

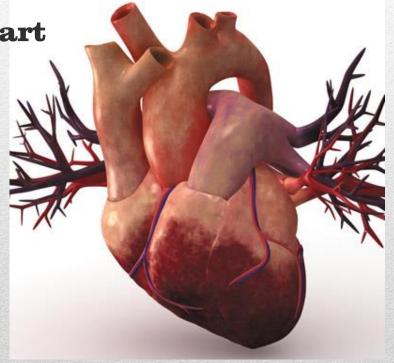
Presented by: Claudia J. Bricks N.D.
Sheboygan Natural Health Series of Classes
Sheboygan, Wisconsin

Please visit: www.sheboygannaturalhealth.com

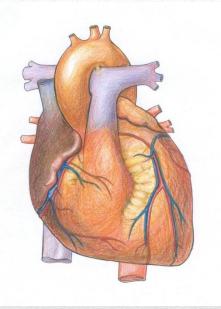
- Understanding Heart Anatomy & Terminology
- The Real Heart Health Culprit-Inflammation
- Controlling Heart Health Issues
- Supplements for a Healthy Heart
- Exercise and Heart Health
- Resources

The information in these slides is for educational purposes only.

Seek a qualified health professional for any health concerns.



# What We're Going to Do...

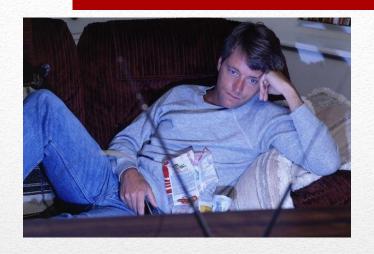


Mostly, we're blissfully unaware of our heart's ceaseless activity –

- nearly 100,000 beats per day,
- 37 million beats per year
- 3 billion in a lifetime.
- Starts about 23 days after conception- only quits at death.

#### Heart is both an organ and muscle:

- Needs to be exercised to keep it healthy. Exercise delivers oxygen to the heart muscle itself & all other parts
  - For healthy adults, 150 minutes of moderate-intensity exercise per week-(20 min./day, or 30 min. 5 days per week).
- Needs good nutrition to keep vessels clear and flexible
- Needs us to manage our biological and emotional stress well







# Most Heart Disease is <u>Man-Made</u>!















Healthy Habits



## **Heart Terminology**

- <u>Heart & Circulatory System-</u> 12,400 miles of arteries, veins, and blood vessels feed life-giving oxygen to trillions of cells. Heart beats 100,000 x's per day, pumping 4,000 gallons of blood
- <u>Heart Attack-</u> caused by lack of O2 to heart muscle and/or Blood clots that cut off blood supply. Part of heart dies. Arrhythmia (irregular heart beat) also causes insufficient blood flow to heart
- <u>Angina</u>- Pain due to lack of O2 to heart. Starts in center of chest, radiates to throat, back, neck, jaw and down left arm. Usually caused by over exertion. Is wake up call- take care of heart!
- <u>Congestive Heart Failure</u>- damaged heart- can't pump efficiently. Kidneys respond by holding onto water and salt, making matters worse. Damage on Heart's Rt. Side- blood collects in legs. On Heart's Left side- blood backs up in lungs.
- <u>Stroke</u>- Caused when blood flow to brain is blocked by atherosclerosis. Two major **types of strokes**: ischemic stroke and hemorrhagic stroke.

## **Heart Terminology** (cont'd)

Arrhythmia- Irregular heart beat

Arterial Plaque- build up of cholesterol in lining of artery due to weakness or inflammation. Weak areas are patched with Cholesterol

Arteriosclerosis - is a disease resulting in <u>hardening of the arteries</u>. Stiffness & loss of elasticity occur. Arterio. in Coronary Artery = 's heart attack.

Atherosclerosis- a type of arteriosclerosis where arterial wall narrows or is obstructed. Caused by free radical damage (from a deficiency in the antioxidant system) to the lining of arteries, which then causes plaque build-up.

#### Atherosclerosis' 3 step process-

- 1. Arteries develop tiny tears, esp. where there is High Bld. Pressure
- 2. Cholesterol in blood sticks to tears, slowly hardening into plaque
- 3. This narrows arteries, reducing blood flow to heart & body parts

Atrial Fibrillation- (also known as AF, or A-fib)-abnormal rhythm of the heart caused by problems with heart's electrical activity. See:

http://www.webmd.com/heart-disease/ atrial-fibrillation/atrial-fibrillation-cause

*C-Reactive Protein-* blood testmeasures particular type of liver protein - shows acute inflammation or infection in body.

#### Heart Terminology (cont'd)

Coronary Artery Disease- a common term for Coronary heart disease, or heart disease. #1 Killer in America, affecting over 13 million. Is result of plaque buildup in arteries- causing blockages/narrowing-restricting blood flow and O2 to heart. Arteries start out smooth & elastic, but over time become narrow/rigid

**Endothelium**- the thin, multifunctional layer of cells lining interior walls of arteries, veins, capillaries, and heart. Fights inflammation and repairs body. When injured\*, white blood cells invade-inflammation begins, so does plaque formation- result = atherosclerosis. \*Smooth lining becomes rough like it was "sand-papered." Body needs to repair.

Beta Blockers- Prescription Drugaffects body's response to certain nerve impulses. Decreases force and rate of heart's contractions, which lowers BP and reduces heart's demand for oxygen. Has several harmful side effects.

#### Calcium Channel Blockers-

Prescription Drug-keeps calcium from entering cell walls of heart and blood vessels, allowing them to relax & widen, thus reducing work of heart & lowering bld. pressure. Has side effects for rest of body.

Autoimmune Disease- Body's Immune system mistakenly attacks the it's own cells and tissues.

#### Heart Terminology (cont'd)

- <u>Cholesterol</u>- fat-like substance in body- produced by liver, (some also comes from foods we eat).
- It is in body for a reason!
- All steroid hormones come from it
- All cell membranes made from it
- Brain & nerv. system made of it
- Low Cholesterol levels may cause
   Cancer & Immune Deficiencies

#### Many Reasons for High Cholesterol:

insulin resistance, stress, low-Antioxs., DHEA, fiber & thyroid. Nutritional deficiencies and lack of dietary fiber

#### Oxidized Cholesterol is the culprit!

- Happens when body's antioxidant defenses are depleted.
- From excess stress, poor fitness, and lack of antioxidant nutrients.

#### Statin drugs are dangerous!

- Lowering cholesterol levels with drugs may increase death rate!
- Very little current research shows support for Statin effectiveness
- Depletes enzyme needed to make CoQ10- powerful anti-oxidant, esp. for LDL-protects it from oxidation
- Heart Failure is associated with CoQ10 deficiency. Heart needs it.
- Statin side effect- muscle damage. .
  Heart is a muscle. Needs energy++
- Half all heart attacks- people with normal cholesterol.
- Half of people w/high cholesterol don't have heart attacks

From: Bursting With Energy

by Dr. Frank Shallenberger

<u>Triglycerides</u>- are fats produced in liver from carbohydrates.

- More Carbs = higher Triglycerides
- Higher Triglycerides = higher risk for cardiovascular disease
- High Triglycerides = lower HDL
- Best below 120 mg/dl
- <u>To improve</u>: Lose Wt., Exercise, Eat low Carb diet, use Supplements Fish Oil and Niacin

Inflammation- Two types- Acute (healthy) and Chronic (dangerous). A major cause of all disease in body.

**See:** www.inflammationreliefguide.com/ health-and-wellness/what-is-inflammation/

See next slides for more . . .

**Homocysteine**-an amino acid produced by the body, usually as a by-product of consuming meat. Amino acids are building blocks of all proteins in body.

**Blood tests check levels**. High Levels (>10 micromoles/liter) may be associated with atherosclerosis, increased risk of heart attacks, strokes, blood clots and possibly Alzheimer's disease because of damage to done to arterial walls.

#### To lower homocysteine levels-

- Maintain a healthy liver
- Try folic acid supplements, & vitamins B6 and B12

From: <a href="http://www.medicinenet.com">http://www.medicinenet.com</a>

#### Inflammation

#### 2 Types of Inflammation: Acute (Healthy) and Chronic

## <u>Acute</u>

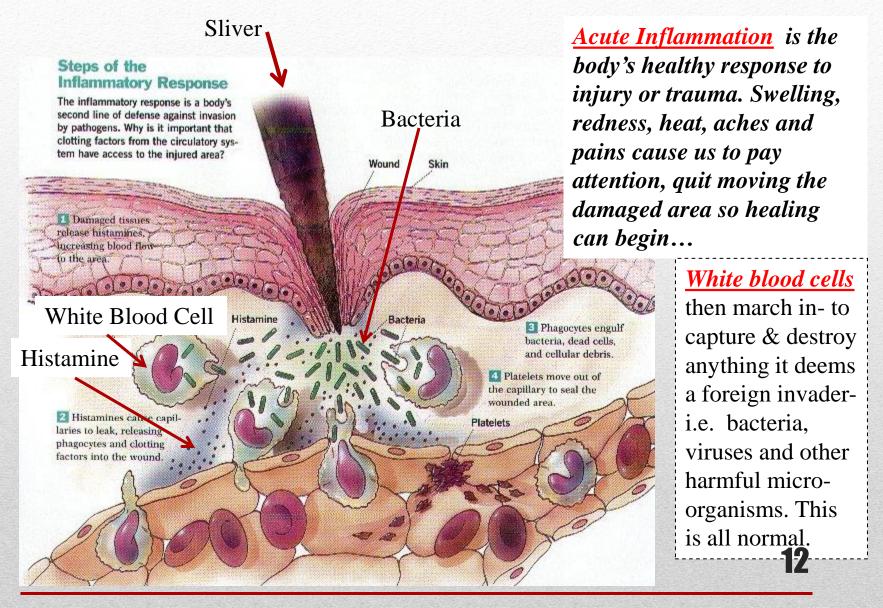
The body's natural response to a physical injury or trauma that breaks the integrity of the skin. Anything from a sliver to a major automobile accident, to surgery. The body marshals its immune system to send protecting and healing chemicals (histamines) and blood cells to the damaged area to cause swelling, redness, etc. so the healing process can begin.

## **Chronic**

Inflammation that is dangerous to the body's health. Not usually in response to injury- may go away on its own. If not healed: Chronic Inflammation can lead to autoimmune diseases where immune system mistakenly attacks body's own cells, tissues and organs. Celiac Disease, Crohn's, Diabetes, Grave's, Hashimoto's, Rheumatoid Arthritis, Multiple Sclerosis, Psoriasis, Pernicious Anemia, Polymyalgia Rheumatica, Narcolepsy, Lupus, Scleroderma, Sjogren's Syndrome, Schizophrenia, plus any organ or tissue the body starts attackingi.e. Thyroid, Adrenal, Cardiac, GI Tract, Joint, Bone, Bowel, Brain!

www.buzzle.com/articles/list-of-autoimmune-diseases.html

#### **Acute Inflammation**

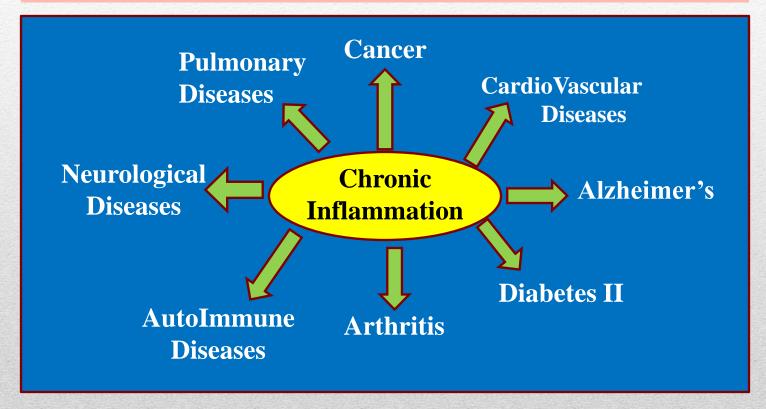


Excerpted from: http://www.inflammationreliefguide.com/health-and-wellness/what-is-inflammation/

## Chronic Inflammation

To understand the prevalence of heart disease and natural means to improve heart health, we have to carefully look at <u>Inflammation</u>...esp. *Chronic Inflammation* 

Scientists are now finding that chronic inflammation is the main culprit in most diseases...



<a href="http://www.inflammationreliefguide.com/health-and-wellness/what-is-inflammation/http://www.ehow.com/about\_5551904\_causes-chronic-inflammation.html">http://www.ehow.com/about\_5551904\_causes-chronic-inflammation.html</a>

## What causes Chronic Inflammation?

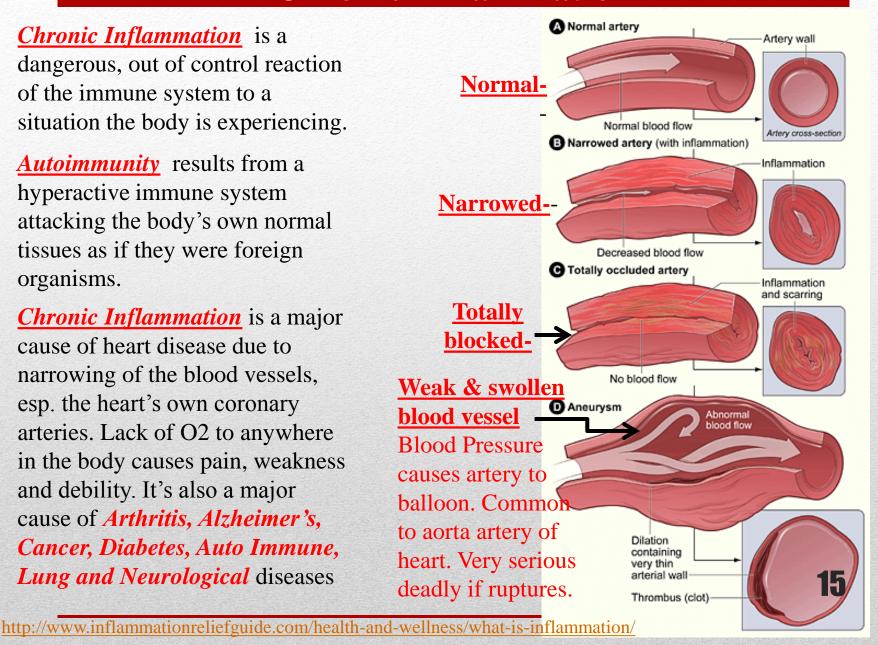
- Illness. Teeth, mouth, gum diseases
- Unstable Blood Glucose levels
- Quality of Diet and Foods in it
- Vitamin Deficiencies (Vits. D & B esp.)
- Gluten & Cross-Reactive Foods
- Leaky Gut Intestinal Permeability
- GMO Foods
- Infectious Agents
  (i.e. Helicobacter pylori, Candida, & Hepatitis C)
- Lack of Exercise & Oxygen to the body
- Excessive Red Meat consumption

#### **Chronic Inflammation**

**Chronic Inflammation** is a dangerous, out of control reaction of the immune system to a situation the body is experiencing.

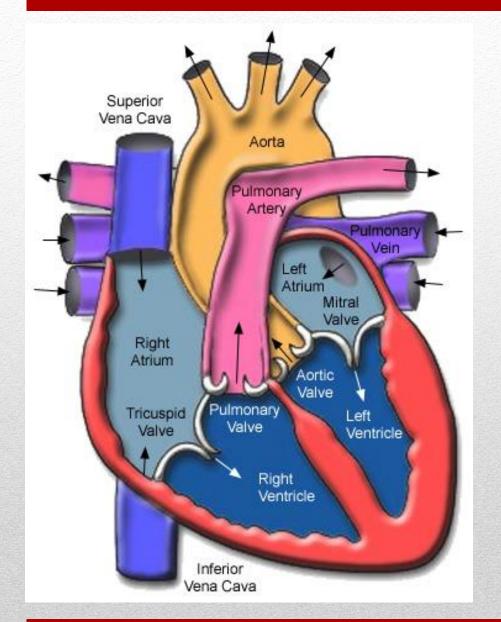
**Autoimmunity** results from a hyperactive immune system attacking the body's own normal tissues as if they were foreign organisms.

**Chronic Inflammation** is a major cause of heart disease due to narrowing of the blood vessels, esp. the heart's own coronary arteries. Lack of O2 to anywhere in the body causes pain, weakness and debility. It's also a major cause of Arthritis, Alzheimer's, Cancer, Diabetes, Auto Immune, **Lung and Neurological** diseases





Anatomy of Heart Attacks



#### **Main Parts of Heart:**

Left and Right Atriums
Left and Right Ventricles

#### **Arteries:**

Aorta

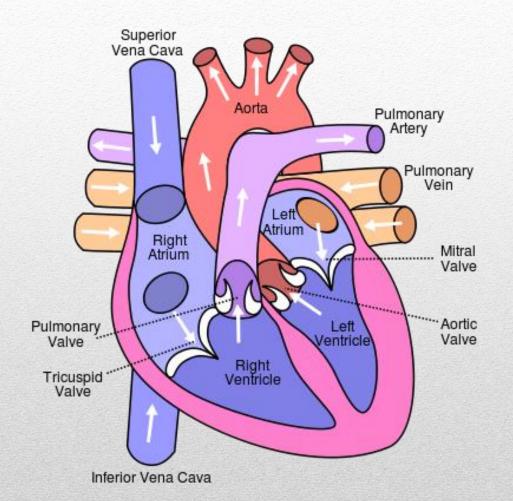
**Pulmonary** 

#### **Veins:**

Superior Vena Cava Inferior Vena Cava Pulmonary Vein

#### 4 Valves:

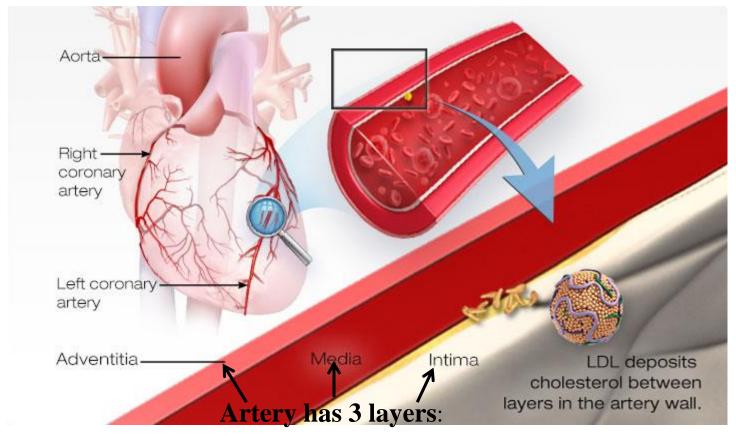
Mitral Valve Pulmonary Tricuspid Valve Aortic Valve



**How it Works:** Blood enters the left atrium via the Pulmonary artery from the lungs. Flows through the bicuspid valve to the left ventricle. Is pumped out of the left ventricle through a valve into the aorta. It branches through series of arteries to all parts of the body. Then leaves the body tissues via various veins and reenters the right atrium of the heart via the vena cava. Through the tricuspid valve to the right ventricle where it is pumped through another valve into the pulmonary vein where it is passed to the lungs to be oxygenated. Then the whole 18 process starts again!!!

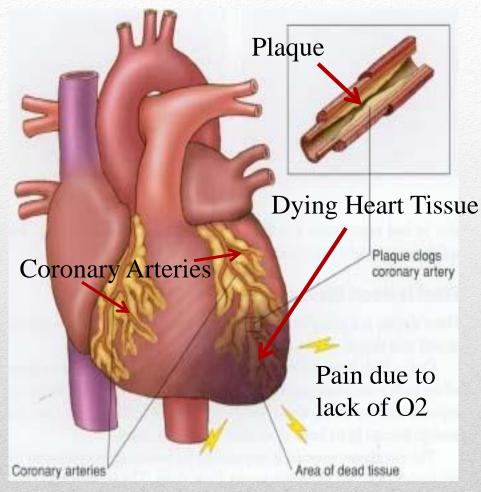
#### **Anatomy of A Heart Attack**

<u>Cardiovascular Disease/Heart Disease</u>- Diseases of the Heart and blood vessels; i.e. heart attack, stroke, heart failure, heart valve problems and arrhythmia. <u>Most caused by atherosclerosis</u>. Also, vessels harden with age.



http://www.heart.org/HEARTORG/Conditions/More/MyHeartandStrokeNews/Coronary-Artery-Disease---Coronary-Heart-Disease\_UCM\_436416\_Article.jsp

## **Heart Attacks**



- **❖** Call 9-1-1 immediately.
- **\*** First Responders- trained to save lives.

#### Signs of Possible Heart Attack:

- Chest Pains: uncomfortable pressure, squeezing, or crushing sense in the center of chest for 2 minutes or longer
- Severe pain that radiates to the shoulders, neck, arms (L), jaw or top of stomach
- Shortness of breath
- Paleness, Sweating
- Rapid or Irregular Pulse,
- Dizziness
- Fainting or loss of consciousness

#### **Women feel more subtle symptoms:**

nausea, jaw pain, sweating, faintingloss of appetite, malaise or heartburn.

# **More on Heart Health**

- Coronary Artery Disease causes other diseases, too.
- Atherosclerosis- begins in childhood!
- 500,000 people die suddenly every year from clogged arteries.
- Clogged arteries = arterial plaque
- Arterial Plaque causes partially clogged arteries. You won't know anything is wrong—No symptoms
- Plaque dislodges, travels in vessels and gets trapped preventing O2 to tissues which causes pain and damage. May cause blood clots.

• Standard American Diet and Lifestyle (S.A.D.) Sugars and bad fats are the culprits. Increasing inflammation, leading to chronicity.

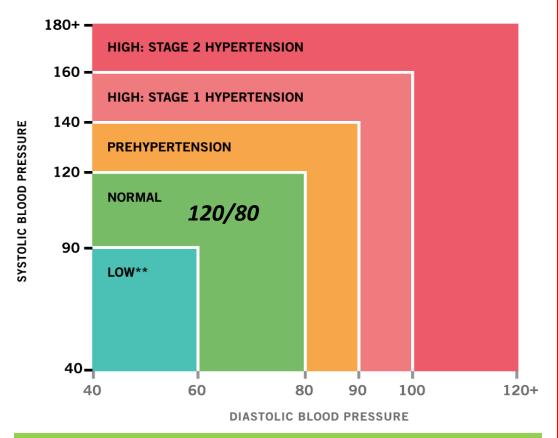
#### Cholesterol is NOT the enemy!

- It makes key hormones.
- Helps Vit. D, & immune system
- Exists in every cell of the body.
- Immune system uses it to heal tears in vessel wall.

**Beriberi of heart muscle** is major cause of congestive heart failure. Deficiency of Vit. B1- Thiamine (Dr. Bruce West- www.healthalert.com)

#### **Blood Pressure Chart\***





50 million people have Hypertension

<u>To lower</u>: Lose Wt., Exercise, Eat Low Carb diet,
Take CoQ10, Fish Oil, & Magnesium & Deep Breathe

© 2010 Vertex42 LLC

www.vertex42.com/ExcelTemplates/blood-pressure-chart.html

#### The Heart Health Big Deal:

wiki.answers.com-about 2,500 Americans die every day from heart disease.

1 out of every 4 deaths is Cardiovascular related.

- Cost in U. S. for heart failure=\$38.1 billion,
- \$23 billion spent on inpatient care
- \$14.5 billion in outpatient therapy
- \$250 million in heart transplants.

http://www.ncbi.nlm.nih.gov
/pmc/articles/PMC2716264/

#### <u>D O'S</u>

- Replace clogging foods with good foods.
- Olive and coconut oils are best
- Fresh fruits, fish, veggies, chicken, a little lean red meat
- Add sea salt.
- Nuts, almonds, sunflower seeds.
- Walk, reduce stress and high blood pressure with fun, social activities.
- Gradually replace bad foods with heart healthy foods.
- Get going now! gradually.

#### DON'TS

- NO carbohydrates- Pot. Chips, corn or soy chips- all have inflammatory agents.
- NO Bread, Pasta, Rice, Cereals, Potatoes
- NO candy, cakes, cookies, ice cream. Inflammatory to the body. Sugary, too.
- Grain cereals have chemical additives— Eat only organic steel cut oatmeal
- NO sugar-free foods either- bad fats, & chemical sweeteners are non-foods
- NO vegetable oils- bad- inflammatory
- NO partially hydrogenated soy bean oil
- NO margarine- Only real organic butter
- NO processed foods—they're loaded with sugars, chemical additives, cause inflammatory response in body
- Fruit flavored yogurts contain sugar
- If man made it-don't eat it! Jack LaLane

#### **Blood Screening Tests**

#### Recommended Blood Tests:

- Arterial Plaque test
- Inflammation test- CRP
- Complete Lipid Panellevels of HDL (high-density lipoprotein) cholesterol and LDL (low-density lipoprotein) cholesterol, triglycerides, and homocysteine levels
- Test for Small and Large LDL-Pattern A and B.
- Get Hormone levels checked and balanced
- Ultra sound/Sonogram of heart

#### Early Warning Sign of Heart Attack:

Hippocratic Fingers = Clubbed fingersfingers & fingernails become deformed. --Treat heart to fix this.

#### **Basic Health Screening Blood Tests**

**Comprehensive Metabolic Panel (CMP)** 

**Complete Blood Count (CBC)** 

Urinalysis (UA)

Complete Blood Count (CBC)

Metabolic Panel, Comprehensive 14

**Lipid Profile** 

**C-Reactive Protein** 

Thyroid Profile (T3,T4,T7)

Thyroid Stimulating Hormone (TSH)

**ALT**- liver

**AFP**- liver

Hemoglobin A1c- glucose avg. for 3 months

**Hepatitis C Virus** 

Testosterone- hormone

IGF-1- -hormone

**DHEA-** hormone

Celiac Antibody Screening

Cardiometabolic Risk describes a person's chances of damaging their heart and blood vessels when one or more of these factors are present: (from *Hormone Health Network* 

#### **Cardiometabolic Risks Factors**

Danger Zones:	Where You Want to Be:
Obesity: Waist measurement greater >	A <b>body mass index (BMI)</b> of 18.5 to 24.9 for
40 inches in men; > 35 inches women	normal weight. (BMI is calc. from Ht. Wt)
High LDL ("bad"): >100 mg/dl.	Less than 70 mg/dl.
Low HDL ("good") cholesterol: < 40	>40 mg/dl in men & 50 mg/dl in women.
mg/dl in men 50 mg/dl in women.	
<u>High triglycerides</u> (blood fat): > Greater	Less than 150 mg/dl.
than 150 mg/dl.	
High blood pressure: Systolic 130	<b>Recommended:</b> Systolic less than 120
mmHg or greater; diastolic 85 mmHg	mmHg and diastolic less than 80 mmHg
or greater (130/85).	(120/80).
Fasting blood glucose: >100 mg/dl or	Normal blood glucose after an 8-hour fast is
already diagnosed type 2 diabetes.	70 to 100 mg/dl.
	Zi

## **Healthy Heart Supplements**

**L-Carnitine** - Used for energy production w/in cells. Reduces arterial plaque, lowers LDL & raises HDL. Prevents fat from accumulating in heart, liver & muscles. Sources: Grass-fed red meat and dairy. Dosage: 500 mg/day.

**Chelation Therapy-** Intravenous treatment using solution of EDTA, Amino Acids, Minerals & Vitamins. This removes calcium deposits, allowing O2 to better reach cells. <a href="https://www.antiagingmedicine.com">www.antiagingmedicine.com</a> – Dr. Frank Shallenberger in NV <a href="https://www.watershealthcenter.com">www.watershealthcenter.com</a> Summer 2013 newsletter- Dr. Robert Waters , Wisconsin Dells

**L-Arginine**- Precursor to Nitric Oxide (NO2), improves elasticity of vessel walls, safer than prescription drugs. Without NO2, blood vessels narrow, plaque builds up & BV's become rigid and restrict blood flow. Sources: Red meat, fish, chicken, beans, chocolate, raisins, sunflower and sesame seeds. Dosage: 500 mg. daily

**Co-Q 10**- 4,000+ studies, helps prevent & heal heart disease, helps reduce high blood pressure, slows aging, improves energy & strength, counteracts statin effects. **Dosages: 75+ mg.**- prevention; **150+ mg.**- angina, HBP, gums; **300+mg.**- Moderate heart failure; **375-600+mg.**- severe heart failure. Can regenerate heart with high doses. Take stabilized form of Co Q 10.

## Healthy Heart Supplements (cont'd)

Vitamin E- 8 forms available: 4 tocopherols, 4 tocotrienols. Work together/mixed to increase blood circulation and elasticity of arteries and decrease platelet stickiness. Take with fat, like almond butter or Cod Liver oil. Sources: Meat, fish, nuts, oil, dark-green leafy veggies, seeds, and avocadoes. Dosage: 400 IU of mixed tocopherols with 5-20 mg. of mixed tocotrienols/ day Vitamin E can activate Telomerase, an enzyme which lengthens telomeres What are telomeres? They are segments of DNA that occur at the ends of chromosomes that act like caps to keep chromosomes from fusing together. The length of a telomere influences the stability of genetic information. Repeated copying of genetic material causes telomeres to shorten and may play a role in cellular senescence and age-related diseases. http://www.thefreedictionary.com/telomere

According to Dr. Al Sears, several scientific studies show that shortened telomeres relate to increased risk of heart attack, heart disease and early death. People with the shortest telomeres had an increased risk between 280% and 320%! Alpha-tocopherol Vit. E protects telomeres from shortening by activating/restoring telomerase. Dr. Sears recommends only 20 mg. (200 IU) of this Vit. E daily apart from other Vit E forms. Excerpted from Doctor's House Call, Feb.14, 2014. www.alsearsmd.com

## Healthy Heart Supplements (cont'd)

**Magnesium**- Very important for heart health. Aids energy production in heart. Relaxes muscles, reduces blood pressure and stress. **Sources**: Leafy Green organic veggies. Most folks deficient in Magnesium

**Omega-3**- Unsaturated fatty acid that may reduce inflammation throughout body. Reduces triglycerides, blood pressure, blood clotting, heart failure and stroke risks, irregular heartbeats. www.mayoclinic.org

**D-Ribose**- May benefit congestive heart failure by improving ATP levels. Increases blood flow to the heart. Looks & tastes like sugar. Heart patients- deficient in this. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2716264/

**Hawthorn**- Used to treat heart disease since 1<sup>st</sup> century. Leaves, flowers, and berries contain antioxidants that destroy free radicals. May help improve or control HBPressure, high cholesterol & angina. Hawthorn may interact with Digoxin, Betablockers, Calcium channel blockers, male ED, and Nitrates. **Dosages:** 160-1800 mg. daily.

http://umm.edu/health/medical/altmed/herb/hawthorn



## Healthy Heart Supplements (cont'd)

**Vitamin C**- Most people are deficient in Vitamin C. All animals, except humans, guinea pigs, primates, & fruit bats, make their own & don't usually get heart disease. Vit. C scavenges heart damaging free radicals, and builds collagen & elastin which keep blood vessel walls healthy.

**Low levels of Vit. C** increase the risk of **stroke**. A Univ. of Calif. study of 11,000 men and women, showed a **huge decline in heart disease** w/ men taking Vit. C.

Nobel Prize winner **Linus Pauling** took 12,000-18,000 mg daily for 40 years to prove its effectiveness. He lived to be over 90 years old.

Vit. C, like Vit. E slows down shortening of aging telomeres-Japanese study.

**Sources**: Citrus, oranges, strawberries, broccoli, and bell peppers. (Common drugs like aspirin, alcohol, antidepressants, birth control and steroids reduce levels of Vit. C.)

**<u>Dosage</u>**: 500 mg. twice a day with food. If ill with a viral cold, take 1,000 mg every couple of hours with water. Peppermint leaves are good source-Vit. C.

## How to Fix All of This?! The Heart needs:

- Fresh Air/Sunshine; Exercise, balanced with Rest
- 8 glasses of fresh, pure water every day
- Good Foods- Organic where possible, Fresh, low glycemic fruits, Veggies,
   Wild Caught Fish, Coconut
- Limited Alcohol usage and NO smoking or Recreational Drugs.
   Limited Use of Prescription drugs- ONLY when absolutely necessary
- Friendship and Love- Do Valentine's Day all year long!
- Managed Stress- Sing, Take a hike, Dance, Laugh, Spend time w/friends you care about, Relax, Take a hot bath, Pamper yourself. Remember that "This, too, shall pass!" & "It's ALL Good!"
- Good Fats- Omega 3, Olive Oil, Nuts & Seeds, Avocadoes
- **Quality Supplements**, especially Antioxidants: Vits, A, C, E, CoQ10, Alpha Lipoic Acid, Amino Acid Cysteine, & Minerals: copper, manganese, selenium, & zinc
- Healthy, Normal-Weight, Blood Pressure, Normal LDL, HDL, Triglyceride levels
- Good Personal Hygiene, especially take care of teeth and gums
- Balanced Hormones
- Less Dairy Products, Sugar, Artificial & Processed Foods, NO Gluten or grains
- Heart Healthy Thoughts, Positive Attitude & Positive Thinking

## **Healthy Heart Exercising**

**Exercise-** Movement is the best medicine!

Maximum Heart Rate: Subtract Your Age from 220. Use this to determine a good heart rate for exercising.

**Moderate- Intensity Zone:** 50-70% of max. heart rate. Centers for Disease Control recommends 150 minutes of activity in this zone per week.

220-70= 150. Mod. Intensity Zone is 75-105 bpm

220-65= 155. MI Zone: 78-109 bpm

220-60=160. MI Zone: 80-112 bpm

220-40= 180. MI Zone: 90-126 bpm

Check Pulse at wrist or neck. Count

for 10 seconds x 6.

Vigorous Intensity Zone: 70-85% of max. heart rate. Centers for Disease Control recommends 75 minutes of activity in this zone per week.

220-70=150. Vigorous Intensity Zone: 105-128 bpm

220-65= 155. VI Zone: 109-132 bpm.

220-60=160. VI Zone: 112-136 bpm

220-40= 180. VI Zone: 126-153 bpm

If over 50, get a checkup from your M.D. before starting this.

## EXERCISE- An Anti-Aging "Pill"

#### Exercise...

- Cuts down disease rates, esp. heart disease
  - Counters decreased metabolism level
- Osteoporosis reduced by wt. training
  - Increases life expectancy even after 60
- Reduces colon, breast & ovarian cancer
  - Helps your sex life!
- Help reduce depression & Alzheimer's

#### **Are You Exercising Too Hard?**

- Must burn FAT not Carbs for energy. Find your Fat Burning Rate (FBR)
- Find Anaerobic Threshold Heart rate
- Use Interval Training with any method of aerobic exercise- Warm-up, then exercise at your minimum heart level for 4 minutes to raise Hrt. Rate. Then go as hard as you can for 30 seconds. Decrease intensity to low level, then go hard again for 30 seconds. Repeat for 12-20 minutes. This works!

www.antiagingmedicine.com or www.bioenergytesting.com

From Dr. Frank Shallenberger

# "Most Heart Disease is Man-Made! Therefore, we already have the cure. Many of our diseases are because of a deficiency of nutrients"

-Dr. Al Sears, author-The Doctor's Heart Cure

P.A.C.E. Program-by Dr. Al Sears

Progressively Accelerating Cardio pulmonary Exertion

This program builds the vital capacity of the Heart & Lung systems.

- Do a series of short burst exercises followed by periods of rest in between.
- Helps the heart pump more efficiently
- Pick up the pace of any aerobic exercise to increase intensity and endurance. (Vigorous Intensity Zone).

Do the same amount of exercise in less time.

Swim, bike, hike, run, use exercise machines, etc. every other day for 12-20 minutes with varying intensities.

Full details in Dr. Sears' book and: http://www.paceliving.com/



Staying Heart Healthy Takes Some Effort. . .

**BUT IT'S WORTH IT!** 

## Websites to visit

Dr. Frank Shallenberger: <a href="http://www.antiagingmedicine.com/">http://www.antiagingmedicine.com/</a> http://www.truthaboutshallenberger.com/video-presentations.html

Dr. Al Sears: <a href="http://www.alsearsmd.com/">http://www.paceliving.com/</a>

Dr. James Bowman, Stevens Point, WI. Naturopathic Physician & Homeopath www.getyourlifeback.org

More information on **Telomeres** and **telomerase** and effects on aging: http://www.wisegeek.com/what-are-telomeres.htm

Clogged artery demonstration, Avocado as Natural Plaque Remover: http://www.bing.com/videos/search?q=video+showing+arterial+plaque &FORM=VIRE3#view=detail&mid=34AF37C0C26DCB5BB85134AF37C0C 26DCB5BB851

Artery Damage picture:

http://www.inflammationreliefguide.com/health-and-wellness/what-is-<u>inflammation</u>

## Resources

Sears, Al. MD. <u>The Doctor's Heart Cure</u>. Dragon Door Publications: St. Paul, MN. 2004. <u>www.alsearsmd.com</u>

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