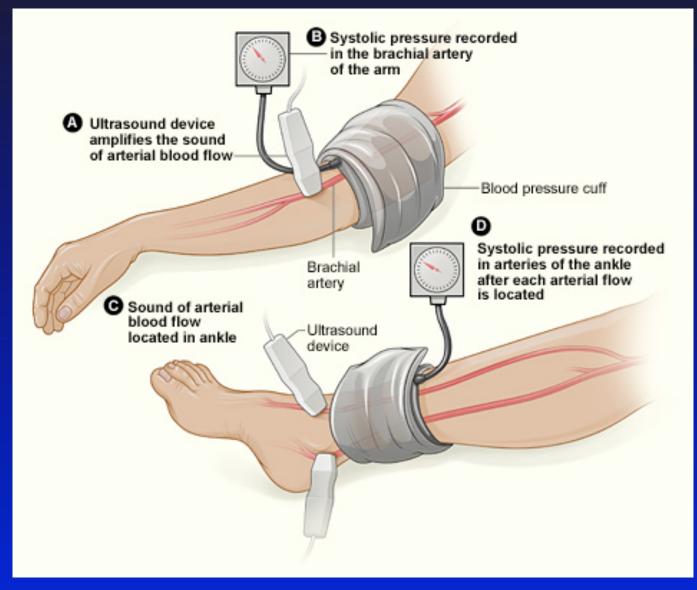
CAROTID EXAM



PERIPHERAL VASCULAR DISEASE



Ankle-brachial index test

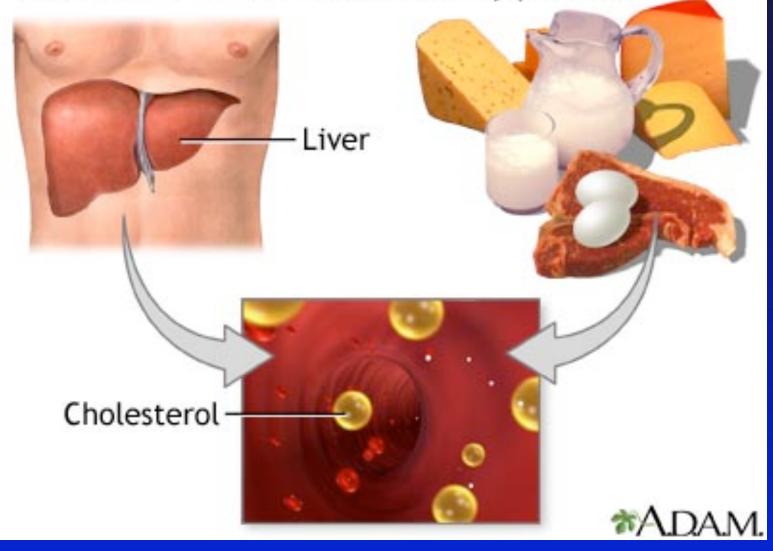


CHOLESTEROL

ALWAYS in Animals

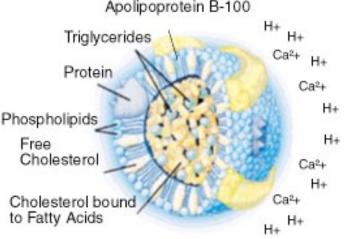
NEVER in Plants

Cholesterol is produced by the liver and we consume it from meat and dairy products

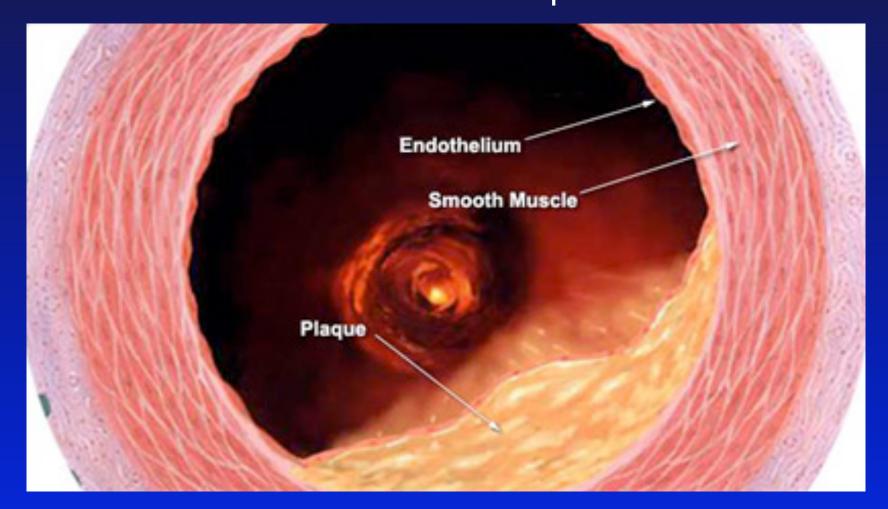


Why is Cholesterol Good?

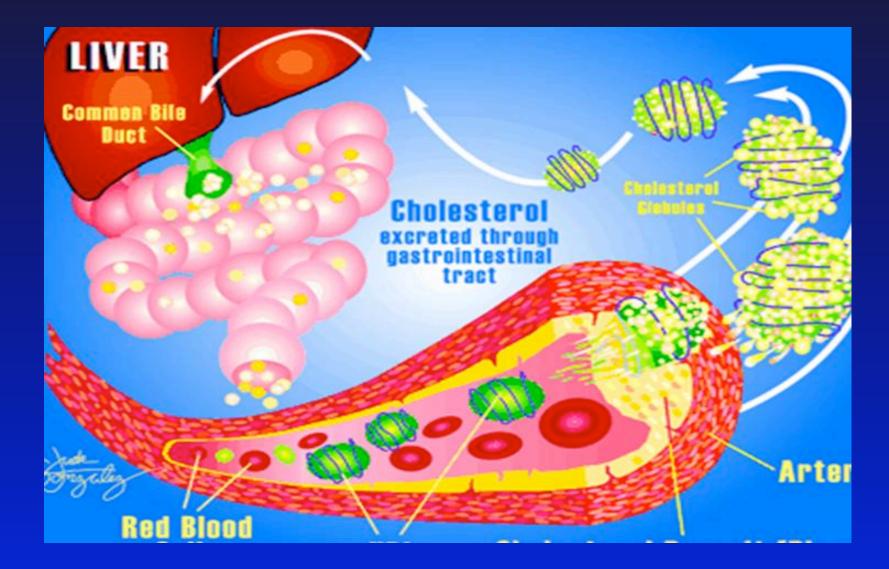
- Essential for normal structure, function and repair of cell membranes
- For nerve conduction and brain function
- Precursor for steroid hormones, e.g. testosterone, estrogens, and adrenal hormones
- Precursor for bile acid
- Precursor for Vitamin D



Why is LDL Bad? It Gets Under The Lining Of The Artery And Forms Plaque



WHY IS HDL GOOD?



How to Lower Your Triglycerides

- Stop alcohol
- Fat and simple sugars
- Exercise
- Obtain ideal weight
- Fish Oil
- Medication if needed

















Although medication can improve your cholesterol, poor lifestyle choices can overwhelm the effects of medication and negatively impact the health of your arteries.





DRUG INTERACTIONS WITH STATINS WHEN TAKING ZOCOR, LIPITOR, MEVACOR, LESCOL *CRESTOR AND PRAVACHOL OK









DRUG INTERACTIONS WITH STATINS WHEN TAKING ZOCOR, LIPITOR, MEVACOR, LESCOL *CRESTOR AND PRAVACHOL OKI







Can Rx Nystatin (suspension or troche)

NEW REVISED GUIDELINES FOR ASPIRIN – PRIMARY PREVENTION

- Men age 45-79 take aspirin if chance of preventing heart attack outweigh the chances of GI bleeding
- Women age 55-79 take aspirin if chance of reducing ischemic stroke outweigh the risk of GI bleeding
- Men under 45 and women under 55 who never had a stroke or heart attack should not take aspirin for prevention
- Patients with diabetes and who possess two additional risk factor (age 40-60, tobacco use, HTN, family history, high cholesterol, low HDL)

Aspirin—uncertain value for primary prevention <u>except</u> for high risk patients--always check with your doctor

Annals of Internal Medicine: March 17, 2009

NEW REVISED GUIDELINES FOR ASPIRIN –<u>SECONDARY</u> PREVETION

- Patients with prior history of CVD, or ischemic stroke
- Doses between 75-325 are equally safe and effective
- Always check with your doctor

Annals of Internal Medicine: March 17, 2009

<u>NSAIDs</u>

- Aspirin
- Ibuprofen (Motrin—Advil)
- Naproxen (Aleve)
- Celebrex

*20-30% develop upper GI bleeding

NARCOTICS

- Vicodin–Hydrocodone/Tylenol—5/500
- Vicodin ES—7.5/700
- Vicoprofen—Hydrocodone/Ibuprofen—7/5/200
- Tylenol with Codeine--#3 and #4
- Percodan---Oxycodone/Aspirin
- Percocet—Oxycodone/Tylenol—2.5/325--etc
- Darvon—Darvon Compound--Darvocet

Do not prescribe NSAIDs during the last 6 to 8 week of pregnancy

- Prolonged gestation
- Premature closure of ductus arteriosus

 Cause maternal and fetal complications
 In breast feeding women, ibuprofen and naproxen can be safely used
 Low-dose aspirin is safe during pregnancy and lactation

NSAIDs

- 1. Increase CV events and stroke-Aleve the least cardiovascular effect
- 2. Exacerbation of heart failure
- 3. Effect on kidneys and salt retention
- 4. Increase BP and worsen control of HTN







DENTAL IMPLICATIONS WITH NSAIDs

- For patients at risk for renal failure and those taking ACE inhibitors (Vasotec, Zestril, etc), ARB (Atacand, Cozaar, etc) or diuretics (Diuril, Lasix, Aldactone, etc)
- For patients taking anticoagulants (Coumadin, Plavix, etc) NSAIDS and aspirin should be avoided
- Patients taking Gingko-may cause a bleeding problem
- Combining ibuprofen and aspirin may increase risk of GI bleeding and decrease cardio protection of aspirin





MerckSource Medical Condition Guide Medical Dictionary Merck Manual Medical Tests













Supplement Facts							
Supplement Facts							
Serving Size: 2 Soft Gels							
Servings Per Container: 60							
	Amount Per Serving	% DV					
Calories	18						
Calories from fat	18						
Total Fat	2.0 g	3%					
Saturated Fat	0.1 g	1%					
Trans Fat	0 g	†					
Vitamin E (d-alpha tocopherol)	30 I.U.	100%					
Omega-3s	Weight #	Volume %					
EPA (Eicosapentaenoic Acid)	650 mg	35 %					
DHA (Docosahexaenoic Acid)	450 mg	25 %					
Other Omega-3s	180 mg	10 %					
Total Omega-3s	1280 mg	70 %					
Oleic Acid (Omega-9)	56 mg	3 %					
* Percent Daily Values are based on a 2,000 calorie diet. † Daily Value not established. # Natural Triglycerides Less than 5 mg of Cholesterol per serving.							

TRIGLYCERIDES

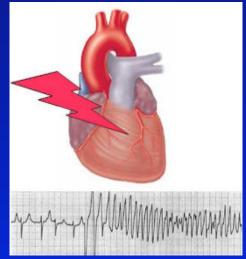




CARDIOVASCULAR HEALTH "SECONDARY PREVENTION"

Systematic review of clinical trials **supplementing** with EPA + DHA found that dietary supplementation significantly reduced the risk of cardiovascular deaths, sudden cardiac death (antiarrhythmic effects), all cause mortality, and nonfatal cardiovascular events.

Clin Cardiol. 2009 Jul:32(7)365-72



OMEGA-3 AND DEPRESSION

- Omega-3 Fatty Acids Subcommittee (American Psychiatric Association) concluded there is evidence for EPA or EPA-DHA based on DBRCT as an *adjunctive* therapy for major depressive disorder and bipolar depression.
- Studies mixed for schizophrenia, ADD, and ADHD

Freeman MP et al J Clin Psychiatry 2006 Archives of General Psychiatry Feb.2010



RHEUMATOID ARTHRITIS

Randomized clinical trials have demonstrated a range of clinical benefits in patients with RA that include reducing joint pain and duration of morning stiffness, when used as an additive with NSAIDs (ibuprofen, naproxen, aspirin)

Calder PC, Proc Nutr Soc. 2008 Nov:67;(4):409-18



OMEGA 3 AND PREGNANCY

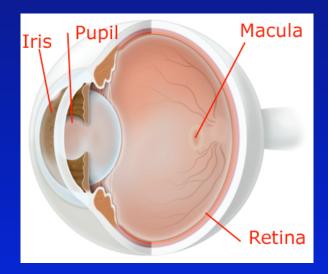
- Fetal brain development—third trimester and first 2 years of infancy
- Neural and retinal development
- Lower risk of preeclampsia
- May increase the duration of PG by 4-6 days

Omega 3 helps build the brain

MACULAR DEGENERATION

Studies (2500 pt's – 7 years) show that omega-3 fatty acids slow the progression of vision loss from age-related early macular degeneration and reverse the signs of dry eye syndrome.

SanGiovanni JP Arch Ophthalmol. 2008 Sep:16(91274-9)



Heart Health: 1000mg-1200mg DHA+EPA High Triglycerides: 4000mg DHA+EPA Rheumatoid arthritis: 2500mg DHA+EPA Children (1-5 yrs): 300mg-400mg DHA Mental Health: 1-2000mg EPA or EPA+DHA Prenatal: 250-350mg DHA Vision: 800mg DHA or 1000mg DHA+EPA



Multiple Vitamins

- Chronic gastrointestinal disorders
- Fail to get the right amount and type of food for proper nutrition
- People with a chronic illness
- Women who are pregnant
- Alcoholism

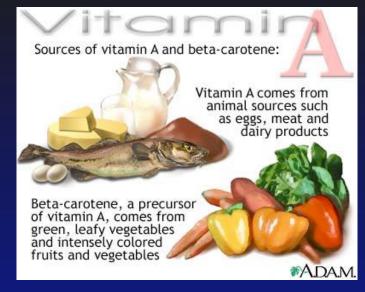




PRENATAL VITAMINS

- Folic acid in prevention of neural tube or spinal defects
- Prevention of low birth weight
- Prevention of neuroblastoma in infants and children
- Vitamin B12 deficiency may be cause of infertility or spontaneous abortion
- Omega 3 important





Vitamin A

- Hepatotoxicity
- Osteopenia and increased fracture risk
- Lung cancer
- Gastric carcinoma
- Increase total cholesterol and TG
- Tetracycline and vitamin A
- Avoid Palmate or Acetate--Beta carotene O K
- good for vision, immune system, bones



Vitamin E is found in corn, nuts, olives, green, leafy vegetables, vegetable oils and wheat germ, but food alone cannot provide a beneficial amount of vitamin E, and supplements may be helpful

*ADAM

Vitamin E

- Increased risk of heart failure
- Does not prevent cancer or CVD
- No effect on dementia
- May increase risk of bleeding
- Decrease anti inflammatory effects of statins
- Increase in mortality if have stroke, open heart surgery, or heart attack
- formation of RBC and vitamin K
- no more then 400 IU/day



Vitamin C

- Increase in kidney stones
- May increase risk of CHD
- May increase woman's age related cataract risk
- Decreases anti inflammatory effect of statins
- Insomnia, fatigue
- In colds and respiratory infections remains controversial
- synthesis of collagen, absorption of Vit E, antioxidant
- no more then 2000mg/day

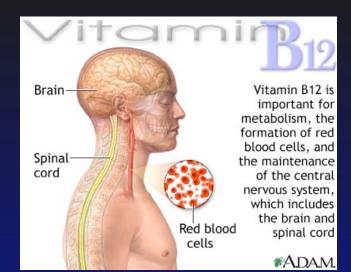
VITAMIN B12

Causes of vitamin B12 deficiency

- Abdominal or intestinal surgery
- A diet low in vitamin B12 (for example, a strict vegetarian diet that excludes all meat, fish, dairy products, and eggs)
- Chronic alcoholism
- Crohn's disease, ulcerative colitis, atrophic gastritis
- Metformin (Glucophage) for type 2 diabetes
- PPI (Nexium, Prilosec, Prevacid)

Symptoms of vitamin B12 deficiency: (Folic Acid)

- Anemia (megaloblastic or pernicious), fatigue, tiredness
- Neurologic (muscle weakness, unsteady gait, numbness or tingling in fingers or toes)
- Psychiatric symptoms (dementia, cognitive impairment, psychoses, depression)
- Dental (bleeding gums, sore mouth and tongue)
- Lab test—methyl malonic acid



DEFICIENCY—RESULTS FROM

- Use of sunscreen
- Liver or kidney problems



- Aging-decrease in provitamin D because of thin skin
- Dark skin-require sixfold as much UV light to produce vitamin D
- GI disorders—Crohn disease, ulcerative colitis, Celiac disease (gluten induced)
- Hyperthyroidism and Hyperparathyroidism
- No sun—Northern climate

DRUGS ASSOCIATED WITH LOW BONE MINERAL DENSITY

- Steroids
- Antiepileptic drugs (Dilantin, Tegretol, Neurotin)
- Nexium, Prilosec, Pepcid, Zantac
- Coumadin
- Actos or Avandia

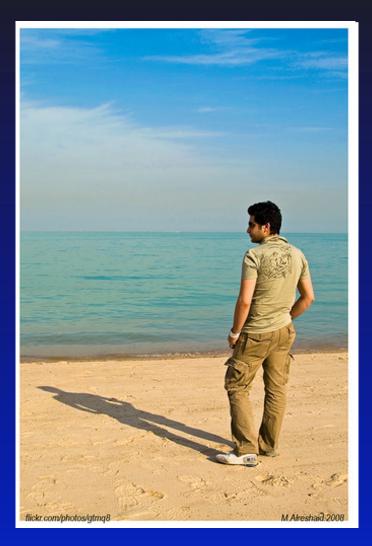












If your shadow is longer than you are tall, you are not making any vitamin D

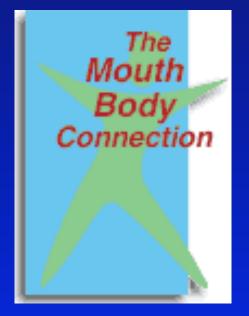
Vitamin D Deficiency

- Rickets/osteomalacia-weak bones/muscle
- Formation of blood cells in bone marrow
- Immune system
- Seasonal affective disorder
- Cardiovascular disease
- Chronic pain—may need higher narcotic dose
- Osteoporosis-- more resorption then formation
 Winter-best time to get checked

VITAMIN D AND PERIODONTAL DISEASE

In the third National Health and Nutrition Examination Survey (NHANES 111), a large US population survey, a low serum 25-hydroxy vitamin D concentration was independently associated with periodontal disease.

Osteoporosis and periodontal disease share several risk factors, and it might be speculated that these pathologic conditions are biologically intertwined.



Cleveland Clinic Journal of Medicine Vol 76-No

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DEPRESSION	311		783.1		
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DIZZINESS	780.4		rs V58.69	Other Symptoms/dia	ignosis code:
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LI GLOCOGE TOLL	PROSTATE CANCER SCREENING		HEP/	ATITIS B SURFACE Ag	CATH
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VITAMIN D AND CANCER

- 16 year study > 88,000 women found higher intakes of vitamin D associated with significantly lower breast cancer risk in premenopausal women
- Breast cancer--women with deficient vitamin D levels had a 60% to 90% increased risk of development of metastatic disease

Journal Clinical Oncology, Vol 27, Page 3757-2009



VITAMIN D AND CANCER

- Prostate cancer-if vitamin D level<20ng/ml the rate of dying from prostate cancer is 8 fold greater then men with vitamin D >30ng/ml
- Studies suggest strong association for the protective benefit of vitamin D for colorectal cancer

Martinez M, Recent Results Cancer 2005;166:177-211

PROSTATE CANCER AND ANDROGEN DEPRIVATION THERAPY

- To reduce levels of male hormones (testosterone) which stimulate the growth of prostate cells and fuels the growth of cancer
- Within 4 years of starting androgen therapy, 50% of men will have osteoporosis –lose 4-13% BMD every year (estrogen regulates bone metabolism in men and women)
- More likely to have periodontal disease
- Need to change lifestyle
 - Smoking cessation
 - Alcohol consumption
 - Resistance exercise
 - Calcium 5-800 mg/day
 - Vitamin D 1000 IU/day or more
- depends on lab test

One in two men with prostate cancer will, at one point, receive ADT following diagnosis

CALCIUM SUPPLEMENTS

- Calcium carbonate

 least expensive
 must be taken with food
- Calcium citrate

-best with those with low gastric acid production and those taking Nexium,
Prevasid, Prilosec, to block stomach acid
-don't need to take with food

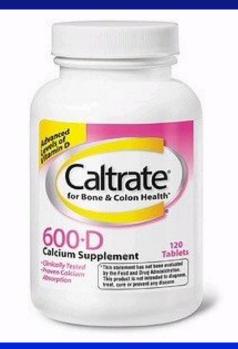
- Take with magnesium if blood test shows it is low
- Do not take with thyroid, bisposphonates, dilantin, cortisone, or tetracycline medications (take 2 hours before or 4 hours after)
- Those who have liver disease, kidney disease, high or low parathyroid levels, talk with Dr. first





Evidence supports use of 1200mg calcium and 800-1000 IU of vitamin D3 to improve bone density, and decrease hip and other non-vertebral fractures.

(take in divided doses-500mg/dose) Tang ,et al Lancet 2007

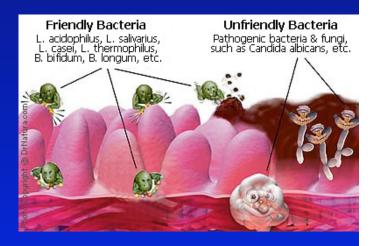




PROBIOTICS

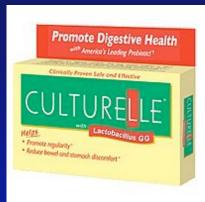
- Treat diarrhea, especially with AB Tx
- Prevent and treat vaginal yeast and urinary tract infection from antibiotic treatment
- Shorten the duration of intestinal infections
- Treat irritable bowel syndrome (IBS)
- Reduce bladder cancer recurrence
- Prevent eczema, allergy, and asthma in children
- Child-vomiting and diarrhea
- Enhance the efficiency of Flagyl

Do not take if have AIDS, or undergoing radiation or chemo



Irritable Bowel Syndrome Constipation





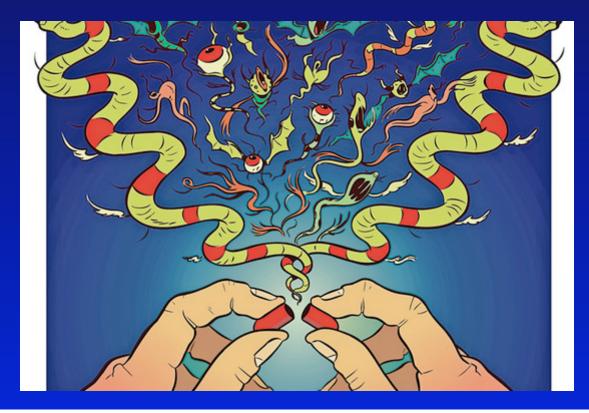
Ulcerative Colitis Antibiotic-Associated Diarrhea Vaginal Yeast Infection Allergy

Antibiotic-Associated Diarrhea Allergy Celiac Disease



National Center for Complementary and Alternative Medicine VS

Science Based Medicine



Physical activity, diet, and combined activity and diet interventions can mitigate progression of chronic disease and in fact reverse existing disease





The "Toxic Environment"

- 7% of U.S. Population eats at McDonald's every day
- The average child sees 10,000 food commercials each year, mostly for candy, fast food, soft drinks, and sugared cereals
- Energy-saving devices reduce physical activity



French Fries Today

20 Years Ago





210 Calories 2.4 ounces 6.9 ounces Calorie Difference: 400 Calories

How to burn 400 calories: Walk 1 hours (based on 130 pound person)





1200 calories

Center for Science in the Public Interest (www.cspinet.org)

Regal Theater

Med. Popcorn & Soda 1500 calories (720mg) 1800 mg salt

<u>AMC Theater</u> Large Popcorn 1030 calories 800 mg salt

1000 calories Walk 21/2 hours

Calorie and Salt Bombs



Causes of Obesity

Energy Intake > Energy Expenditure

or

Calories In > Calories Out

Weight management = Healthy eating

ORGANIC

Why buy organic foods?

- Less chemical residue--insecticides, herbicides, fungicides
- Kinder to the environment-less chemical runoff into the water system
- Kinder to the farmed animals





FARMED SALMON

ATLANTIC SALMON=FARMED SALMON ALASKA AND NORWEGIAN=WILD SALMON

- Less Omega 3
- More pro-inflammatory Omega 6
- Antibiotics and pesticides
- Salmon color dye in food
- More PCBs and dioxins



GUIDE TO PESTICIDES

Rank	Fruit or Veggie
1 (Best)	Onions
2	Avocado
3	Sweet Corn (Frozen)
4	Pineapples
5	Mango (Subtropical and Tropical)
6	Sweet Peas (Frozen)
7	Asparagus
8	Kiwi Fruit (Subtropical and Tropical)
9	Cabbage
10	Eggplant
11	Cantaloupe (Domestic)
12	Watermelon



FoodNews.org

37	Lettuce
38	Grapes (Imported)
39	Potatoes
40	Kale / Collard Greens
41	Cherries
42	Spinach
43	Sweet Bell Peppers
44	Nectarines
45	Blueberries (Domestic)
46	Apples
47	Strawberries
48	Peaches
9 (Worst)	Celery



"The whiter the bread, "The sooner you're dead."



AMERICAN JOURNAL OF CLINICAL NUTRITION

- Harvard Medical School—Brigham and Woman's Hospital Study
- 74,000 women aged
 38-63 years-12 years
- Weight gain inversely associated with whole wheat

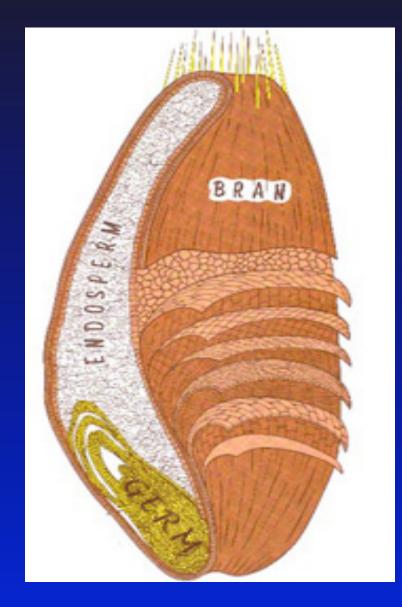
Am J Clin Nutr 2003;78:920-27



WHOLE GRAINS

ROLLED OATS
POPCORN
WHOLE WHEAT FLOUR
BROWN RICE
WHOLE CORNMEAL
BARLEY

WHOLE GRAINS REDUCE
HEART DISEASE
STROKE
CANCER
DIABETES
OBESITY





THIAMIN (B₁), RIBOFLAVIN (B₂), NIACIN (B₃) ZINC, FOLIC ACID, MANGESIUM, COPPER PHOSPHORUS, IRON, CALCIUM,SODIUM, AMINO ACIDS, ANTIOXIDANTS, FIBER, PLUS **15 MORE**

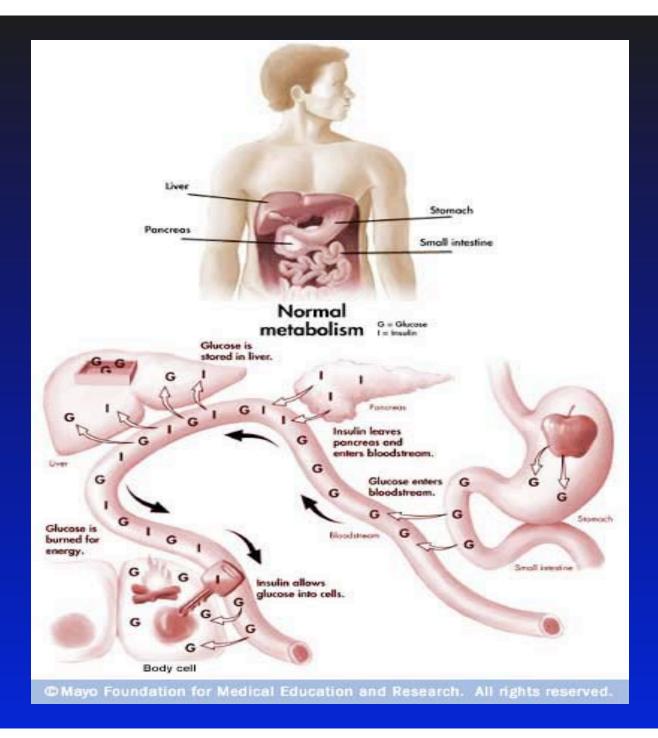
VITAMIN B₁, B₂, B₃, IRON, FOLIC ACID (Molasses or Carmel)



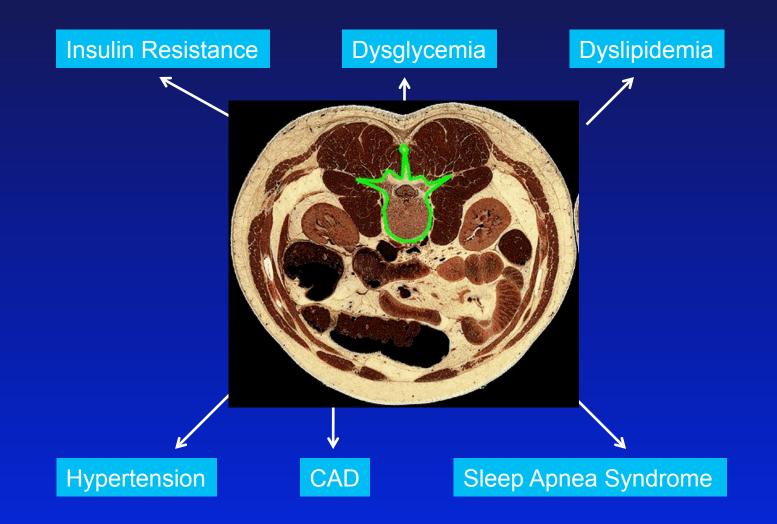
Wheat flour Unbleached flour Semolina Cracked wheat Durum wheat Enriched flour Multigrain Enriched flour

THESE ARE NOT THE SAME AS "WHOLE WHEAT" or "MULTI-GRAIN WHOLE GRAIN"





Associations of Adiposity



OBESITY ASSOCIATED MALIGNANCIES

- Breast (post-menopausal)
- Endometrial
- Prostate
- Kidney
- Colon
- Esophagus
- Pancreas
- Gallbladder



Nutrition Facts Serving Size 1 cup (228g) Servings Per Container 2

Amount Per Servin	9
Calories 250	Calories from Fat 110
	% Daily Value*
Total Fat 12g	18%
Saturated Fat 3	g 15%
Trans Fat 3g	
Cholesterol 30mg	g 10%
Sodium 470mg	20%
Total Carbohydra	nte 31g 10%
Dietary Fiber 0	g 0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%



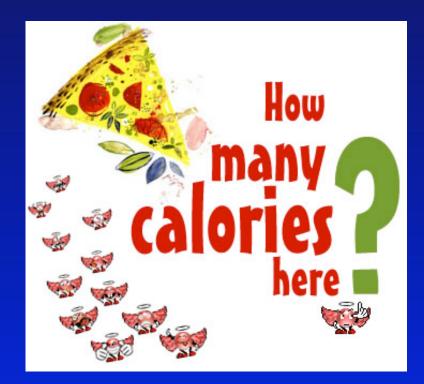
1 teaspoonful=2400mg RDD=1500 to 2000mg



Nutrition Facts
Serving Size 1 Can Servings Per Container 12
Amount Per Serving
Calories 140
% Daily Value*
Total Fat Og 0%
Sodium 50mg 2%
Total Carbohydrate 39g 13%
Sugars 39g
Protein Og
Not a significant source of calories from fat, saturated fat, trans fat, cholesterol, dietary fiber, vitamin A, vitamin C, calcium and iron.
*Percent Daily Values are based on a 2,000 calorie diet.

LOOKING UP NUTRITIONAL INFORMATION

- healthydiningfinder.com
- Google -- How many calories in---



If You Don't Know What You Are Eating...

How Can You Make The Best Choice?

What kind of exercise will give me the benefits?

- Exercise does not have to be a workout at the gym
- The key is doing some type of moderate exercise routinely--time of day
- 9 MONTHS!!!!!
- Check with your health care provider before starting an exercise program and a certified health and fitness professional

Women who walk 2 or more hours a week, especially at a brisk pace, are significantly less likely to experience any type of stroke than women who do not walk.

Woman's Health Study 4-13-2010 39,315 women, 45 years or older



Benefits of Exercise

<u>Improves</u>

- Mood
- Self confidence
- Sense of well-being
- Have a better sex life!



<u>Reduces</u>

- Stress
- Depression
- Anxiety
- Blood pressure
- Blood sugar
- Bone mineral loss





- Post surgical recovery is faster
- Increases weight loss
- Emphysema
- Increases joint function-arthritis



<u>Decreases</u>

- CHD by 40%
- Stroke by 30%
- Type II Diabetes by 30%
- Medication dosage

Pedometer





<u>www.walk4life.com</u> 888-422-1806 40% Code: DRL-10

Benefits of using Pedometers

- Helps you realize just how active you are (or are not) in your everyday life
- Gives you a visible cue to see how far you are walking
- Acts as a motivator
- Inspiration on a daily basis
- Immediate feedback



Primary and secondary prevention of hormone driven cancers

- Lose weight
- Exercise
- Vitamin D





WALKING/TREKKING POLES

- Helps stability and balance
- Takes stress off of lower joints
- Build upper body strength
- Reduces fatigue
- Stand up straighter as opposed to a cane
- Burn more calories



Strength training builds muscle and increases your fat-burning capacity (increases your BMR)
By the age of 65, many seniors have lost 30-40% of their muscle mass





Impact of Physical Activity on Cancer



- Accelerates movement of food through intestine, reducing time bowel lining is exposed to mutagens.
- May decrease exposure of breast tissue to circulating estrogen
- Reduce risk of colon, breast, prostate, and other cancers by improving energy metabolism and reducing concentrations of insulin and related growth factors

American Cancer Society

EXERCISE AND COLON CANCER

- Patients with stage III colon cancer post surgery and chemotherapy
 - 6 or more hours/week exercise
 - Had a 47% greater chance of survival then controls
- Patients post surgical resection for colon cancer
 61% reduction in mortality

Meyerhardt, et al.Jour Clin Oncol 2006



EXERCISE AND BREAST CANCER PRIMARY PREVENTION

Increasing physical activity, even if started later in life, reduces overall risk of developing breast cancer by **20%** across women of all risk categories, including those considered to be high risk.

C Brown et at M.C. Anderson Cancer Center 2009

PHYSICAL ACTIVITY AND LONGEVITY

- Age 70—8 yr mortality 15% vs 27%
- Age 78—8 yr mortality 26% vs 40%
- Age 85—3 yr mortality 7% vs 24% yr mortality

Reduces frequency of falls, fractures, and joint or musculoskeletal pain





Aging

- Progressive weight gain
- Decreased metabolism
- Loss of muscle mass
- Pancreatic Beta-cell function
- Adverse distensibility of the arterial tree



Perseverance = Success

Procrastination = Failure

Recommended Reading

"Conquering Diabetes" by Anne Peters, MD

"Eating Between the Lines" by Kimberly Lord Stewart

Mayo Clinic Heart Book

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