

Is That Pain in Your Leg Muscles Serious?

John McNeil, MD

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Boulder Community Health

MOVE ON FROM YOUR PAIN AND RISK

FREE ONLINE HEALTH LECTURE

Is that pain in your leg muscles serious?

When Wednesday, April 27, from 7 to 8 p.m.

Where Watch online. You'll get the link once you register.

ARTERY DISEASE RAISES RISK FOR HEART ATTACK, STROKE

It can strike while you're walking or climbing stairs—painful cramping in your hip, thigh or calf muscles. You stop for a few moments, and the pain goes away. You may have chalked up these incidents to “getting old,” but you shouldn't dismiss those symptoms too quickly. It could be Peripheral Arterial Disease (PAD), a serious and progressive circulation problem that raises your risk of coronary artery disease, heart attack and stroke.

PAD develops when your leg arteries become clogged with fatty deposits called plaque. When left untreated, clogged arteries in the leg can be as deadly as plaque in your heart.

Hear John R. McNeil, MD, a board-certified cardiologist, describe the latest approaches for diagnosing and treating PAD, including lifestyle changes and medication.

RESERVATIONS REQUIRED:

bchlectures.org/PAD

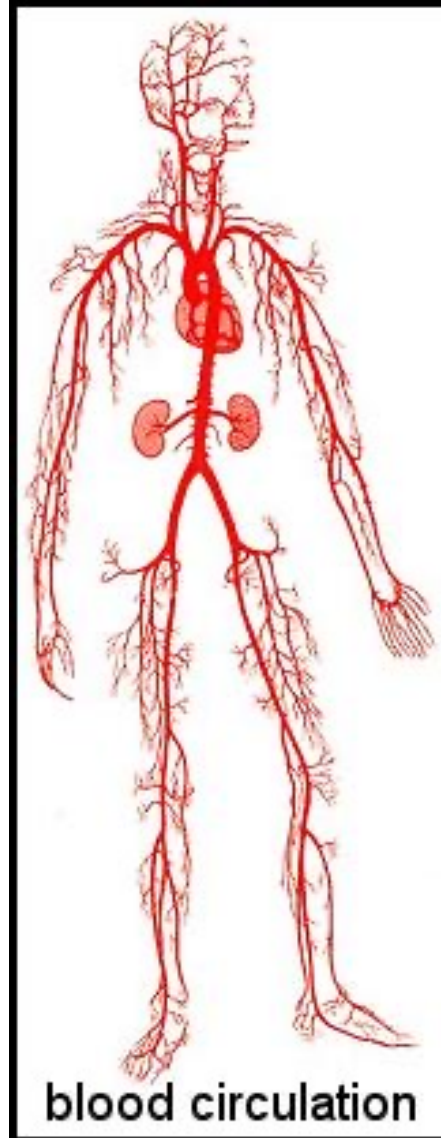
**WATCH THE
LECTURE ONLINE**



Boulder Community Health does not discriminate on the basis of race, color, ethnicity, national origin, sex (including sexual orientation, gender identity and expression), age, or disability.

- Peripheral vascular system
- Diseases involving the peripheral vascular system
- Symptoms of peripheral vascular disease
- Diagnosis of peripheral vascular disease
- Treatment of peripheral vascular disease
- Association with stroke and heart attack

Peripheral Vascular System



Causes of Vascular Disease

Major cause

Atherosclerosis (arteriosclerosis obliterans)

Other causes

Acute arterial disease (dissection, embolism, thrombosis, trauma)

Adventitial cystic disease

Aortic coarctation

Arterial fibrodysplasia

Arterial tumor

Ergot toxicity

Iliac endofibrosis of athletes

Occluded limb aneurysms

Popliteal-artery entrapment

Pseudoxanthoma elasticum

Radiation fibrosis

Retroperitoneal fibrosis

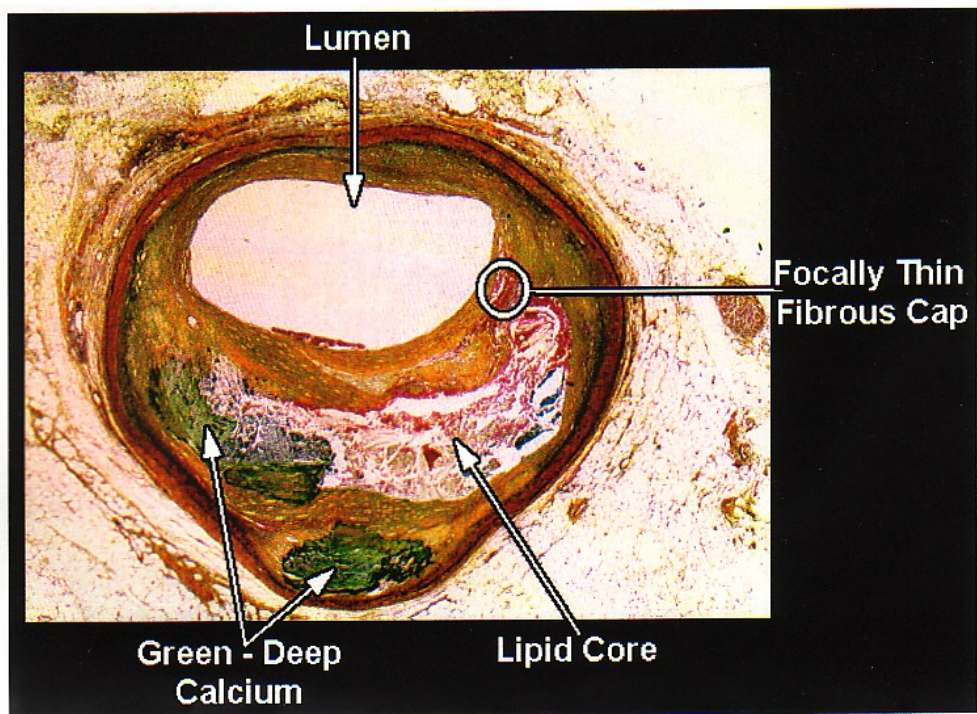
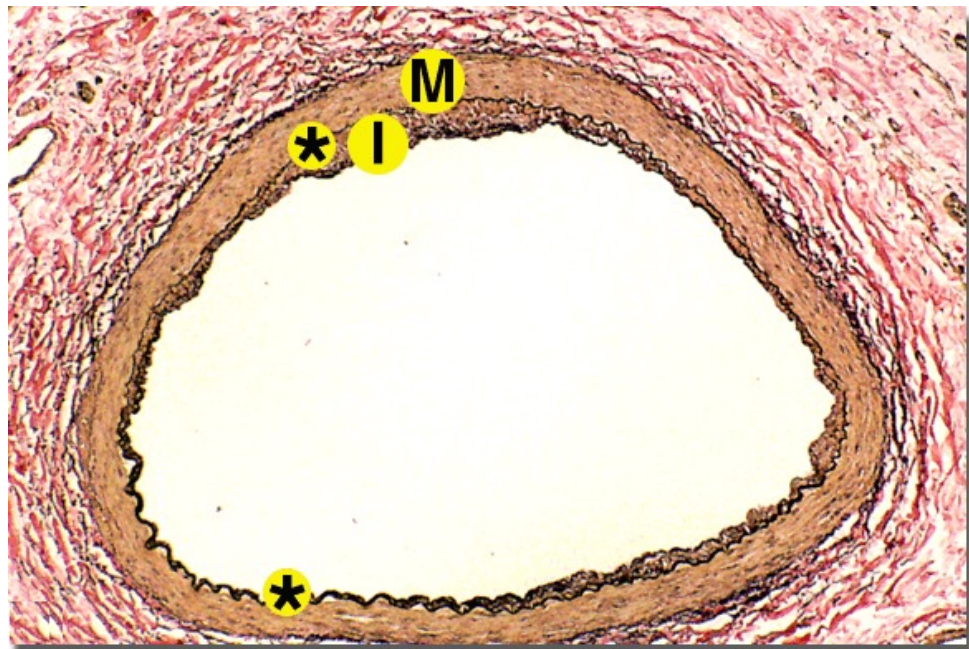
Takayasu's arteritis

Temporal arteritis

Thoracic outlet obstruction

Thromboangiitis obliterans
(Buerger's disease)

Vasospasm

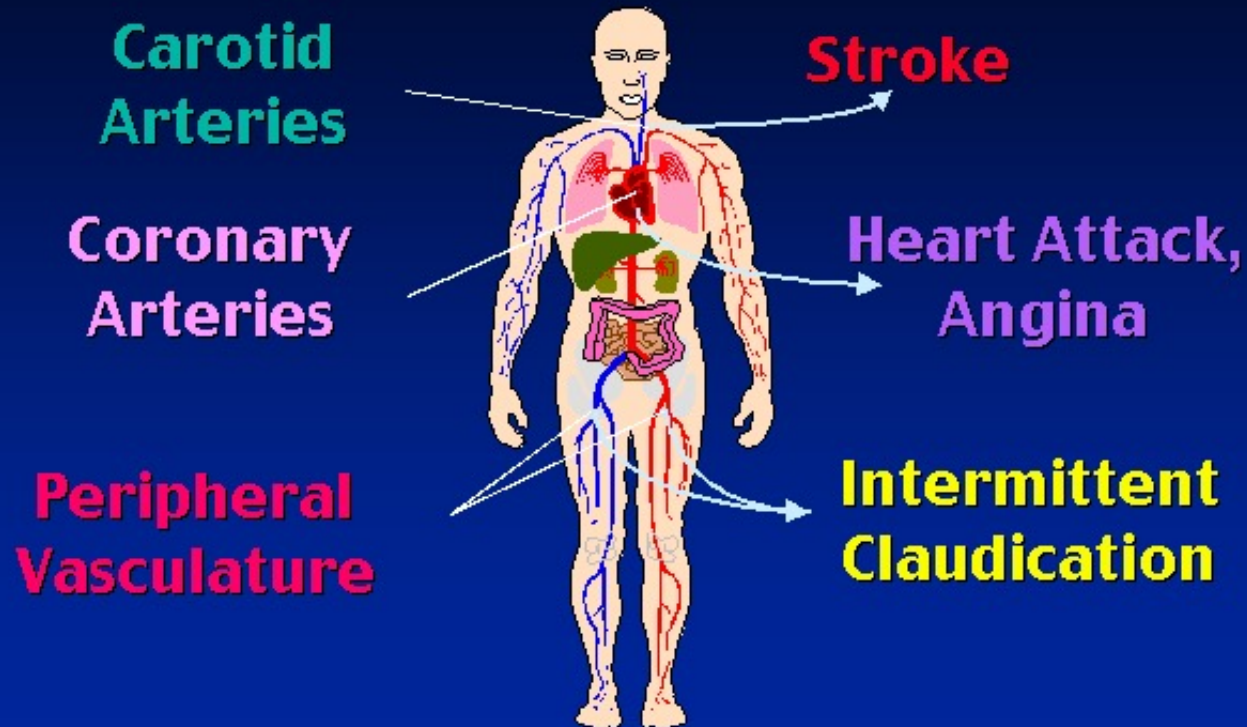


“like rust in a pipe”

**The Traditional
View of
Atherosclerosis**

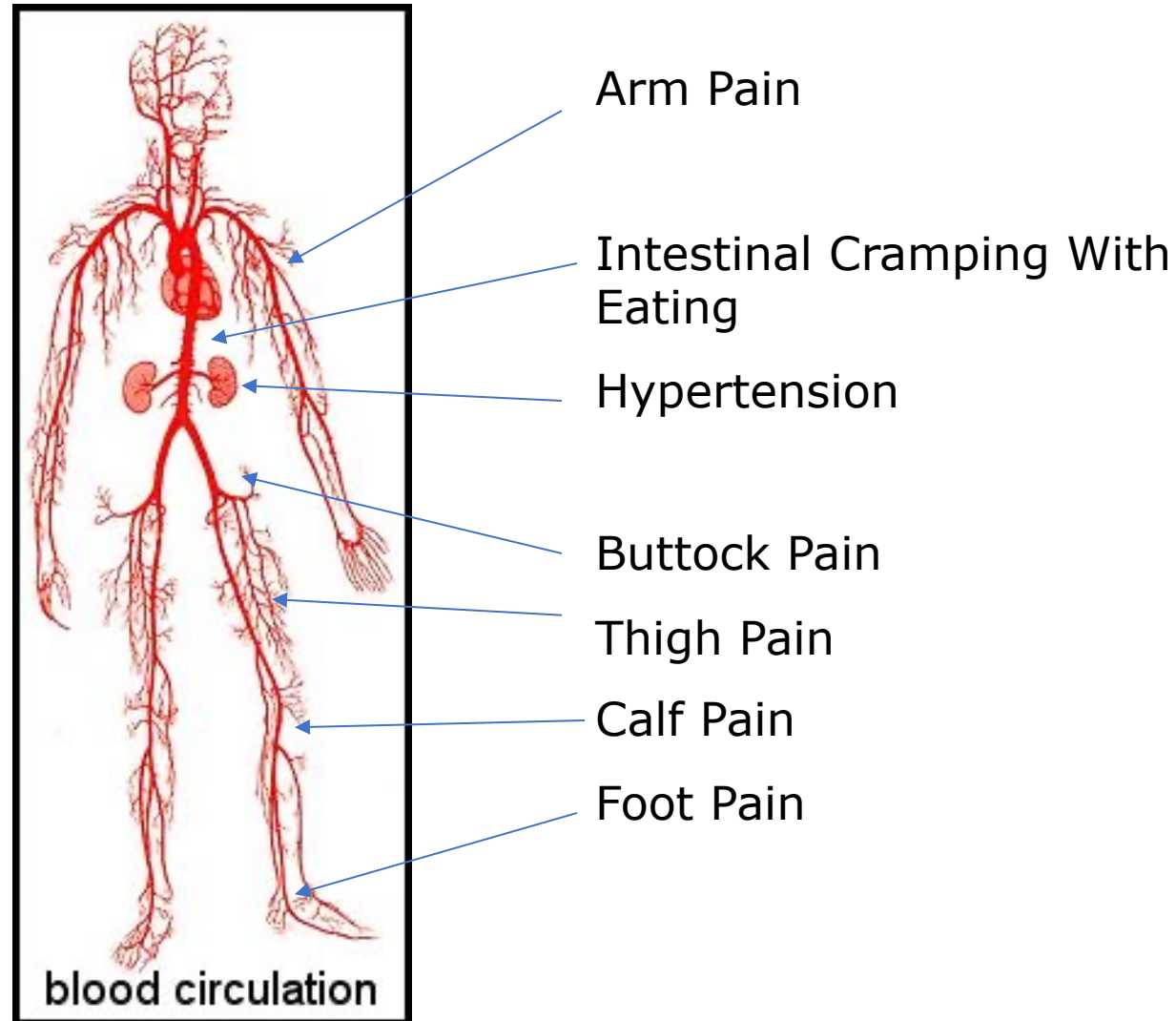


Atherosclerosis



- **Classic Claudication** — Exertional pain that does not begin at rest, causes the patient to stop an activity, and resolves within 10 minutes of rest.

Symptoms of Vascular Disease

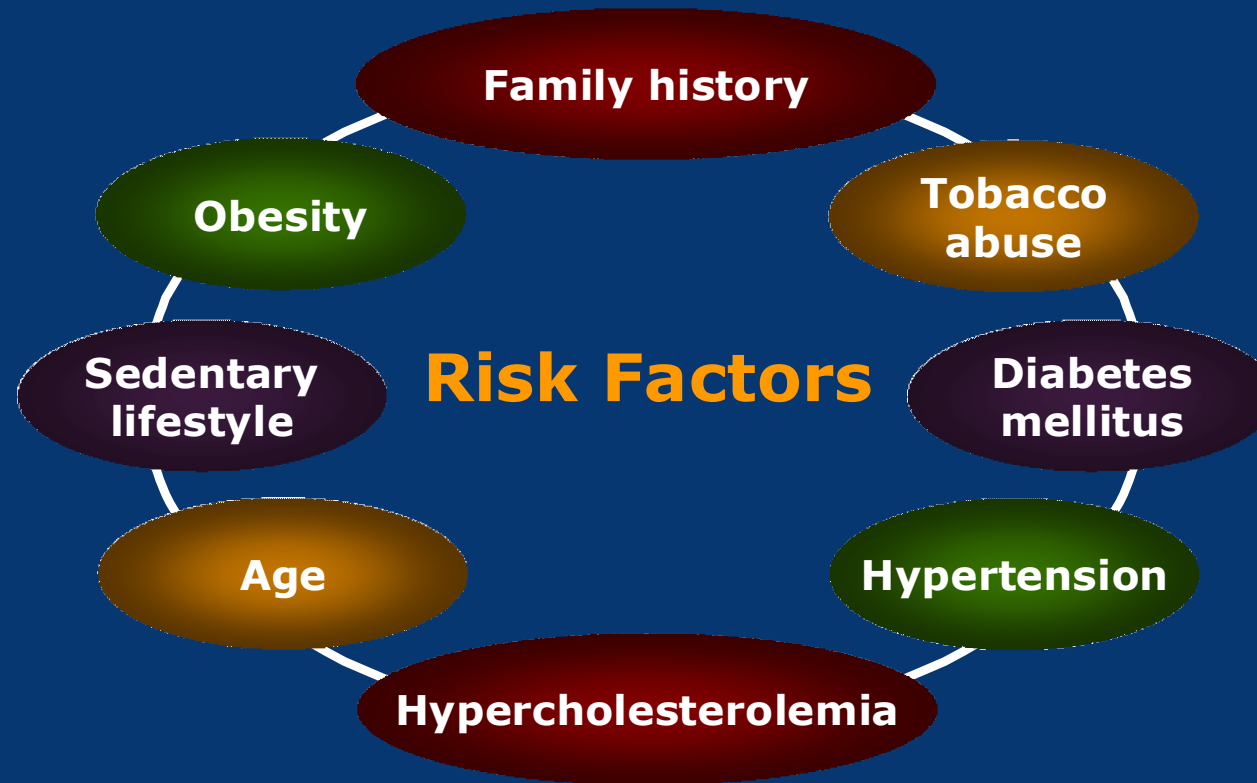


Non-Vascular Causes Symptoms



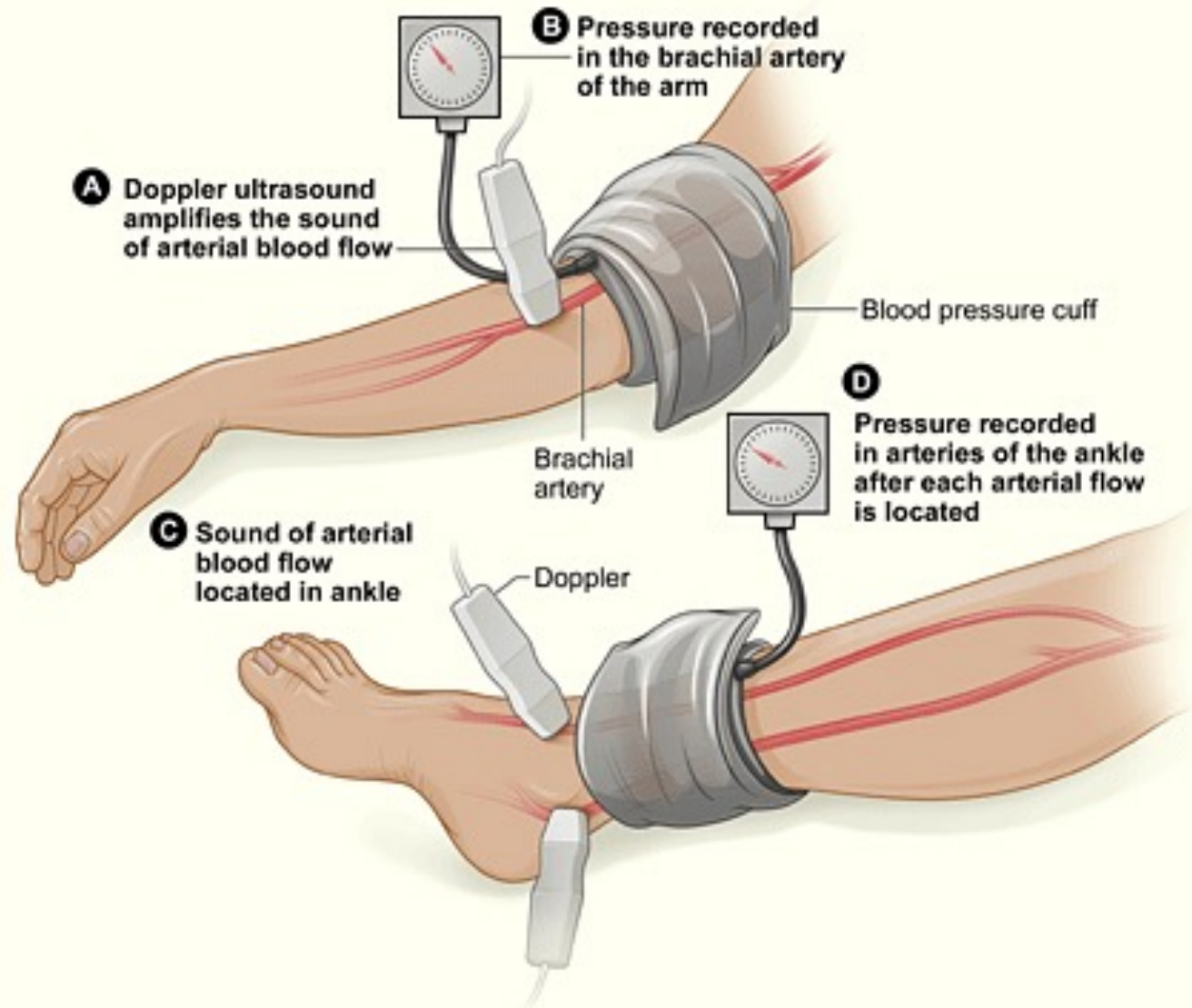
- **Pseudoclaudication** – Pseudoclaudication, describes a pain syndrome due to lumbar neurospinal canal compression. Unlike Classic claudication which occurs with walking and is relieved by stopping, pseudoclaudication causes pain with erect posture and is relieved by sitting or lying down.
- **Nocturnal Leg Cramps** – Nocturnal leg cramps occur among older and infirmed patients and is not associated with exercise. This complaint is thought to be neuromuscular rather than vascular in origin.
- **Calf Pressure and Tightness** – This symptom is primarily seen in athletes and is usually associated with chronic exercise. It is thought to be due to increased compartment pressure and may persist even after rest.
- **Arthritis** – Pain in the joints of the extremities.

The Disease



- Ankle Brachial Index
- Carotid Dopplers
- CT/MRI Scans
- Angiography

Ankle Brachial Index



Diagnosis

- Ankle-Brachial Index (ABI)

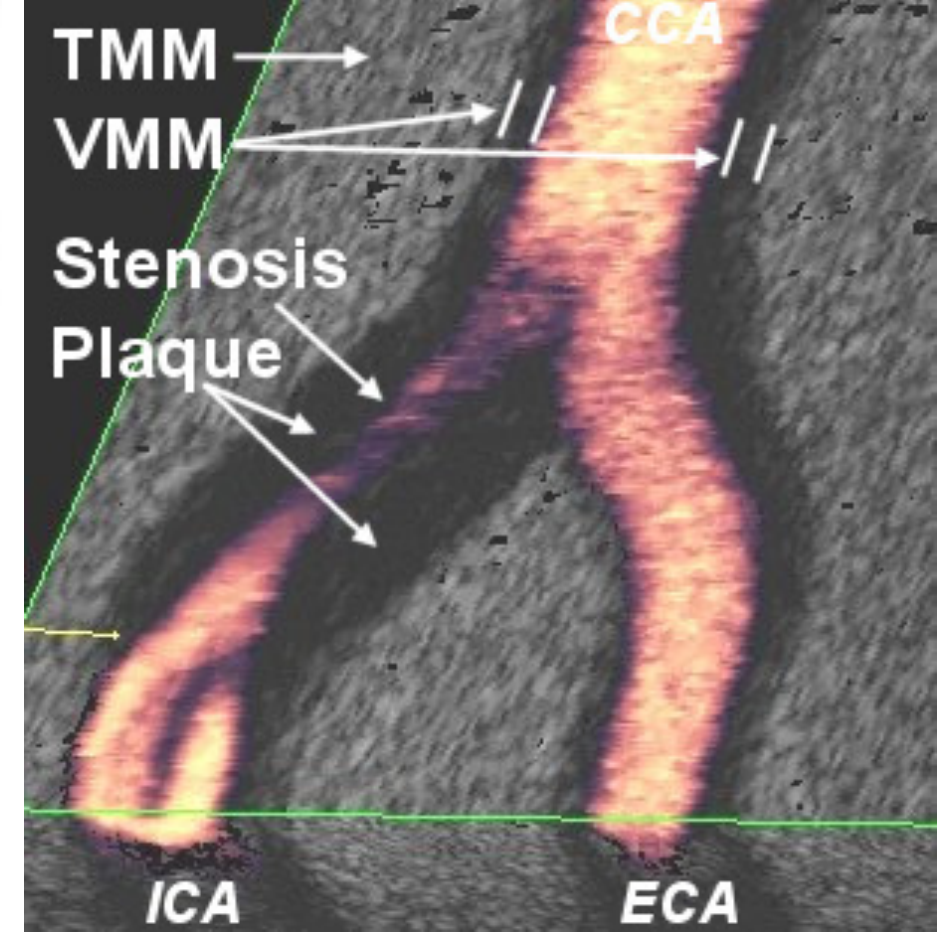
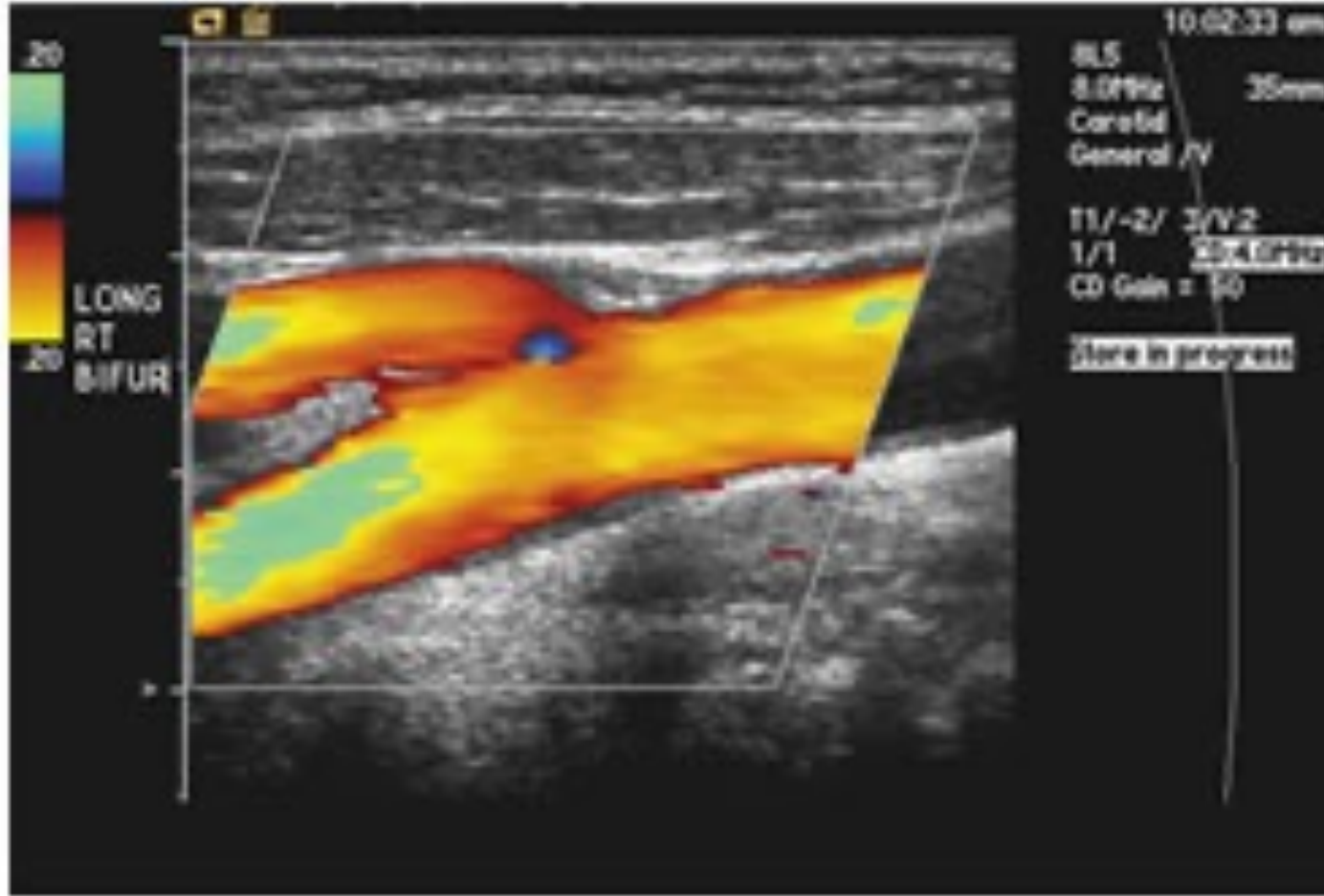
$$\text{ABI} = \frac{\text{Ankle Systolic Pressure}}{\text{Brachial Systolic Pressure}}$$

- 1.0 = Normal
- >0.80-<0.90 = Mild, possibly asymptomatic disease
- 0.50-0.80 = Moderate disease
- <0.50 = Usually indicates severe, multilevel occlusive disease
- <0.25 = Usually indicates ischemic rest pain or tissue loss

Carotid Dopplers



Carotid Dopplers



CT/MRI Imaging



CT/MRI Imaging



Angiography

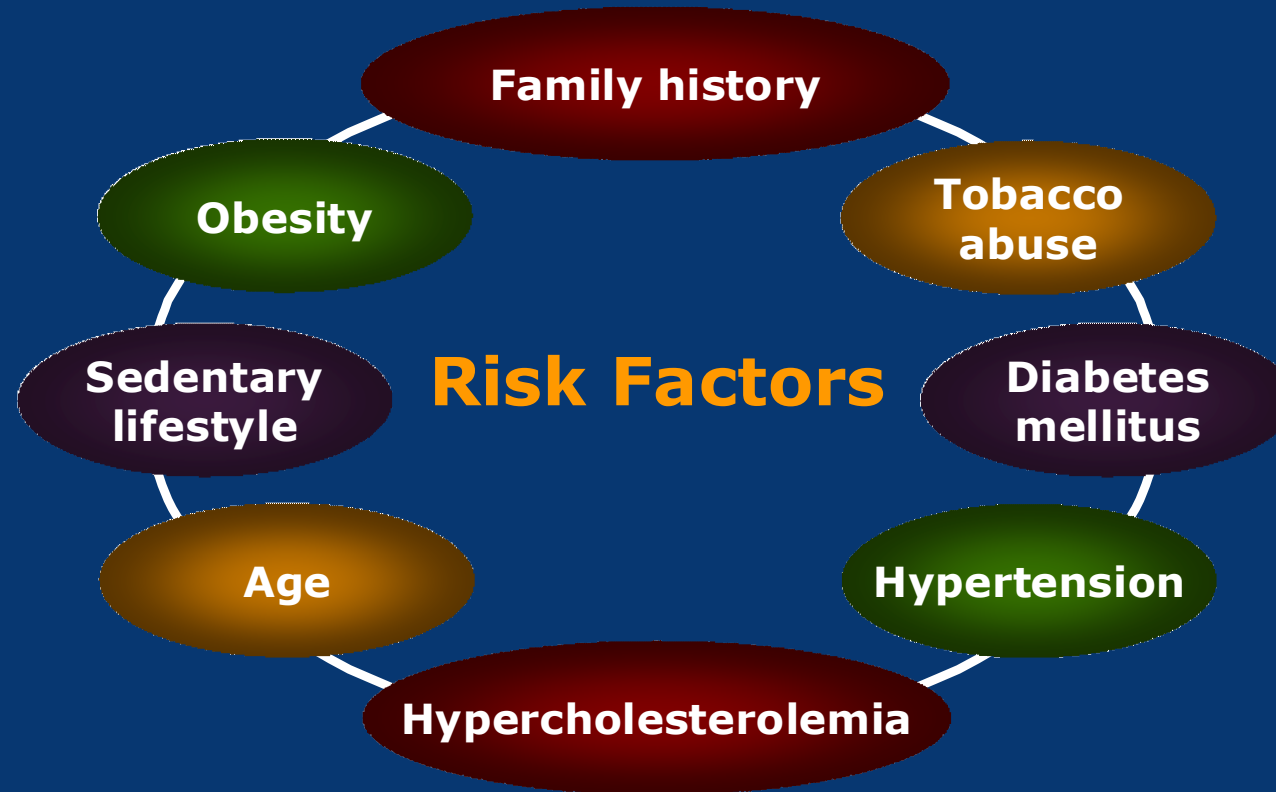


Angiogram

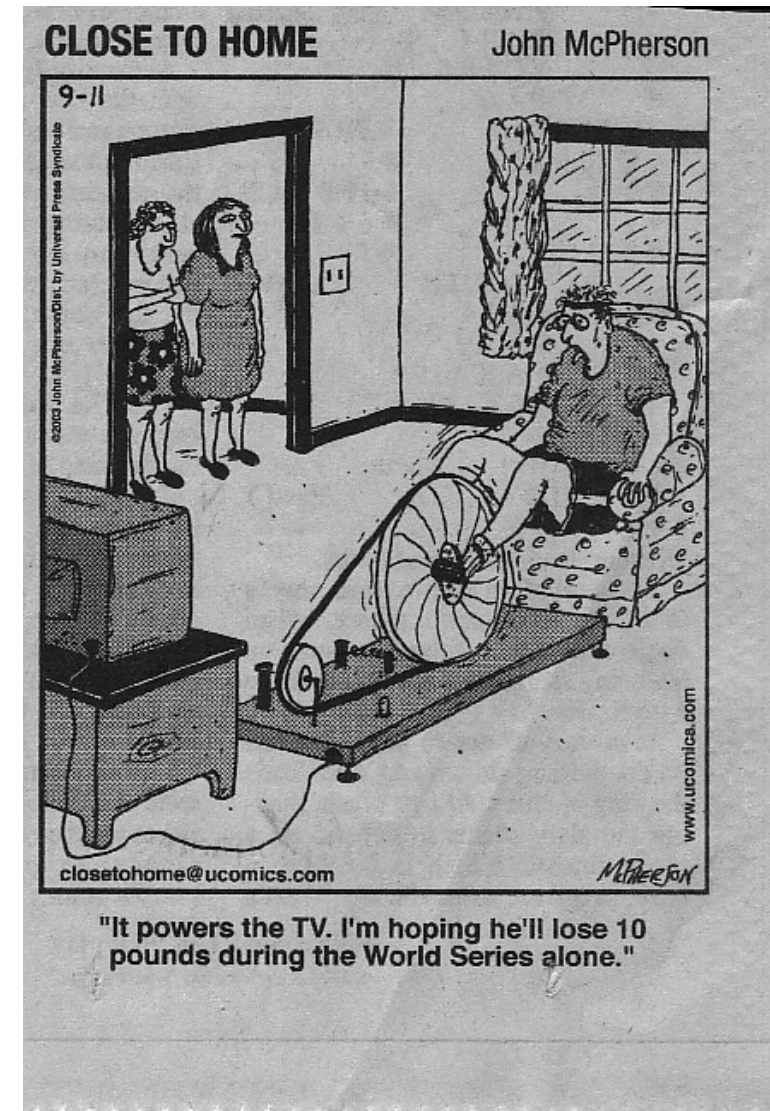
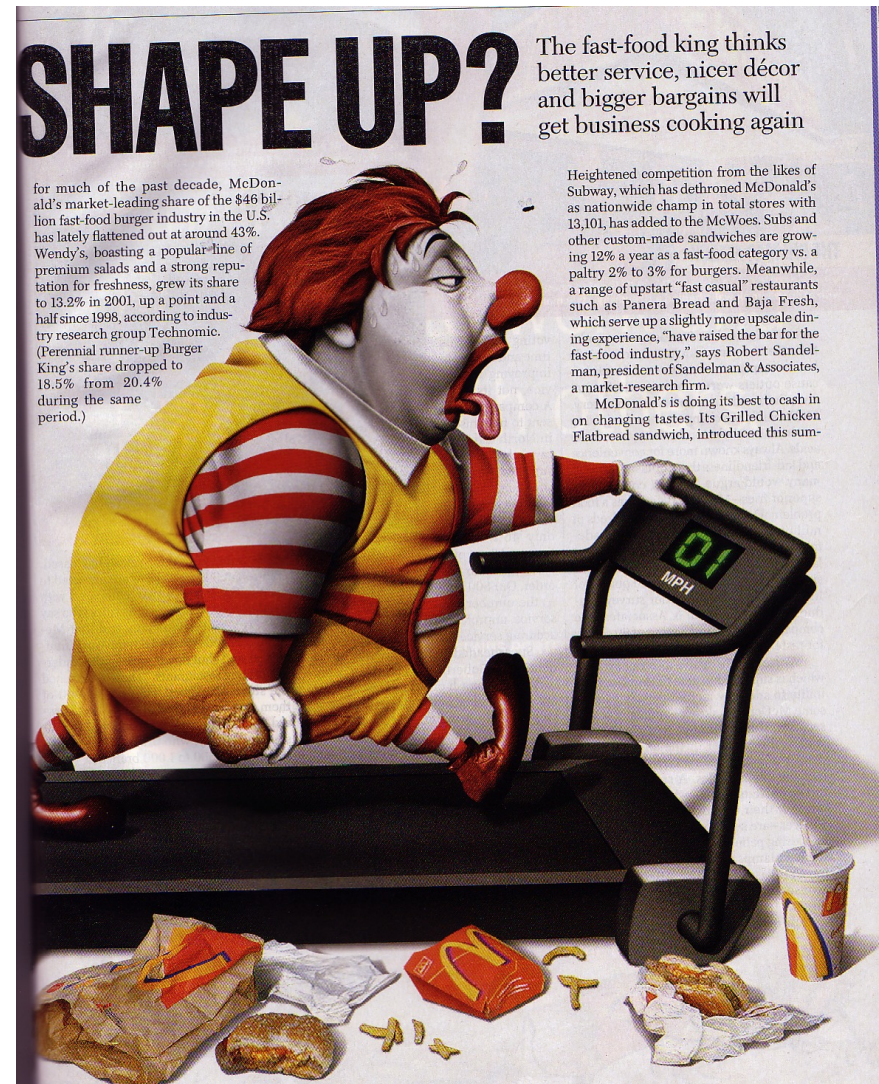


- Risk Factor Reduction
- Medications
- Exercise
- Percutaneous Intervention
- Surgery

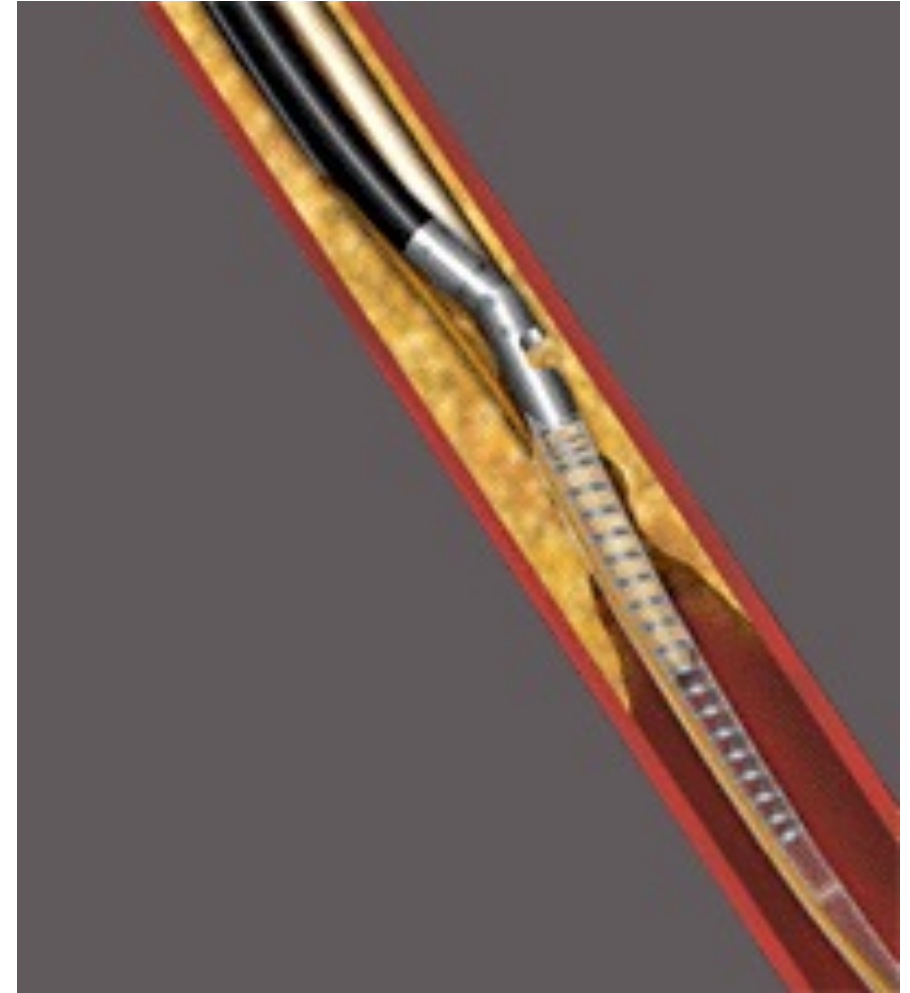
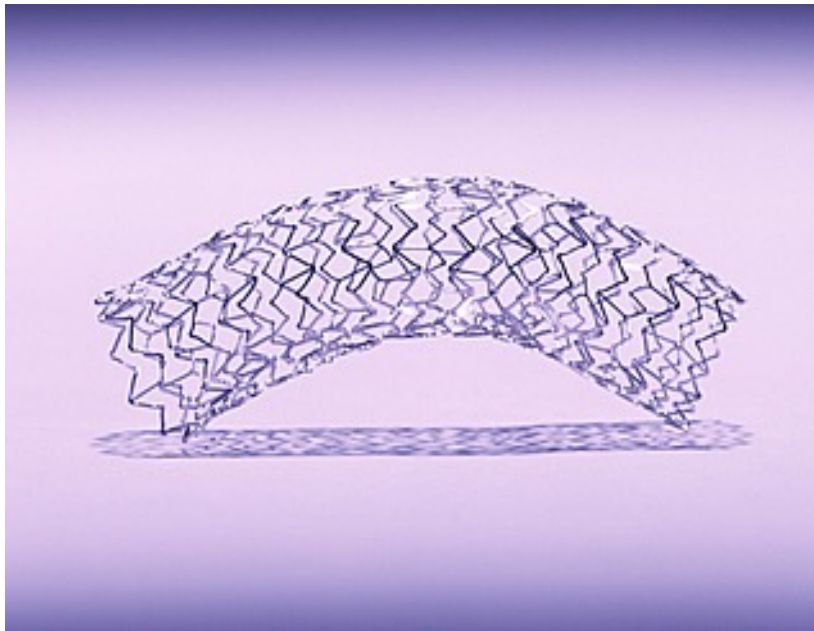
The Disease

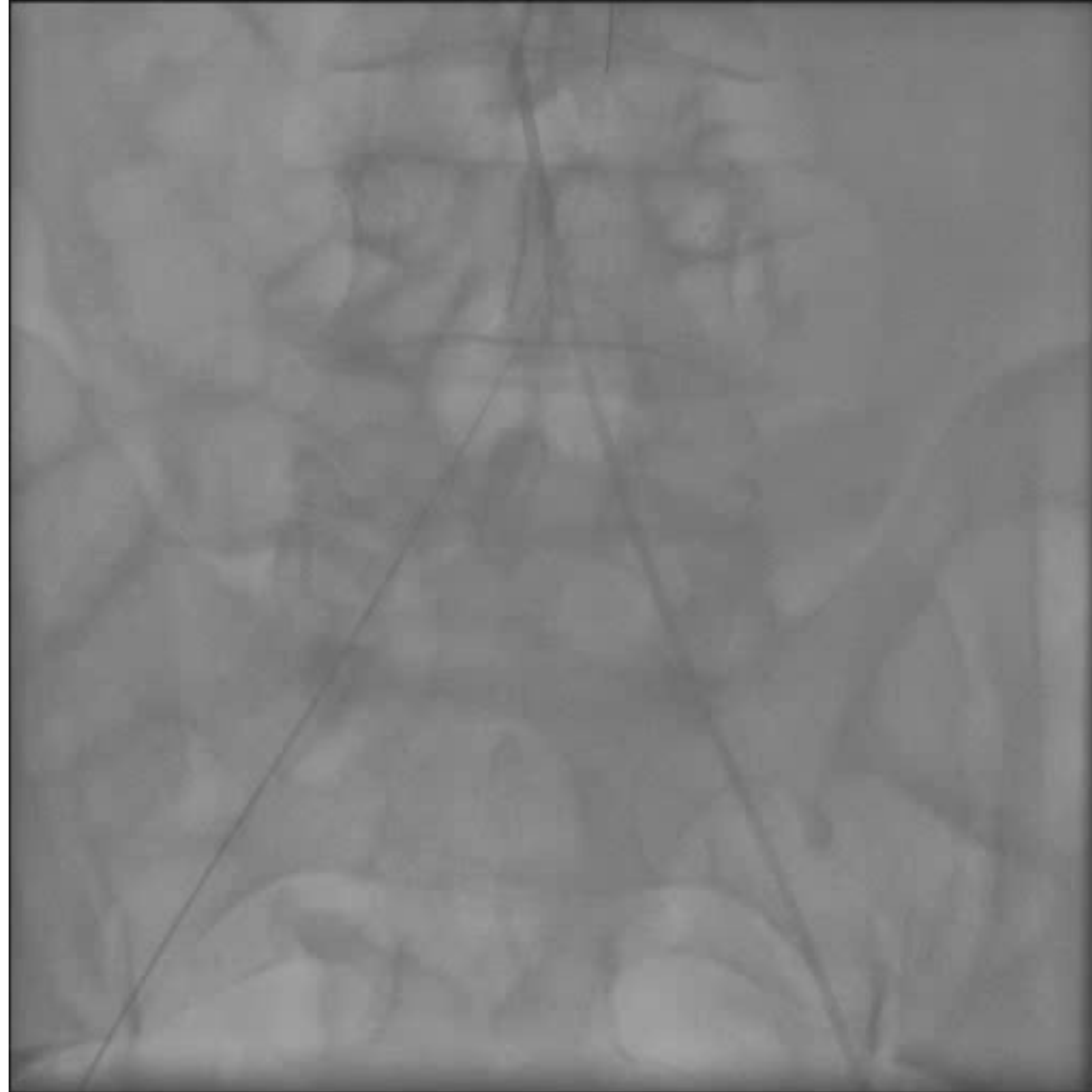


- Aspirin
- Plavix
- Cilostazol
- Pentoxifylline
- Ginkgo Biloba
- Chelation Therapy

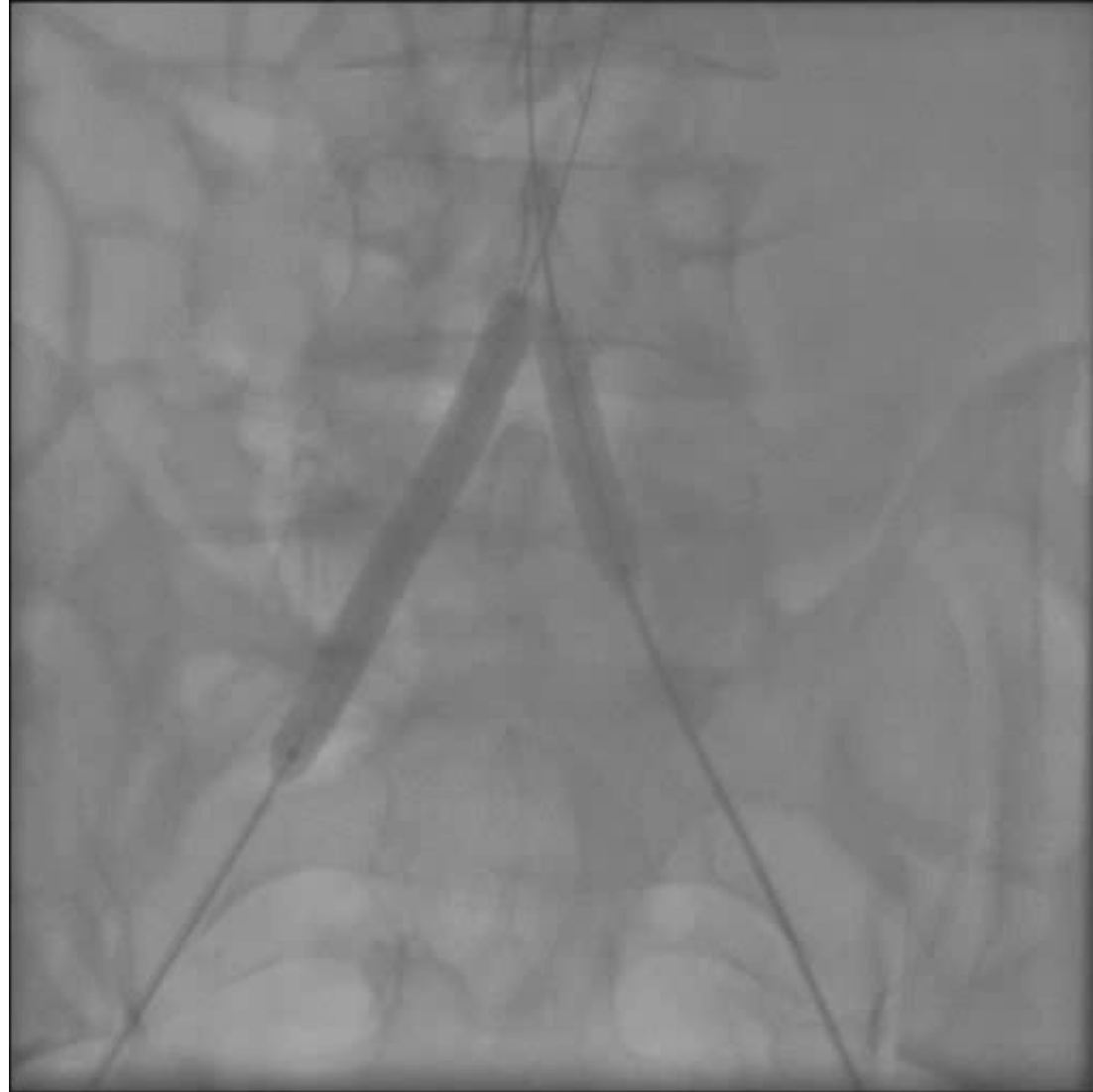


Percutaneous Intervention

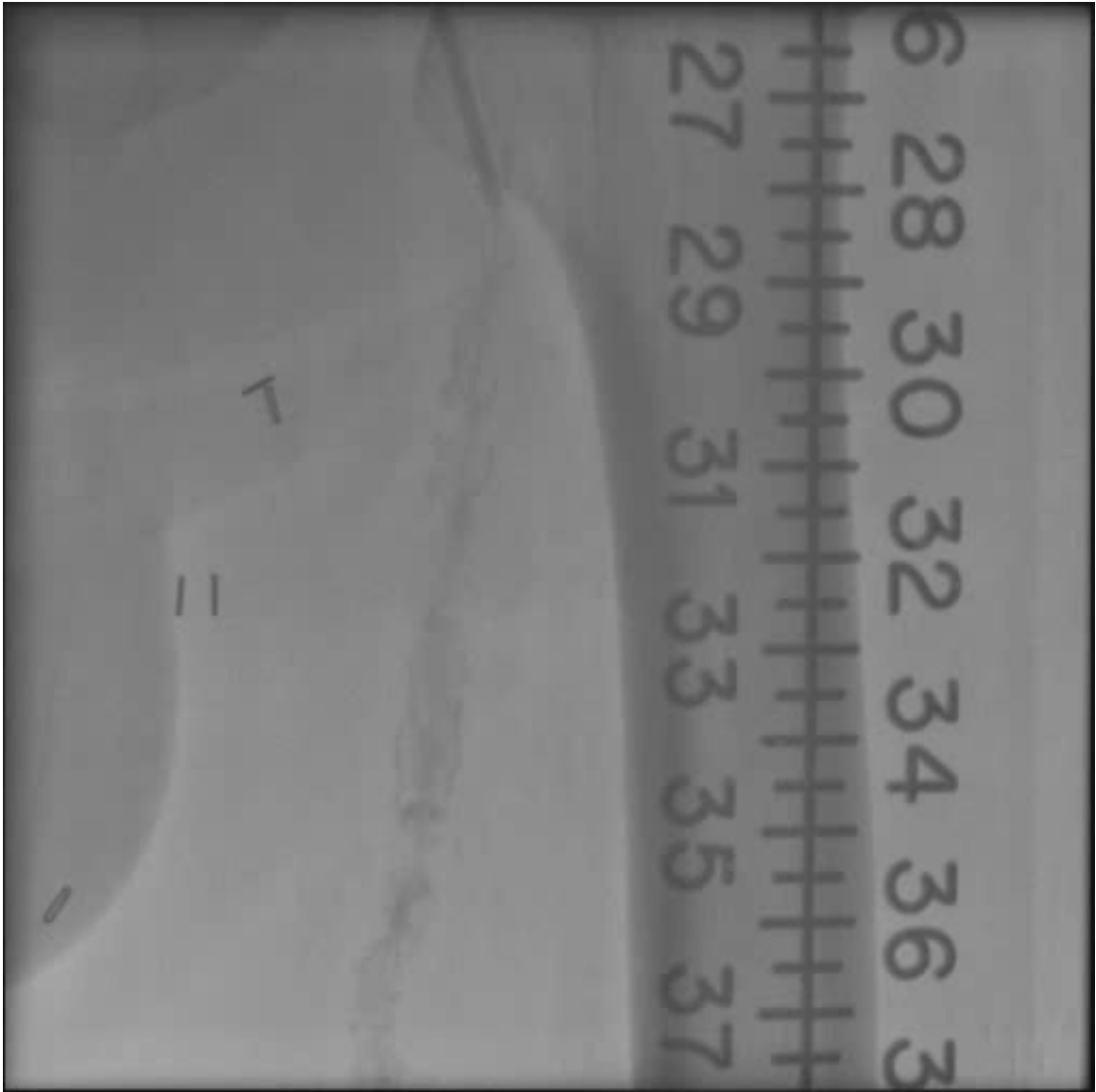


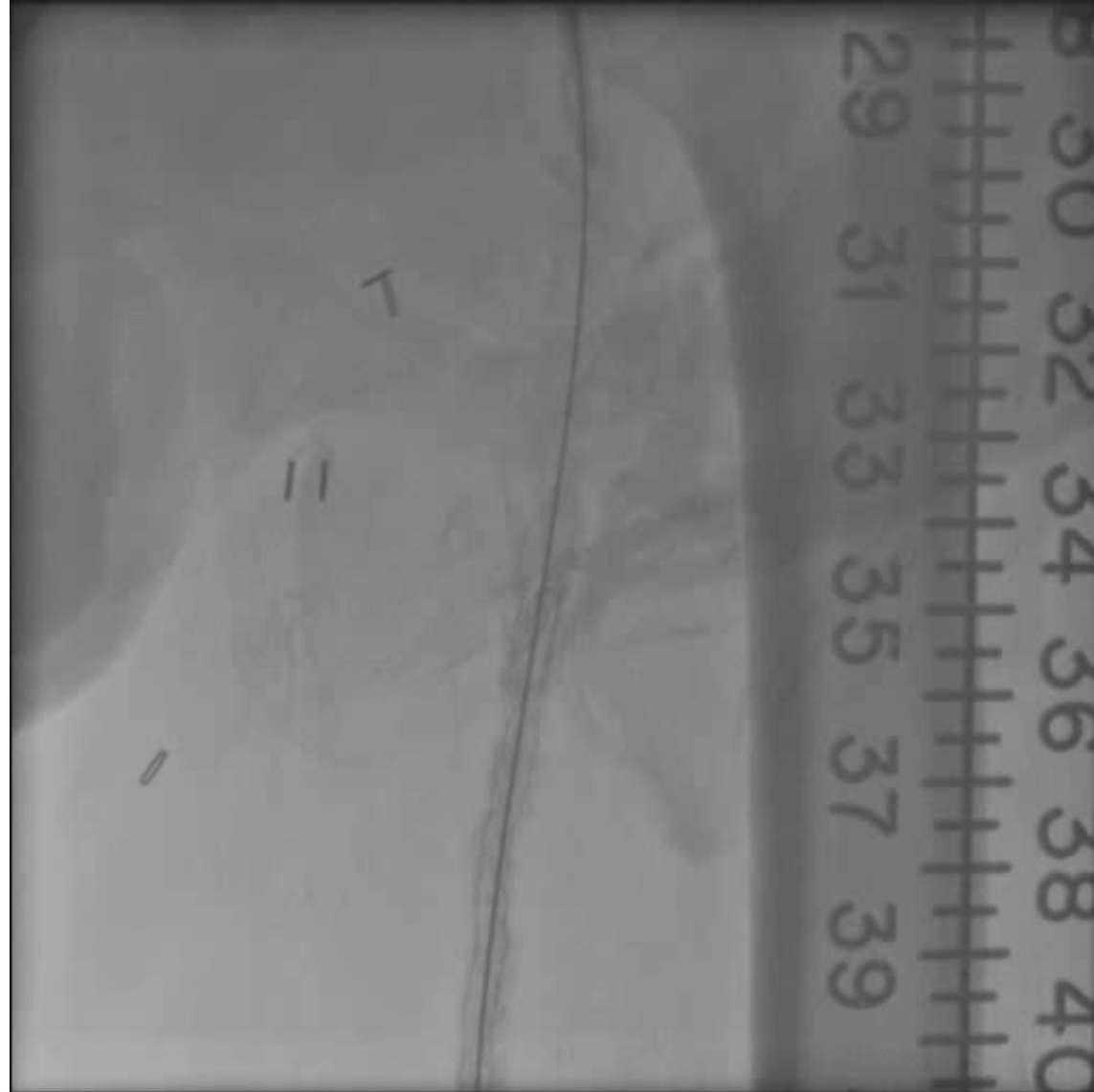


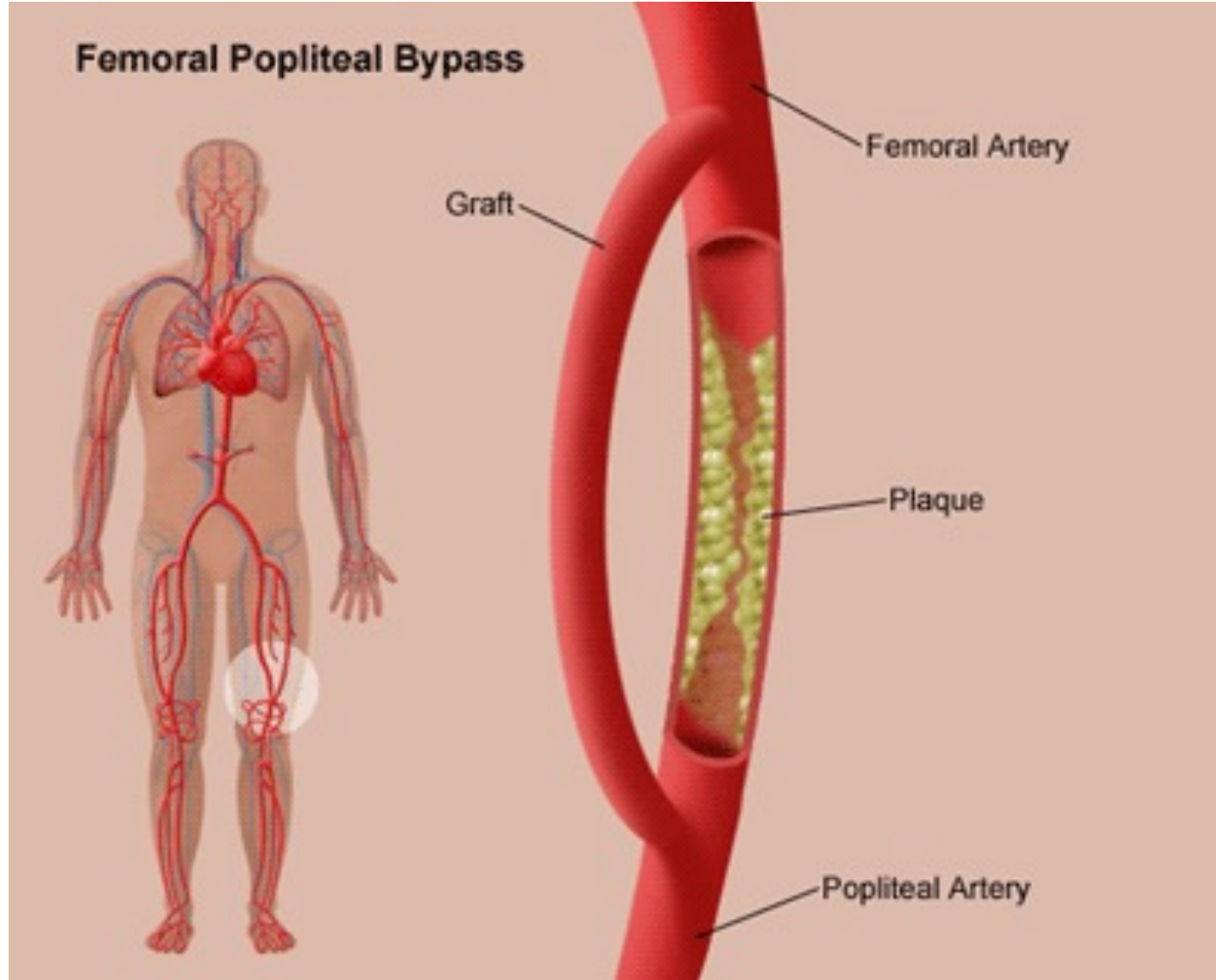
Iliac Stenting











Bypass Pre



Bypass Post



Why Treat Peripheral Vascular Disease?

- **Cardiovascular Morbidity and Mortality** — Nonfatal myocardial infarction or stroke in 20 percent, and death in 15 to 30 percent (three-quarters due to cardiovascular causes); an association between cardiovascular disease and PAD has been noted in multiple studies [[43,44,46](#)]. The importance of PAD as a marker for coexistent coronary artery disease cannot be understated.

Questions?

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