


GRANDPA, WHAT'S WRONG?




Richard Beebe MS RN NRP

Who are talking about?

THE GRAYING OF AMERICA

— U.S. CENSUS PROJECTIONS

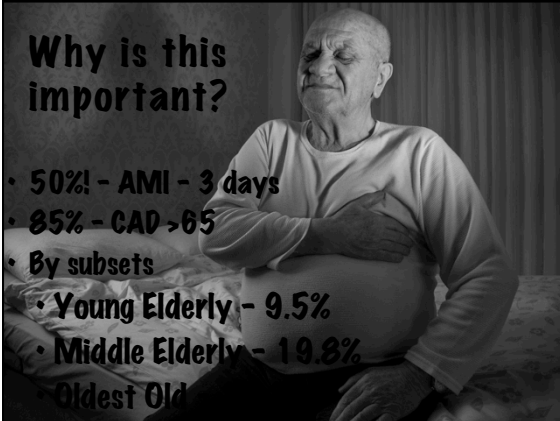


- 20% by 2030!
- Young Elders
- Middle Elderly
- Oldest Old
- Fastest growing subset

2003: 36 MILLION
2030: 72 MILLION
2050: 87 MILLION

SOURCE: U.S. CENSUS REPORT "65+ IN THE UNITED STATES: 2005"

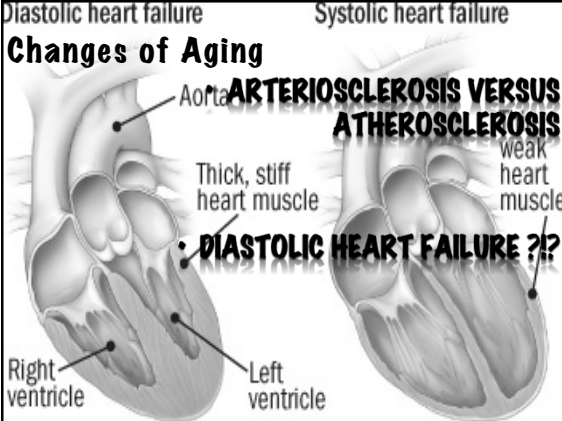
Why is this important?



- 50% - AMI - 3 days
- 85% - CAD >65
- By subsets
 - Young Elderly - 9.5%
 - Middle Elderly - 19.8%
 - Oldest Old

Changes of Aging

ARTERIOSCLEROSIS VERSUS ATHEROSCLEROSIS



Diastolic heart failure Systolic heart failure

Aorta

Thick, stiff heart muscle

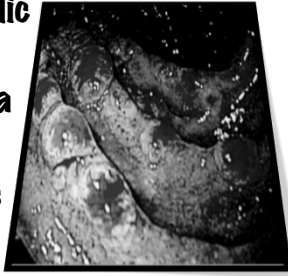
weak heart muscle

• DIASTOLIC HEART FAILURE ??

Right ventricle Left ventricle

What sets off the cascade of events?

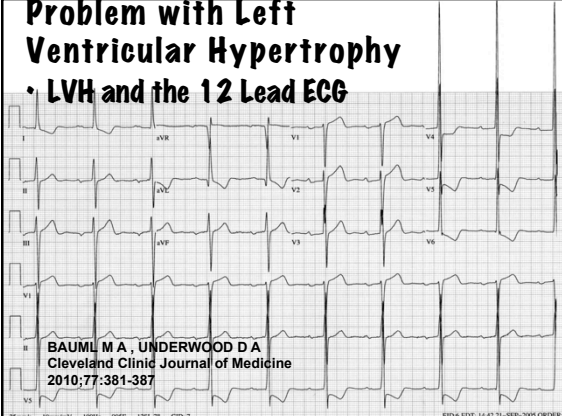
- Stressors
- Loss of diastolic filling
- Hypovolemia
- Sepsis
 - Old Man's Friend
- GI Bleed



cascade of events?

Problem with Left Ventricular Hypertrophy

• LVH and the 12 Lead ECG



BAUML M A , UNDERWOOD D A
Cleveland Clinic Journal of Medicine
2010;77:381-387

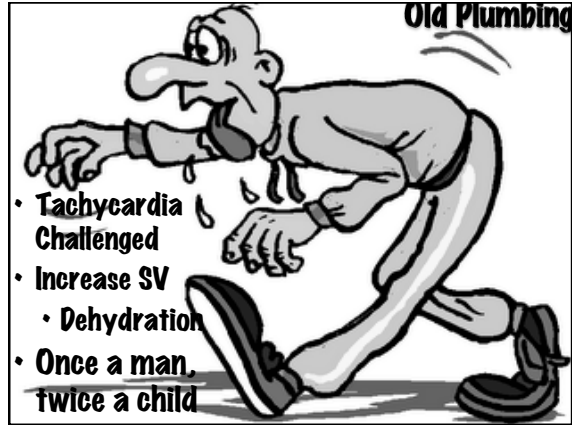
Changes of the Heart

- Catecholamine Resistance
- A little something extra -
- Vasopressin




Old Plumbing

- Tachycardia Challenged
- Increase SV
 - Dehydration
- Once a man, twice a child



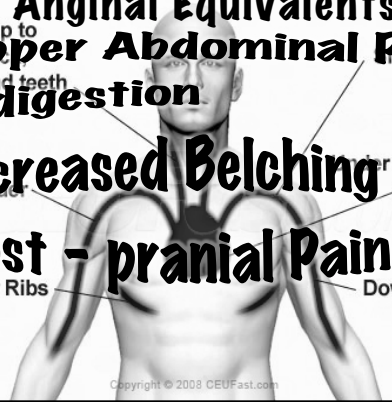
- Renal Cell Mass
- Drug Clearance
- Toxicity



Sump Pump

Anginal Equivalents

- **Upper Abdominal Pain** (Pain up to jaw and teeth)
- **Indigestion**
- **Increased Belching** (Right side, Left side, breast bone)
- **Post-prandial Pain** (Below Ribs, Down arm)



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Silent MI? NO!

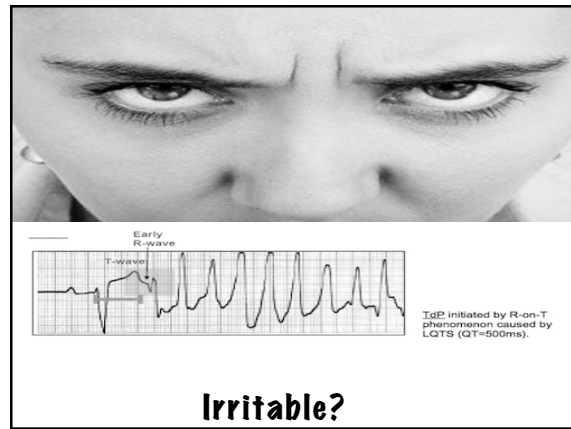
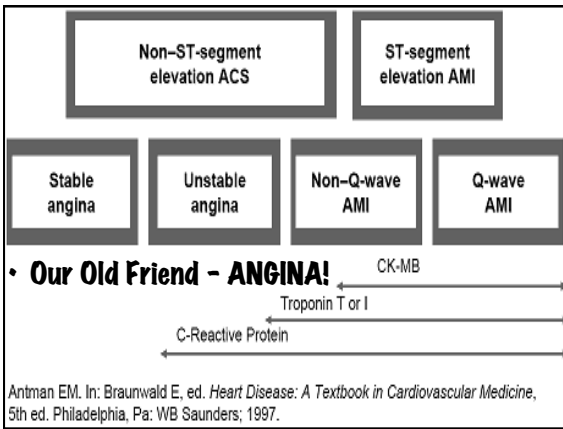
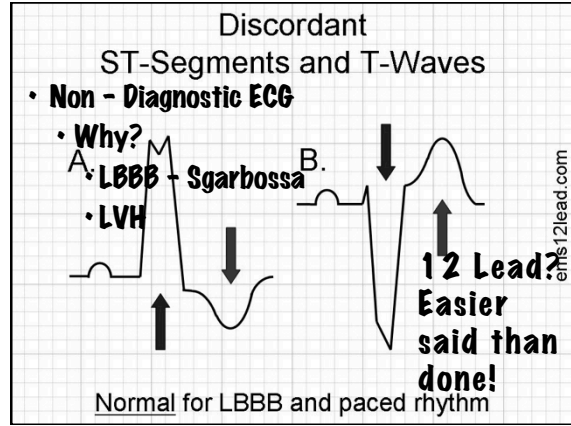



- Painless MI??
- symptomatic
- Mid - elderly -
- 60 - 70%

What do they complain of than?

- Dyspnea 40 - 50%
- Diaphoresis 25 - 30%
- Nausea
- Syncope
- Confusion







- Special Thanks to Amal Mattu - Professor of Emergency Medicine - University of Maryland School of Medicine
- Co - Author ECG cases for EMS - Jones and Bartlett

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