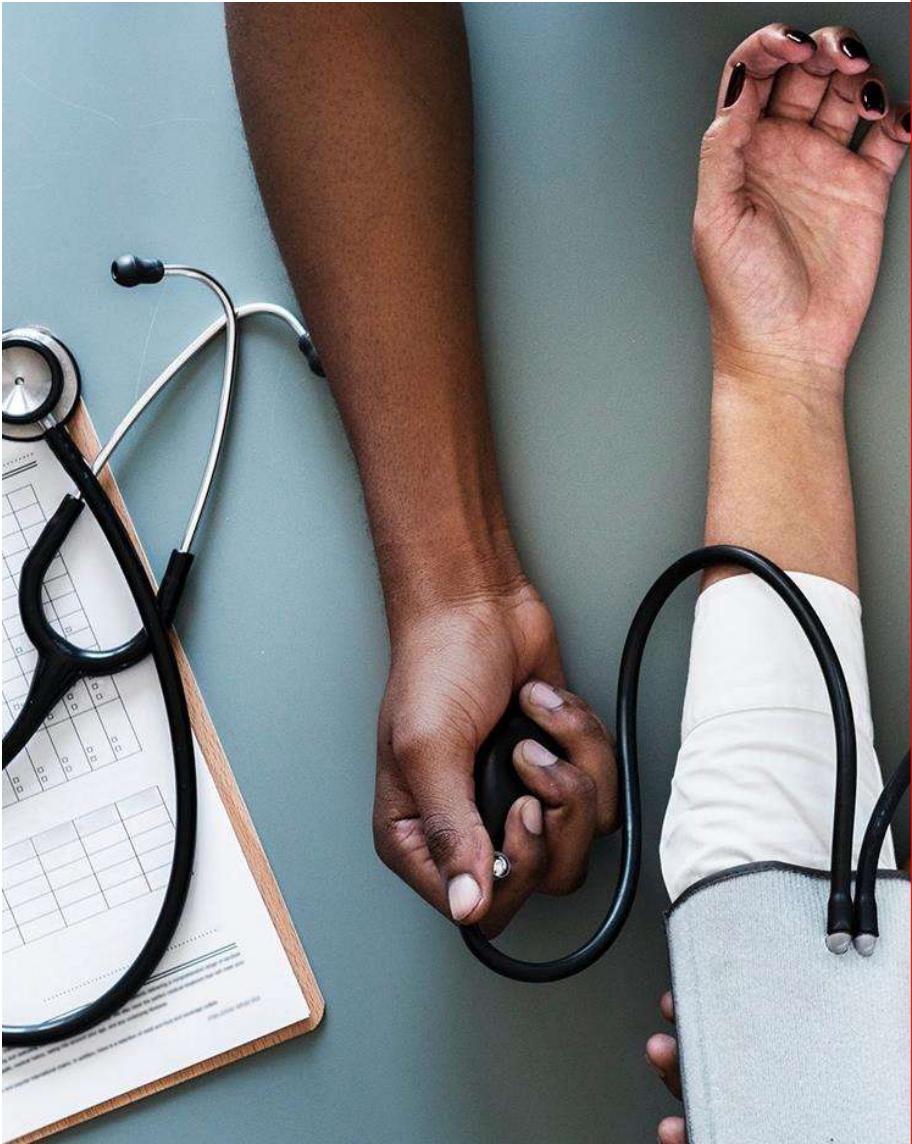


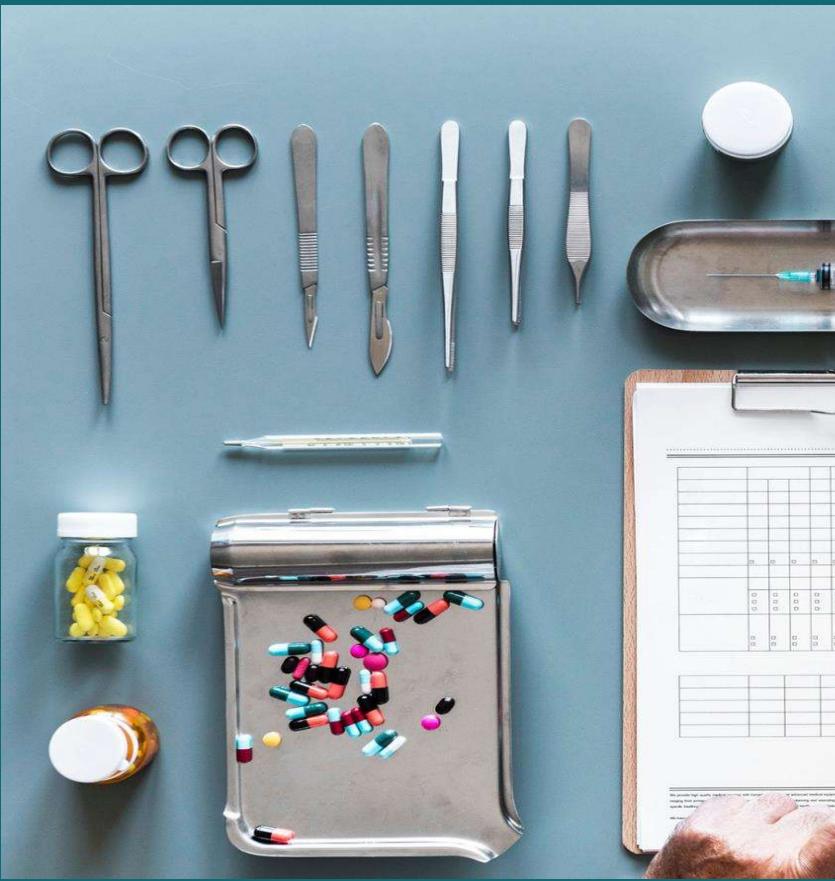


Coronary Artery Bypass Graft & Valve Replacement

Post-Operative Orders and Follow Up
Plan

Alexis Linville Jordan, BSN, RN





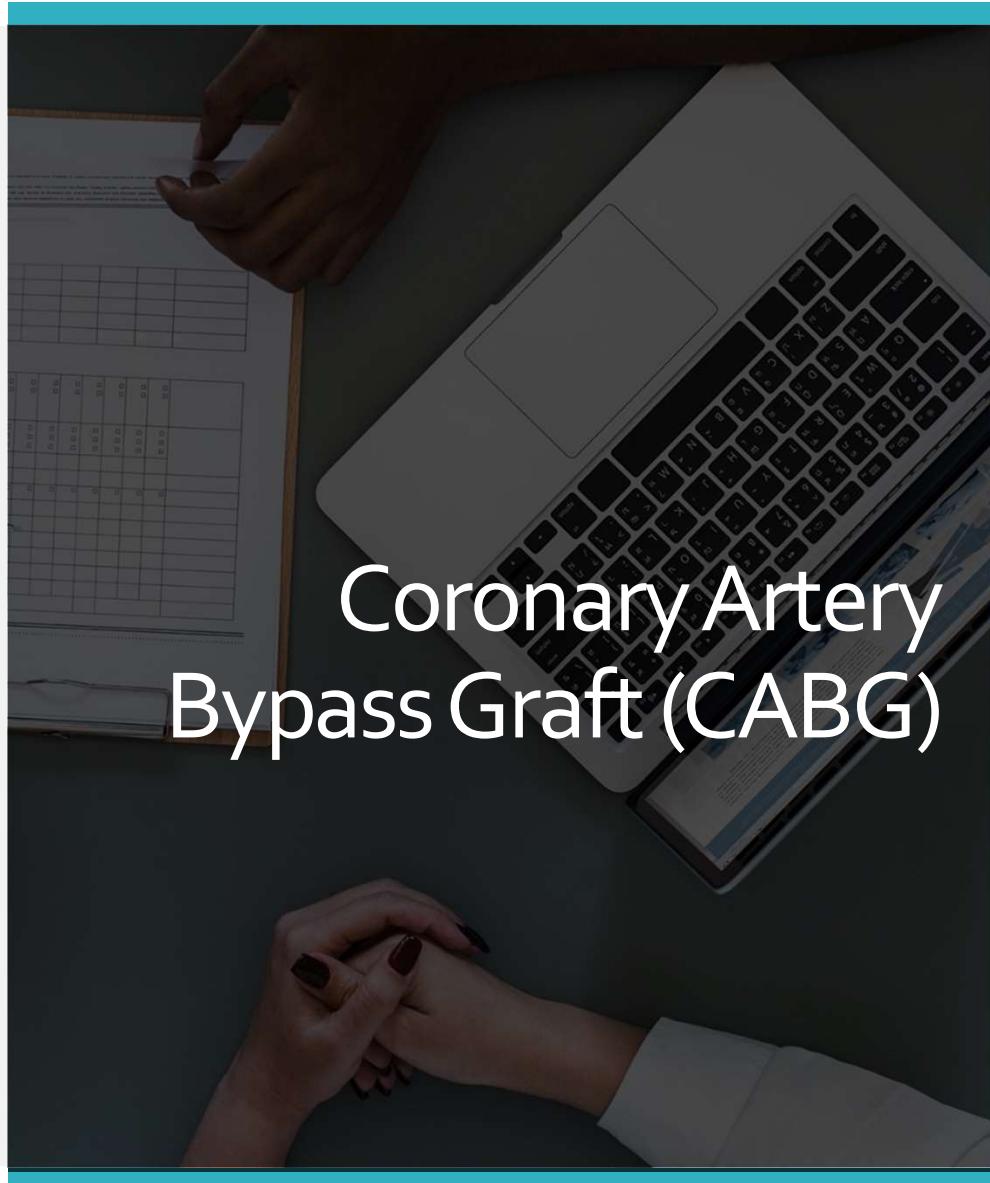
Objectives

- Participants will understand what are the essential medications these patients need to be on
- Participants will understand what activity levels these patients can do post discharge
- Participants will understand how soon post discharge patients should be seen for follow up



What are CABGs?

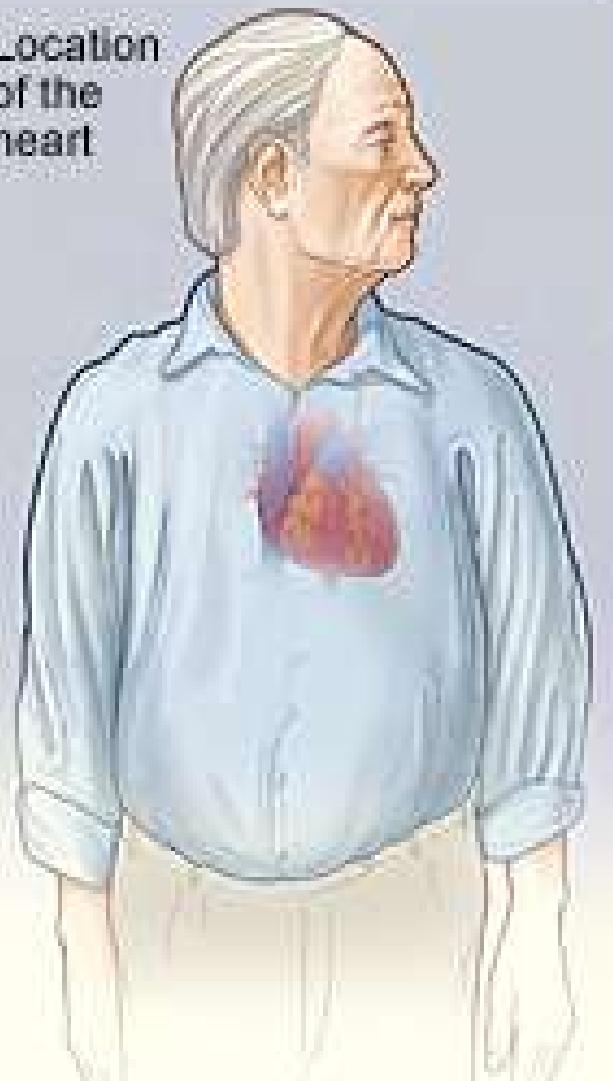
- Restore normal blood flow to obstructed coronary arteries
- Two Main Approaches
 - LIMA or LITA
 - Great Saphenous Vein
 - Radial Artery
- Why do we perform CABGs?
 - Relieve Angina
 - Prevent/relieve left ventricular dysfunction
 - Reduce risk of death
- CABGs do not prevent myocardial infarctions (heart attacks)
- How are CABGs performed?
 - Cardiopulmonary Bypass or “On-pump” technique
 - “Off-pump” technique
- CABG Indications
 - 50 to 99 percent obstruction
 - Obstruction usually due to arteriosclerosis or atherosclerosis



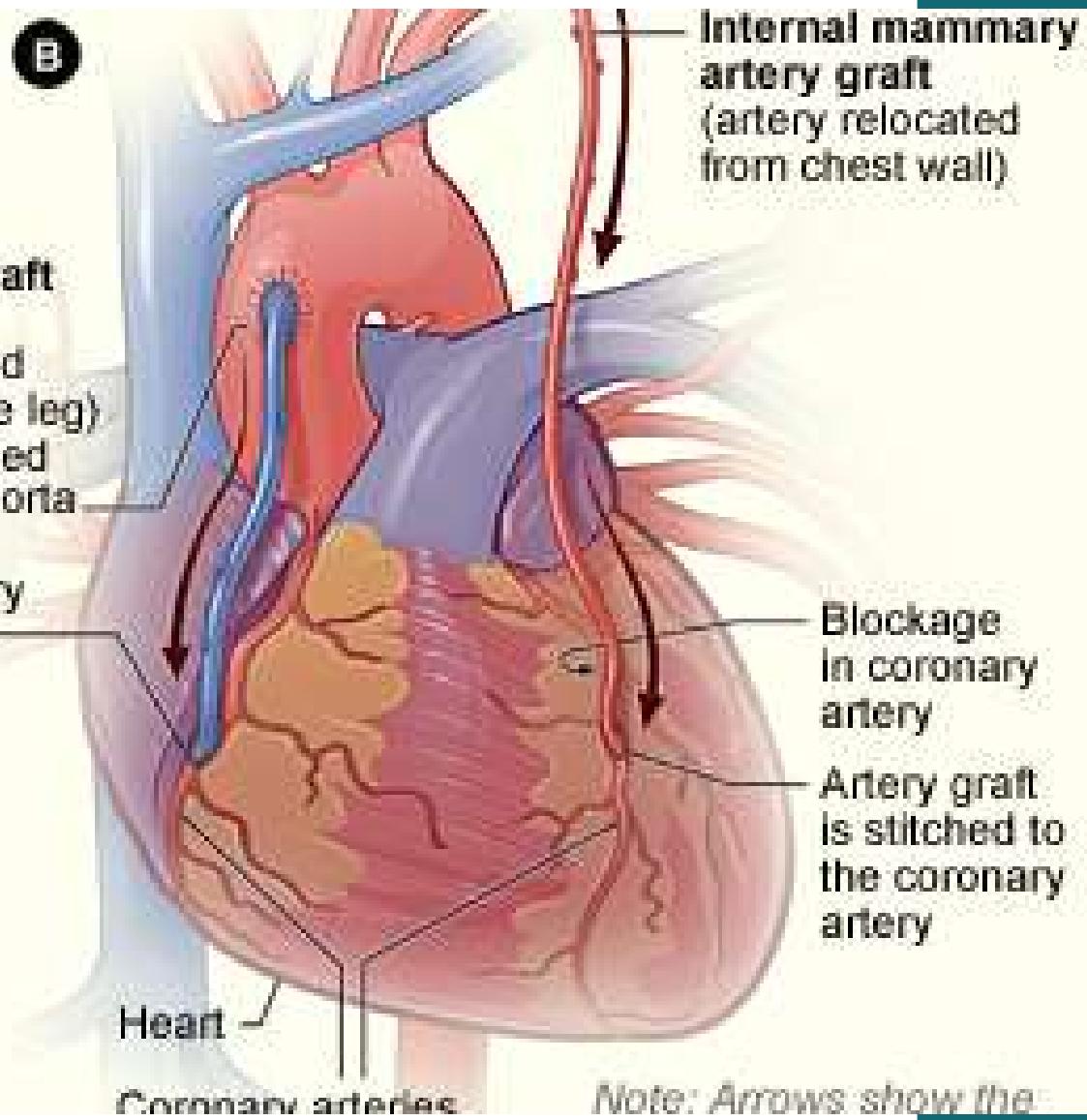
Coronary Artery
Bypass Graft (CABG)

A

Location
of the
heart

**B**

Vein graft
(vein
removed
from the leg)
is stitched
to the aorta
and
coronary
artery



Essential Medications Post-Op CABG



Aspirin

Antiplatelet
Medication



Beta Blockers

Slows heart rate,
lower blood pressure
and decrease the
heart's demand for
oxygen



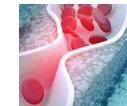
Nitrates

Short Acting Nitrates
Long Acting Nitrates
Dilates blood vessels



ACE Inhibitors

Treat high blood
pressure



Lipid Lowering
Therapies

Reduce progression
of atherosclerosis



Activity Restrictions Post-Op CABGs



Walking

Good for Lungs and Heart

Speed

Increase Amount and Intensity over 3 months

Leg Swelling



Business and Pleasure

No driving 4 to 6 weeks post-operatively

Away from Work – 6 to 8 weeks

No traveling for 2 to 4 weeks

No sex for 4 weeks



Lifting

Nothing over 10 lbs

No Reaching Backwards

No Arm Pulling

No Arm Pushing

Activity Levels for Post-Op CABG & Valve Patients

Exercise has been proven to enhance cardiovascular health. But there is still risks for complications with exercise in post-op CABG patients.





Primary Care Physician

First Visit: 1-2 weeks after discharge

Second Visit: 6-8 weeks after discharge



Cardiology

First Visit: 2 weeks after discharge

Second Visit: 4-6 weeks after discharge



CVT Surgery

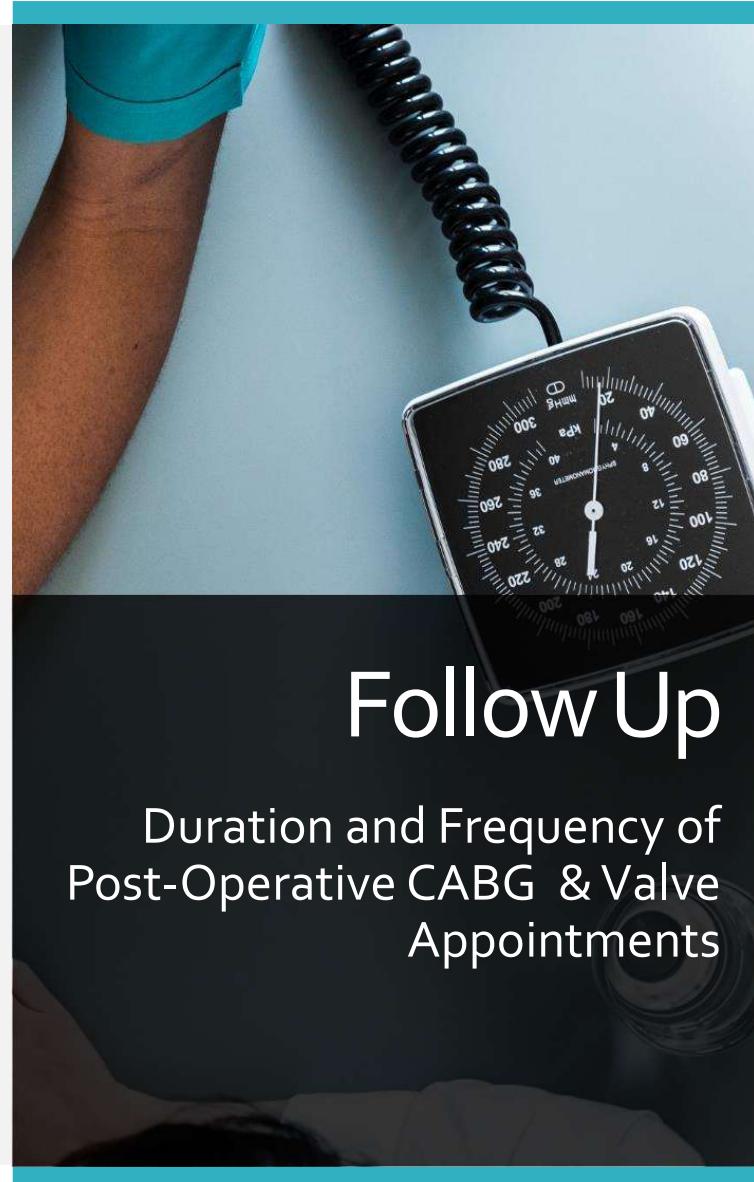
(Valve) First Visit: 2 weeks after surgery

(CABG) First Visit: Within the first month after surgery

Other Specialties

Electrophysiology:
Arrhythmias s/p CABG

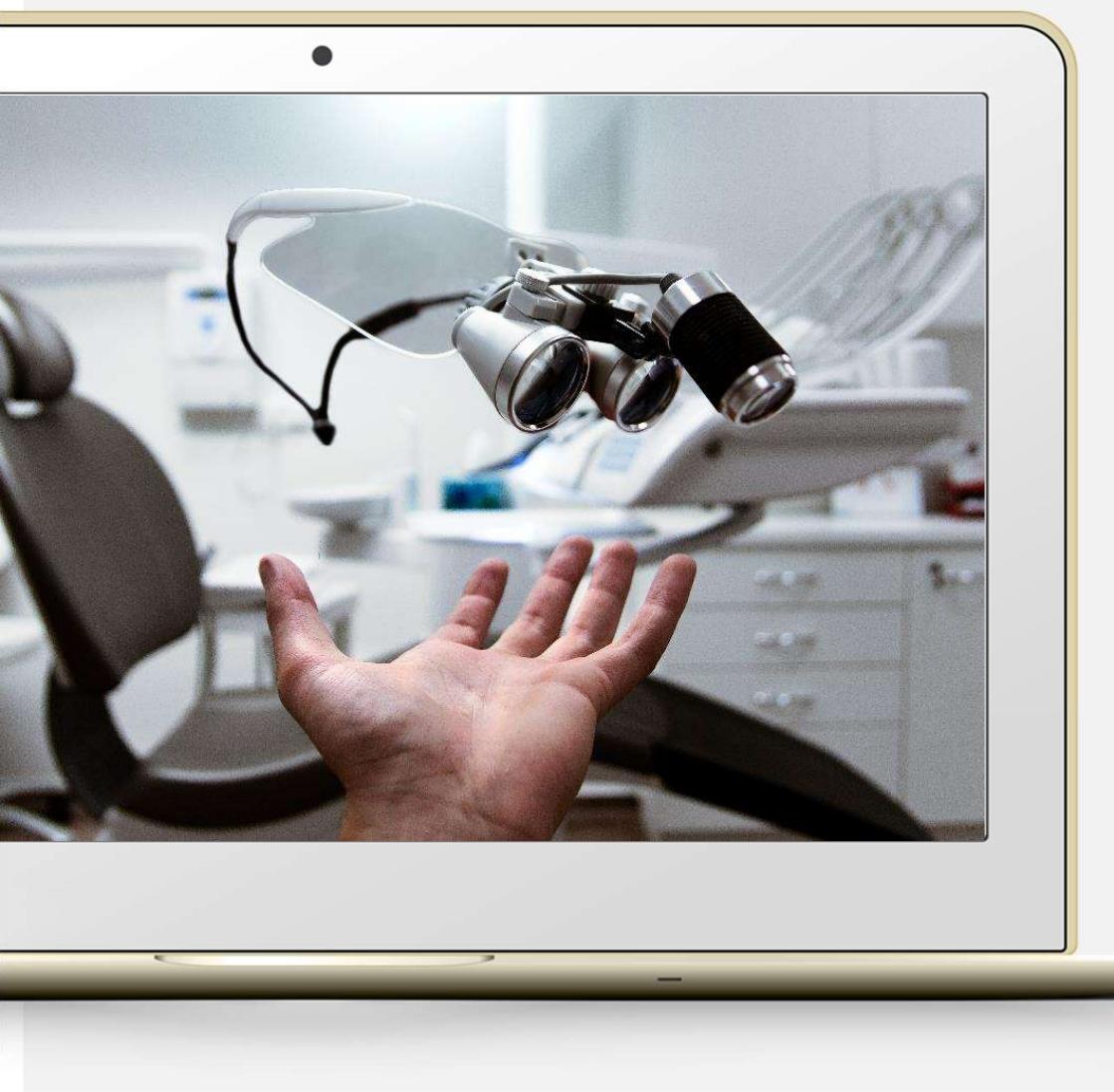
Neurology: Stroke s/p CABG



Follow Up

Duration and Frequency of Post-Operative CABG & Valve Appointments

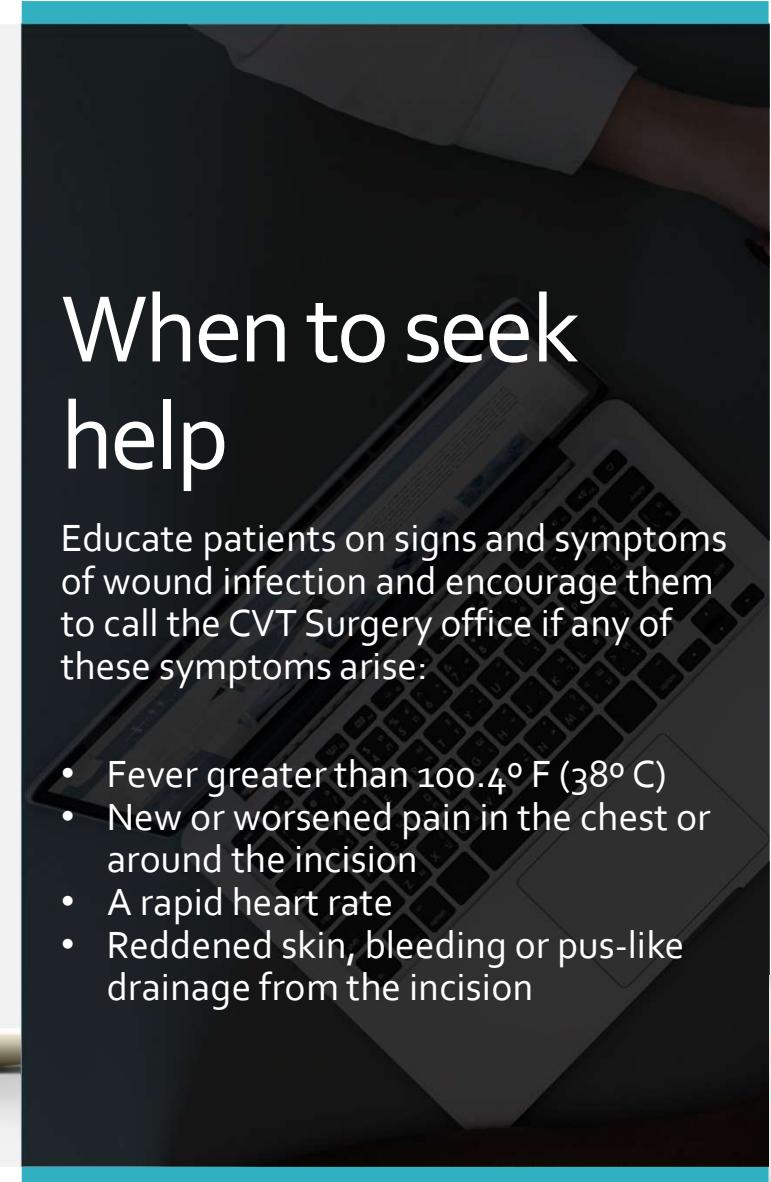




When to seek help

Educate patients on signs and symptoms of wound infection and encourage them to call the CVT Surgery office if any of these symptoms arise:

- Fever greater than 100.4° F (38° C)
- New or worsened pain in the chest or around the incision
- A rapid heart rate
- Reddened skin, bleeding or pus-like drainage from the incision



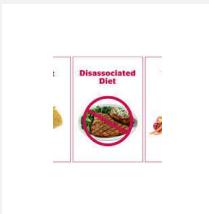
Cardiac Rehab

- Benefits of Cardiac Rehab
 - Improvement of Heart Function
 - Lowering of the heart rate during rest and during exercise
 - Reduce risk in death and complication development post-operatively
- Exercise
 - Determine potential risk
 - Intensity and Duration
 - Types of Exercise
 - Large Muscle Groups and Aerobic Exercise
 - Frequency
 - 3-5 times a week
 - Content and Duration
 - Warm-up Phase
 - Conditioning Phase



Reduce Cardiac Risk Factors

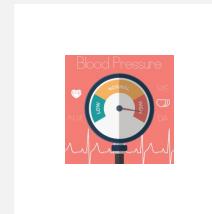
Modifiable Risk Factors that can slow down the progression or development of heart disease after having CABG surgery.



Diet
Substituting Lean for Fatty
Whole Grains
Dairy
Healthy Fats
Sugar
Salt



Smoking Cessation
Smoking is bad for you
Benefits after quitting smoking



Hypertension & Hyperlipidemia
Medications
Why?



Cont'd Reduce Cardiac Risk Factors

More Modifiable Risk Factors that can slow down the progression or development of heart disease after having CABG surgery.



Diabetes

Complications Post-
Op
Treatment and
Control



Psychosocial

Depression
Anxiety



Reduce Stress

Long Term Stress =
Heart Problems
Stress Reduction
Techniques

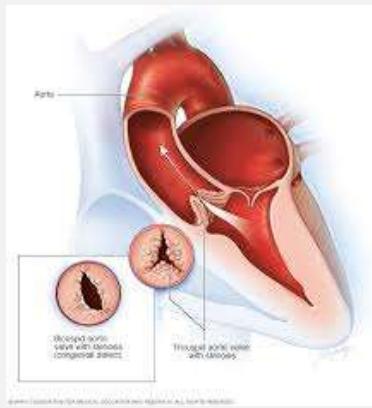


Valve Replacement and/or Repair Surgery

Heart Valves allow a one-way blood flow by opening and closing with each heartbeat

Replacement

- Mechanical Valves
- Biological Valves



Repair

- Commissurotomy
- Valvuloplasty
- Reshaping
- Decalcification
- Repair
- Patching



Valve Replacement

There are four valves: Aortic, Mitral, Tricuspid and Pulmonary

Aortic Valve

Heart to Aorta to the Rest of your Body

Most Common Valve Replacement

Regurge

Stenosis

TAVR

Mitral Valve

Between Left Atrium and Left Ventricle

Most Common Valve Repair

Regurge

Stenosis

Tricuspid Valve

Right Atrium to Right Ventricle

Regurge

Stenosis

Atresia



Medications for Post-Op Valve Replacement/Repair on Discharge

Mechanical Valves

- Blood Thinner
 - Lifelong
 - Warfarin
 - INR 2.5 -3.5
 - Aspirin
 - BB
 - Statins



Mechanical and Tissue Mitral Valves

Tissue

- Blood Thinner
 - >3 months
 - Warfarin
 - INR 2.0-3.0
 - Aspirin
 - Beta Blockers
 - Statins



Minimally Invasive Valve Replacements/ Repair

Discharge Medications

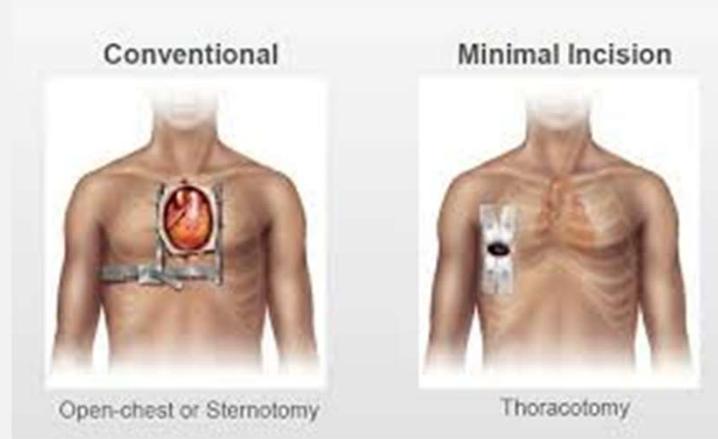
- Same as Open
 - Aspirin
 - Coumadin
 - BB
 - Statins

Activity Restrictions

- No lifting over 25 lbs.
- No driving for 30 days
- Walking

Follow Up Appointments

- 2 weeks of surgery and/or discharge
- 4 weeks of surgery and/or discharge



Post-Op Complications for CABGs and Valve Replacement/Repair

Bleeding

- Top care priority
- 2.4% post-op CABGs
- Arterial Pressures
- CABG > Valve



Arrhythmias

- Atrial Fibrillation
 - Increase stay
 - Increase costs
 - Pacing wires
- Ventricular Arrhythmias
- Bradyarrhythmias



Infections

- Extremely dangerous
- Increase mortality
- Prolong recovery
- Increase cost of care
- Decrease infections
- Most common
 - Respiratory 45.7-57.8%
 - Surgical Site 27.7%
 - Catheters/Devices 20.5-25.2%



Cont'd Post-Op Complications for CABGs and Valve Replacement/Repair

Memory Loss

- Postoperative Cognitive Dysfunction (POCD)
 - Memory problems
 - Difficulty Multitasking
 - Learning new things
 - Following multistep procedures
 - Setting priorities
- Delirium vs. POCD

Kidney Problems

- 30% of patients that undergo cardiac surgery
- 1% need dialysis
- Kidney problems post op has increased while death from kidney damage has decreased
- Death from acute renal failure s/p CABG
 - Decreased by 3 fold
 - Still have higher death rates

Stroke/Heart Attack

- Stroke occurs in up to 5% of CABG patients
 - Older population
 - Cerebrovascular Disease
- Noncompliant with change in lifestyle post cardiac surgery could lead to heart attack
- Determine risk factors pre-operatively
- STS Scores





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