DISCLAIMER

The information presented is for educational purposes only. The material is not medical advice and not intended for medical situations discussed.

Information in this field is always evolving and constantly changing.

Always consult your doctor first.

Angina—no damage to heart muscle

The Widow Maker Heart Attack

Modifiable Risk Factors for Cardiovascular Disease

CORONARY ARTERY SPASM

<table>
<thead>
<tr>
<th>GENETICS</th>
<th>MODIFIABLE FACTORS</th>
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<tbody>
<tr>
<td></td>
<td>MODIFIABLE RISK FACTORS</td>
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<td></td>
<td>DIABETES</td>
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<td>HIGH CHOLESTEROL</td>
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<td>SEDENTARY/HYPERLIP.</td>
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<td></td>
<td>STRESS</td>
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</tbody>
</table>

Rupture of Plaque

Increase odds in your favor
Delay onset of bad outcomes
**BALLOON ANGIOPLASTY**

A guide wire with a deflated balloon is passed through the catheter in the narrowed artery. The balloon is then inflated to open the narrowed artery and the stent expands around the balloon. The balloon is then deflated and the stent is left in place to keep the artery open.

- **STENTS**
  - Underexpansion
  - Injure artery wall

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**ADVERSE EFFECTS OF STENTS (24-48 hours)**

- Acute access site pain with hypotension
- Coronary artery damage
- Arrhythmias
- Thrombus (blood clot)
- Heart attack—4%
- Cardiac mortality—1%

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**ADVERSE EFFECTS OF BYPASS SURGERY**

- Cognitive Impairment - short term memory loss, depression 15%
- Stroke or MI—5%
- Death—3%
- Insomnia
- Flashbacks
- Infection
- 1/300 second bypass

---

**Bypass Surgery**

Neither angioplasty, stents or cardiac bypass surgery is curative for CVD. They do relieve symptoms but do not treat the cause.

JAMA, NOV. 10, 2010 - Vol 304, No.18
Dental Appointments after Stents or Open Heart Surgery

Dental Implications for Patients with Stents or Bypass Surgery

Do Not Stop Taking Medication Without a Physician Approval

Patients on Coumadin for AFib, Mechanical Heart Valve, DVT, Pulmonary Embolism

INR of 3--it takes 3x's longer to stop the bleeding then it would take someone not on Coumadin

INR 1 or less if not on Coumadin

INR of 2-3 normal if on Coumadin

Do Not Stop Taking Medication Without a Physician Approval

Patients on a NOAC for AFib, DVT, Pulmonary Embolism

Replace Coumadin with NOAC’s

Do Not Stop Taking Medication Without a Physician Approval

SUDDEN CARDIAC DEATH

HBP
SMOKE
OVERWT
SEDENTARY
NONCOMPLIANT

SUDDEN CARDIAC DEATH IN YOUNG ATHLETES

Genetic-1 in 500
First degree relatives of SCD victims are at a greater risk for CVD and would benefit from screening.

**SCA vs. Heart Attack**

<table>
<thead>
<tr>
<th>Electrical Problem</th>
<th>Pump Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudden Cardiac Arrest</td>
<td>Heart Attack</td>
</tr>
</tbody>
</table>

AED | NO AED

**ISCHEMIC STROKE**

- Thrombus forms in a cerebral artery causing a stroke
- Thrombus in the cerebral artery breaks off and travels to a cerebral artery in the brain

- Plaque in Carotid
- Atrial Fibrillation
- Heart Valve Problems

**Hemorrhagic Stroke**

15% of strokes

- Weakened vessel wall ruptures, causing bleeding in the brain

**Peripheral Arterial Disease**

- Often underdiagnosed
- 20-25% >70 yrs have PVD

- Poor circulation can cause leg pain
PERIPHERAL ARTERIAL DISEASE

Spinal Stenosis
Sciatic Nerve
Venous Thrombosis

Lower-Extremity Ulcers
Smokers and diabetics most affected (30%)
May be arterial or venous

Cardiovascular disease is the leading cause of death among women & men of all ages

One in 3 women will die of CVD or stroke
One in 31 women will die of breast cancer

HEART DISEASE SYMPTOMS IN WOMEN

Chest pain is shorter, less severe then men
Neck, shoulder, jaw, throat, back discomfort
Nausea and indigestion (Don’t confuse with heartburn & gallbladder)
Unusual fatigue
Shortness of breath
*Walk up flight of stairs

Women can have the same risk factors as men for CVD

Smoking
Overweight
High blood sugar
High cholesterol
Family history
Father or brother < age 55 with CVD
Mother or sister < age 65 with CVD

Pregnancy Complications Tied to Heart Disease

Gestational Diabetes
Preeclampsia
Premature coronary heart disease is a leading cause for morbidity and mortality in patients with lupus or rheumatoid arthritis.

Endometriosis is associated with increased risk of CHD. The association was strongest among young women.

Research links Polycystic Ovarian Syndrome, with Infertility, Coronary Heart Disease, Diabetes, Obesity, Hypertension.

Cardiotoxicity of Herceptin.

Risk of Heart Disease in Women after Radiotherapy for Breast Cancer (7%).

Diagnostic tests in women not as accurate as those in men.
MICROVASCULAR DISEASE

Women may have less blockage in main arteries but more in small vessels

Coronary angiograms will not diagnose microvasculature disease

Stress test
Cardiac MRI
Intravascular ultrasound

Diagnosis Coronary Artery Disease
Physical activity

Diagnosis Coronary Microvascular Disease
Shortness of breath
Unusual fatigue
Mental stress

Heart Valve Defects

Normal aortic valve
Tricuspid
Bicuspid
Congenital heart defect

Transcatheter Aortic Valve Implantation

A Common Risk Factor For Strokes and Heart Failure
THE IMMUNE SYSTEM IS A COMPLEX AND POWERFUL DEFENSE MECHANISM

IMMUNE ORGANS

WHITE BLOOD CELLS
All white blood cells are known as LEUKOCYTES

Leukocytes are divided into 3 classes:
1. Granulocytes - neutrophils, eosinophils, basophils
2. Monocytes - evolve into macrophages
3. Lymphocytes - 2 kinds*
   - B cells — produce specific antibodies
   - T cells — help destroy infected cells

Antigens (Usually Foreign Invaders) Activate our Immune System

THE DEFENDERS

Key feature of the immune system is its ability to recognize self against non-self cells.

All your cells are stamped “SELF”
All invaders, such as bacteria and virus are “NON-SELF”

White Blood Cells
T cells, B cells

PRO-inflammatory Cytokines (Soldiers)

ANTI-inflammatory Cytokines (Peacekeepers)

Order
Harmony
Health

Disorder
Disharmony
Disease

Examples of Autoimmune Disorders
Addison’s disease
Celiac disease
Dermatomyositis
Graves disease
Hashimoto’s thyroiditis
Multiple sclerosis
Myasthenia gravis

Examples of Autoimmune Disorders

75% Women            1 in 12 Women

Self Cells Destroying Self Cells

Rheumatoid arthritis
Sjogren syndrome
Type 1 diabetes
Psoriasis

Hypothyroidism
15% of women >35 have hypothyroidism and only ½ diagnosed (men 5%)

- Low vitamin D & Calcium
- Slowed heart rate
- High cholesterol
- B12 deficiency
- Type 1 diabetes

T Cells Attacking Beta Cells in Pancreas -- Type One Diabetes

Hypothyroidism

Body Parts Involved in Autoimmune Diseases

- Brain
- Eyes
- Joints
- Skin
- Thyroid
- Liver
- Bladder
- Vagina

75% Women            1 in 12 Women
HYPOTHYROIDISM

Some Symptoms of Hypothyroidism
- Weight gain
- Fatigue
- Depression
- Irritability
- Dry skin
- Muscle cramps, joint pain
- Abnormal menstrual cycles

Teens – affects growth and development
Age > 60 – forgetfulness, fatigue, hair loss

HYPOTHYROIDISM

Need to be your own advocate

- Doctors Hear Patients’ Calls for New Approaches to Hypothyroidism 4-11-2016
- Antonio C Bianco MD PhD - Is T4
- Cleveland Clinic, Mayo Clinic
- American Thyroid Association (ATA)
  Guidelines for the Treatment of Hypothyroidism

SJOGREN SYNDROME

90% female
An autoimmune inflammatory connective tissue disease (90% middle-aged female)
- Dry eyes, dry mouth, fatigue, overgrowth of Candida

Other causes of dry mouth
- Antidepressants
- Antipsychotics
- Antihypertensives
- Antihistamines
- Rheumatoid arthritis

Oral Lichen Planus

(Autoimmune disorder--T cell mediated)

45% of women with LP on levothyroxine
Synthroid

RHEUMATOID ARTHRITIS AND THE TEMPOROMANDIBULAR JOINT

50% OF PT WITH RA HAVE TMJ INvolVEMENT

GOOGLE (MILD JAW EXERCISES)

Lupus

Lupus is a chronic autoimmune disease that can damage skin, joints or organs.

Females are at greater risk but mostly it is young women between ages of 15 to 44

Fatigue
Joint pain
Butterfly rash
Lupus Erythematosus

Red ulcers surrounded by a white halo with white radiating lines. Found on cheeks and hard palate.

Psoriasis severity linked to risk of abdominal aortic aneurysms
American Heart Association April 14, 2016

Premature atherosclerosis is well-documented both in Lupus and in Rheumatoid Arthritis

Donated tissues and organs attacked by a patient’s immune system
Cortisone
Sirolimus
Cellcept
Prograf
(Inhibit B & T cells)

No dental work 3/6 months following organ transplant

“Dental Management of the Organ Transplant Patient”

Their compromised IS place them at risk for systemic & oral infections and requires consultation with your patient’s physician.

Premed (?) Call Dr.-- No Biaxin or Zpak

Dental Complications with Immunosuppressant Drugs

Delayed wound healing
Gingival hyperplasia
Infections
Oral candidiasis
Aphthous ulcers
Progressive PD
Cold sores
Do not take supplements or antioxidants without your doctor’s permission when on Immunosuppressant Drugs

Immunotherapy Is Game-Changer for Cancer Treatment

Periodontal disease initiation and progression occurs as a response of our immune system (B-T cells) to pathogens (antigen)

Who is in control? Microbes Genetics?

PERIODONTAL DISEASE

CHOLESTEROL

ALWAYS in Animals

NEVER in Plants
Why is Cholesterol Good?

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

Fewer than half the adults diagnosed with high cholesterol knew whether they had ever been tested for thyroid disease.

May be low in vitamin D
Slowed heart rate
High cholesterol
B12 deficiency

STATIN SIDE EFFECTS
Liver damage
Increased blood sugar or type 2 diabetes
Muscle and joint pain
Cataracts (pt. with diabetes)

Dose related
Age related

If statin intolerant rule out:
- Vitamin D deficiency
- Hypothyroidism
- High dose of statin
- Drug combinations
- Kidney/liver disease

Azithromycin Increased Risk of Cardiac Arrhythmia and Death in Patients with CVD
Annual Fam Med. 2014;

QT interval prolongation
Slow heart rate
Drugs to treat arrhythmias (Betapace, amiodarone)
WHAT CAN I PRESCRIBE FOR PATIENTS WITH CARDIOVASCULAR DISEASE

Amoxil—amoxicillin
Augmentin—amoxicillin/clavulanate
Keflex—cephalexin
Cleocin—clindamycin
Vibramycin—doxycycline
Flagyl—metronidazole

Antibiotics and Pregnancy

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>Amoxicillin (Amoxil)</td>
<td>Ciprofloxacin (Cipro)</td>
</tr>
<tr>
<td>Augmentin</td>
<td>Clarithromycin (Biaxin)</td>
</tr>
<tr>
<td>Azithromycin (Z-Pak)</td>
<td>Doxycycline-Vibramycin</td>
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<tr>
<td>Cephalexin (Keflex)</td>
<td>Clindamycin (Cleocin)</td>
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<tr>
<td></td>
<td>Metronidazole (Flagyl)?</td>
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Antibiotics and Nursing

<table>
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Analgesic
Antipyretic
Anti-inflammatory
Prevent platelet aggregation

ASPIRIN –SECONDARY PREVENTION

GI Bleeding
Hemorrhagic Stroke
Risk increases with age and dose

Patients with prior history of CVD, PVD, or ischemic stroke should be on aspirin
Always check with your doctor
ACC and AHA recommend 81mg
After 80 not a lot of evidence on use
**ASPIRIN – PRIMARY PREVENTION**

Uncertain value for primary prevention of CVD except:

You have diabetes and at least one risk factor — smoking, HBP, genetics — and you're a man older than 50 or a woman older than 60

*Mayo Clinic Nov 3, 2015*

You need to qualify for aspirin
Always check with your doctor

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**Do Not Take Aspirin**

History of stomach ulcers
Gastrointestinal bleeding
Blood clotting disorders
Uncontrolled hypertension

With methotrexate
   Liver & kidney damage (hi dose aspirin)
   (ibuprofen OK)

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**NSAIDs**

Nonsteroidal Anti-Inflammatory Drugs
Down regulate pro inflammatory cytokines

Aspirin—81mg, 325mg, 500mg, 650mg
Ibuprofen (Motrin—Advil) 200mg—q 4-6 hours
Naproxen (Aleve) 220mg—q 8 hours

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**NSAIDs (not aspirin)**

Effect on kidneys and fluid retention
Increase BP and worsen control of HTN
Increase CV events and stroke

*September 10, 2012—Circulation*

*Harvard Health July 13, 2015*

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**BLACK BOX WARNING**

Cardiovascular Risk

NSAIDs—risk of serious cardiovascular thrombotic events, myocardial infarction, and stroke

Gastrointestinal Risk

NSAIDs—risk of GI events including bleeding and ulceration,

Risk greater at higher dose, elderly patients, & pt. with liver or kidney disease

Be careful with patients on BP medicine (may increase BP)

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**DENTAL IMPLICATIONS WHEN PRESCRIBING IBUPROFEN / NAPROXEN**

In patients with prior heart attack, most (NSAIDs), not aspirin, even when taken for as little as one week, are associated with an increased risk of death and recurrent heart attack.

*Circulation May 9, 2011*

*UpToDate Jan.6, 2014*

*FDA July 2015*

Tylenol and Codeine may be best choice
DENTAL IMPLICATIONS WHEN PRESCRIBING IBUPROFEN / NAPROXEN

DO NOT PRESCRIBE WITH:
Aspirin, Coumadin, Plavix, Pradaxa, Xarelto, Eliquis
(Increase bleeding time, stroke, heart attack)

Rx—Tylenol with Codeine or Vicodin (Norco)

DENTAL IMPLICATIONS WHEN TAKING NSAIDs, ASPIRIN, COUMADIN, PLAVIX, PRADAXA, XARELTO, ELIQUIS

Increases risk of bleeding gums

Pregnancy and NSAIDs

1\textsuperscript{st} and 2\textsuperscript{nd} trimester \textit{some} risk of harm to the fetus
3\textsuperscript{rd} trimester more risks

In breast feeding women, ibuprofen, naproxen and Tylenol can be safely used

Aspirin and Nursing

Nursing women are advised against aspirin use because of the possible development of Reye's Syndrome in their babies.

Drug safety while breastfeeding (Google)
325mg  500mg  650mg
Analgesic and Antipyretic
50% of all sudden (acute) liver failure in US caused by Tylenol—ck pt for liver disease and drinking (no more then 3 drinks/day)
Maximum adult dose = 3000 mg/day

TYLENOL (ACETAMINOPHEN) 500MG
MOTRIN OR ADVIL (IBUPROFEN) 200MG

Acetaminophen (Tylenol) 250 mg,
Aspirin 250 mg
Caffeine 65 mg

Excedrin
400 mg aspirin
32 mg caffeine
500 mg aspirin
32 mg caffeine
250 mg Tylenol
250 mg aspirin
65 mg caffeine

Treating Pain in Children
For children aged under 3/6 months, Tylenol should be offered.
Children aged over 3/6 months can be offered both Tylenol and ibuprofen
Extra Strength Tylenol products should not be given to children younger than 12.

Treating Pain in Children
Aspirin is approved for use in children older than 2. Children recovering from viral infection (chicken pox, flu) should never take aspirin because of Reye’s syndrome

National Reye’s Syndrome Foundation
A registered 501(c)3 charity whose mission is to eradicate the incidence of Reye’s Syndrome.
HEART-FRIENDLY MEDICINES

EXCEDRIN

Tylenol with codeine

Bayer enema

NORCO

Vicodin

Percocet

CAUTION--NARCOTIC SIDE EFFECTS WITH:

Antidepressants: Elavil, Wellbutrin, Celexa, Lexapro, Zoloft, Serzone, Effexor, Prozac, etc.

Antipsychotics: Clozaril, Holdol, Lithium, Abilify, Seroquel, Zyprexa, Thorazine, etc.

Alcohol

Symptoms: slow heart rate, confusion, respiratory depression

ALL DRUGS HAVE COLLATERAL DAMAGE. THERE IS NO FREE LUNCH

Alzheimer's drugs don't work for everyone, and they can't cure the disease or stop its progression

JAMA Jan 1, 2014
Agency for Healthcare Research and Quality Oct 4, 2013
Consumers Report Best Buy Drugs Jan 7, 2013

Take off slowly!

Side Effects from Multiple Meds Are Double Trouble for Those Over 65

40% of people over 65 take 5 or more Rx medicines

OVERMEDICATION

Taking 5 Rx drugs, 85% chance of adverse reaction

Start low-go slow! Over 65, start drugs 1/3 to 1/2 the usual adult dose

Any new symptom should be considered a drug side effect unless proven otherwise
SUPPLEMENTS AND VITAMINS

Dietary supplements are classified as foods

Prohibits FDA from regulating the supplement business

Who takes dietary supplements

Older adults
Women (54%) – Men (43%)
Those with the most formal education
Those who are wealthier and healthier

There is no one food responsible for good health

Every food is a Super Food

“If it sounds too good to be TRUE then it probably IS.”
New York attorney general says many herbal supplements mislabeled
February 04, 2015
Institute of Nutrition at Columbia University Medical Center

A false advertising suit claims Almond Breeze is only 2 % almonds
July 29 2015
It's mostly water, sugar, carrageenan, lecithin
Almond Breeze $3/qt
Rice Dream $3.70/qt
Milk $1.80/qt

Milk Made From Peas
Ripple has 8 g of protein per serving
Almond milk has 1g
Coconut milk has none.
Cashew milk has none
Cow’s milk 8 gm
$4.50–1.5 qt

If you're considering a dietary supplements, educate yourself about the product before you take it.

Be Careful if You Buy Supplements Online
- Many testimonials are phony
- Many “studies” are worthless
- “News” sites may be fake
- Free Samples can be costly

Here are warning signs of health quackery
Words such as “miraculous”, “instant”, “secret”, or “amazing”
Vague claims such as “raise your energy level”, or “boosts immune system”
Claims that a product will cure a wide variety of illnesses. Cure-alls seldom cure anything.
Multi-level marketing, testimonials
Never use a herbal product or dietary supplement while pregnant or breastfeeding.
Supplements Can Make You Sick – Consumers Reports

OMEGA 3 FATTY ACIDS
Fish Oil

Benefits of Fish Oil
Cardiovascular disease 500-1000 mg/day
Rheumatoid arthritis 2000 mg/day
Osteoarthritis 2000 mg/day
Triglycerides 3000-4000 mg/day

Vitamin C
Vitamin C is a family of compounds
1. Ascorbic acid
2. Rutin
3. Bioflavonoids
4. Factor K
5. Factor J
6. Factor P
7. Tyrosinase
8. Ascorbinogen
VITAMINS ARE NOT INDIVIDUAL COMPOUNDS BUT BIOLOGICAL COMPLEXES

You can not replicate in a pill what you get in your diet

VITAMIN A
Vitamin K
Vitamin C
Folate
Fiber
Calcium
Molybdenum
Manganese
Potassium
Iron
Vitamin B
Vitamin B2
Vitamin B6
Tryptophan
Copper
Manganese
Zinc
Phosphorus

MULTIVITAMINS

Lots of Types
Lots of Confusion
Take Daily?

Claims such as “Stress Formula”, High Potency”, “Natural” are marketing ploys

Multiple Vitamins May Benefit

Those who have chronic gastrointestinal disorders
Those who fail to get the right amount and type of food for proper nutrition
People on a restrictive weight loss diet
People with a chronic illness
Women who are pregnant or breastfeeding
Prolonged weight loss diets
Age—over 65

PRENATAL VITAMINS

Folic acid (vitamin B9)
Prevention of neural tube or spinal defects
Prevention of low birth weight
New recommendation for iodine in all prenatal vitamins (150ug)
**Multivitamin Use and Breast Cancer**

Postmenopausal women with breast cancer using MVM had lower breast cancer mortality than non-users.

*Breast Cancer Res Treat. 2013 Oct;141(3):495-505*

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**Daily multivitamin use could reduce cataract risk (9%)**

21 February 2014  Brigham and Women’s Hospital

A cataract scatters light and prevents a sharp image from reaching your retina.

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**Age-Related Macular Degeneration**

Intermediate  Advanced

AREDS will not prevent the progression of cataracts

Vit A, C, E  Zn, Cu  Central Vision  No Vit A- Lutein Zeaxathin

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**Antioxidants During Cancer Treatment**

If you are not eating well, a multivitamin can help

Avoid any individual antioxidant
Check with your doctor

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No evidence that antioxidant supplements have beneficial effects on mortality. Beta carotene, vitamin A, and vitamin E seem to increase the risk of death.

in high doses

February 28, 2007, Vol 297, No. 8
Journal of the National Cancer Institute May 16, 2012
Cochran Library Jan. 20, 2010
Kidney Stone Risk in Men Linked to Vitamin C Intake

It is reasonable for men prone to kidney stone formation not to take more than 500mg a day of vitamin C supplements.

Nephrology Oct. 20, 2015

Does not apply to multivitamins

A diet that is rich in a mix of antioxidants is something to aim for. Focus on fruits, vegetables, whole grains, nuts and legumes.

Causes of vitamin B12 deficiency

Abdominal, intestinal surgery
Atrophic gastritis, Hypothyroidism (30/40%)
Metformin (DM and Polycystic Ovary Syndrome)
Nexium, Prilosec, Pепcid, Tagamet--acid blocking,
Celiac disease
Pernicious anemia (AI)

Symptoms of vitamin B12 deficiency

Muscle weakness, unsteady gait, numbness or tingling in fingers or toes (diabetes or MS)
Dementia, cognitive impairment, psychosis, depression, irritability
Anemia, fatigue

Usually Develops Slowly

ATROPHIC GLOSSITIS (Beefy, Red, Smooth tongue)

Nutritional deficiency
- Vit B12
- Folic Acid (B9)
- Riboflavin (B2)
- Niacin (B3)
- Iron
- Celiac Disease

VITAMIN (?) D

The only vitamin that the body can make
Causes of Vitamin D Deficiency

- Liver or kidney problems
- Aging
- Hypothyroidism
- GI disorders—Crohn disease, ulcerative colitis, Celiac disease
- Medications (prednisone, wt. loss drugs)
- Sunscreen (basal, squamous, melanoma)
- No sun—Northern climate

Sunscreen Myths and Facts

Sun is not the enemy it's been made out to be

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

10,000 cases of melanoma & 250,000 cases of basal and squamous cell skin cancer in 2016 can be attributed to tanning bed use

Journal of Cancer Policy, Feb. 28, 2017

Benefits of Vitamin D (?)

- For calcium and phosphate absorption
- Impacts muscle strength
- Benefits the immune system
- Maintain the health of bones and teeth
- Regulate insulin levels and aid diabetes management
- Influence the expression of genes involved in cancer development
- Support lung function
- Multiple sclerosis
- CVD
MUSCLE SORENESS

“Not Just Getting Old”
Low vitamin D—muscle pain
Statins (Zocor, Lipitor, etc—10%-15%)
Peripheral vascular disease
Vitamin B12 (low)
Mg, Ca, K (low)
Celiac Disease
Hypothyroidism
Bisphosphonates
Drug combinations

CALCIUM

Builds strong structure of bones and teeth
Secretion of hormones and enzymes
Transmit impulses thru the nervous system
Muscle and blood vessel contraction

CALCIUM

Found naturally in meat, dairy products, leafy green vegetables, and beans.
May also need supplements since the body cannot make calcium

CALCIUM SUPPLEMENTS

Calcium carbonate
Least expensive
Should be taken with food
Absorption is acid dependent

Calcium citrate
Acid independent
Take with or without food
Can take with PPI (Nexium, etc)
No more then 500mg at one time

WOMAN’S HEALTH INITIATIVE

Women who took 1000mg of calcium supplements daily had 17% more kidney stones
Women who consumed calcium from food had fewer kidney stones

36,000 women/ 15 years
Osteoporosis is silent

Only 30% of patients with osteoporosis had been diagnosed

RISK FACTORS FOR OSTEOPOROSIS

- Small or thin body frame
- Smoking, alcohol
- Sedentary lifestyle
- Intestinal disorders
- Type 1 diabetes (AI)
- Genetics
- Early menopause

Women over 65 & men over 70 should have a bone density test if have risk factors

RISK FACTORS FOR OSTEOPOROSIS

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Drugs Associated with Low Bone Mineral Density and Fracture Risk

Diuretics—Lasix, Bumex, Demadex
Get potassium, magnesium, calcium checked
Thyroid meds—Synthroid, Levoxyl
Lupron, Synarel
Nexium, Prilosec, Pravacide (PPI)

Proton Pump Inhibitors (PPIs): Medication Side Effects & Warnings—Drug Watch

Pneumonia
Ulcerative Colitis
Kidney disease
Osteoporosis
Diarrhea (C.diff)<B12, Mg, Ca, Iron

Antacids
H2 blockers
PPI
Tums
Pepcid
Prevacid
Rolaid
Tagamet
Prilosec
Maalox
Zantac
Pepto Bismol
Nexium
Alka-Seltzer

Do not stop PPI suddenly—horrible heartburn
**LINX Reflux Management System for GERD**

Allowed 87 percent of patients to stop using acid-suppressing drugs  
*Mayo Clinic May 2014*

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**BONE DENSITY SCAN**

Measures bone density at the hips and spine  
The score (T-score) is compared with the average score of a 30-year-old woman

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**Know Your T-score**

<table>
<thead>
<tr>
<th>Osteoporosis Bone Density (risk of fracture)</th>
<th>Normal Bone Density</th>
</tr>
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<tbody>
<tr>
<td>-4.0</td>
<td>-3.5</td>
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</table>

**OSTEOPENIA**

FOSAMAX, ACTONEL, BONIVA, RECLAST, PROLIA

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**Does Exercise Really Help Bones? Berkeley Wellness**

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**LIFESTYLE**

Weight-Bearing Exercise, Strength Training Exercise

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**The Best Osteopenia and Osteoporosis Exercises**

*Duke University Health News*
Does Calcium Strengthen Bones? Evidence is Weak

Increasing one's calcium intake, whether from dietary sources or supplements, does little to improve bone health or prevent fractures in older adults

18 August 2015

Vitamin D, Vitamin K, Magnesium

People over 50 should aim for 1,200 mg of calcium daily, obtaining as much as possible from dietary sources and supplementing only as necessary; there's no benefit from getting more than 1,200 mg

PROSTATE CANCER AND ANDROGEN DEPRIVATION THERAPY

To reduce levels of male hormones (testosterone) which fuels the growth of cancer cells

More likely to have osteoporosis and/or periodontal disease

J Urology-2007 March 177(3)

Rx Lupron
Rx Casodex

Physical activity and eating a proper diet can mitigate progression of chronic disease and in fact reverse some existing diseases

The Year of Food Fights: Contention in the Dietary Community

“2015 Dietary Guidelines”

Wherever there are 4 nutrition experts together, there will be at least 5 opinions.

What most diets have in common

Eat good fats—fish, nuts, avocados, beans, moderate in lean meats and poultry

Eat vegetables, fruits, whole grains

Limit refined flour, sugar

Limit highly processed foods (salt, fat, sugar)

Limit red meat
5 Servings of Fruits and Vegetables

MEDITERRANEAN DIET
Diet high in fruits, vegetables, beans, whole grain, nuts, fish, dairy products in low to moderate amounts, little red meats and alcohol in moderation.

Nutrition experts got together and ranked the best diets of 2017
1. Dash
2. Mediterranean
3. MIND Diet
4. Mayo Clinic Diet
5. Flexitarian Diet
6. Weight Watchers

Low-Carb or Low-Fat? Any Diet Works if You Stick to It,
"there is no need for a one-size-fits-all approach to dieting."

Diet Drugs: a Losing Proposition
It's nearly impossible to design a diet drug that is both effective and safe.

Beware of Supplements Promising Miracle Weight Loss
Hidden Ingredients
Phenolphthalein
Prozac
Maxzide
Ephedra
Meridia

Stop after a few months if you don’t lose significant weight (5% of your starting weight)
Processed Meats
- High temp cooking
- Nitrate
- Nitrite
- Cured
- Salted
- Smoked

Processed Foods
- Miracle-Gro for fat cells

FROZEN VEGETABLES
- Whole grains contain the germ, bran, and endosperm
- Refined grains (white bread) retain only the endosperm (very little nutrition)
- Gluten* is the protein part of the endosperm
  *cause of Celiac Disease

CELIAC DISEASE an AUTO IMMUNE DISEASE
Symptoms:
- Diarrhea/constipation
- Weight loss
- Depression, Fatigue
- Osteoporosis
- Vit. Deficiencies
- Joint pain, Migraines
- Mouth ulcer
- Numbness, tingling legs, hands

1 out of 133 people  80% not diagnosed

IF YOU HAVE AN AUTOIMMUNE DISEASE THERE IS A CHANCE THAT YOU MAY HAVE CELIAC DISEASE
ORAL MANIFESTATIONS OF CELIAC DISEASE

- Recurrent aphthous ulcers
- Atrophic glossitis
- Oral lichen planus
- Cheilosis

Enamel Defects in Children

People with a first-degree relative with celiac disease (parent, child, sibling) have a 1 in 10 risk of developing celiac disease

Gluten-free living — many potential benefits, and easier than you think

WHITE / WHEAT FLOUR

- BRAN AND GERM OUT
- THIAMIN ($B_1$), RIBOFLAVIN ($B_2$), NIACIN ($B_3$)
- FOLIC ACID, ZINC, MANGESISUM, COPPER
- PHOSPHORUS, IRON, CALCIUM, SODIUM,
- AMINO ACIDS, ANTIOXIDANTS, FIBER, PLUS
- 15 MORE

- INTO THE BREAD
- VITAMIN $B_1$, $B_2$, $B_3$, IRON, FOLIC ACID
  (Molasses or Carmel)

WHEAT FLOUR

- Wheat flour
- Unbleached flour
- Semolina
- Cracked wheat
- Rye

- Durum wheat
- Pumpernickel
- Multigrain-7 Grain
- Stone-ground
- Organic flour

DON'T BE TRICKED

THESE ARE NOT THE SAME AS
“WHOLE WHEAT” or “MULTI-GRAIN WHOLE GRAIN”
Ingredients:
Whole oat flour*, whole wheat meal*, wheat bran*, evaporated cane juice*, oat bran*, yellow corn flour*, brown rice flour*, barley malt extract*, sea salt, whole wheat sprouts

WHOLE WHEAT CRACKERS

Calorie and Salt Bombs
Large Popcorn & Soda
1600 calories
1800 mg salt

Make Your Own Microwave Popcorn Using a Brown Paper Bag
1/4 to 1/3 cup unpopped popcorn
Vegetable oil or olive oil
Salt or other flavorings
Microwave 1 1/2 - 2 minutes
No more than 6-8 gm/serving
No more than 35-40 gm/day

Sugar 1-4 Gm/Slice

Saline Injection Machine
Brine, enhanced, self-basting

How to Buy Eggs-Berkley Wellness
CONSUMER WATCH: Beware of misleading "natural" food labels

"Made with Natural Ingredients"
"Naturally Flavored"
"Naturally Brewed"

The United States imports 90% of seafood, about 50% of which is from aquaculture

US farmed catfish and tilapia ok
Atlantic salmon = farmed salmon
Alaska = wild salmon

Which Fish Are Safe for Pregnant Women? CR

Beware of Food Fraud
Berkeley Wellness
February 18, 2016

Fish
Coffee
Olive Oil, Balsamic Vinegar

ORDER

Health for Her
Heart Rate Monitors

- Polar HRM
- Fitbit

Target Heart Rate—220 minus age x 50% to 85%

Walking tied to fewer breast cancers in older women
Postmenopausal women who walked for one hour each day had a 15% lower chance of getting breast cancer.

Even 15/20 minutes a day can improve cardiovascular fitness, decrease cancer risk, reduce stress and increase lifespan.

Reduce Your Risk of Cancer and CVD Recurrence
Lose weight if you are overweight
Be physically active
Don’t smoke
Good diet
Mediterranean diet

Advice for Sitters: Get Up!

Cancer Epidemiology and Prevention October 4, 2013
Harvard Health Mar.22, 2014
JAMA Jan 7, 2015
Take the Stairs!

Climbing stairs regularly can improve cardiovascular fitness and strength

The key to fitness is doing some type of moderate exercise routinely—time of day

9 MONTHS!!!!

By the age of 65, many seniors have lost 30% of their muscle mass

BALANCE

No-Impact Water Workouts for Getting Fit, Building Strength and Rehabbing from Injury

Joint problems COPD

Aging

Progressive weight gain
Decreased metabolism
Loss of muscle mass
Decrease in pancreatic beta-cell function
Adverse distensibility of the arterial tree

Exercise is Medicine

With No Side Effects