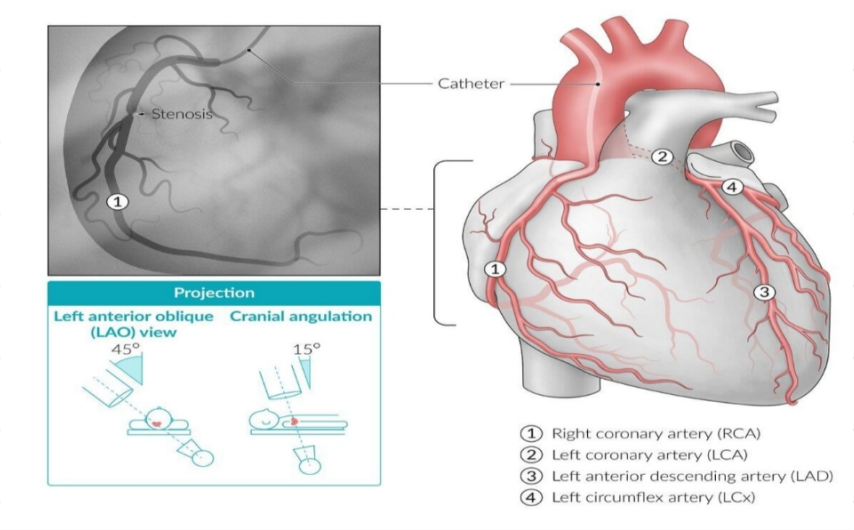


Aetiology

- Atherosclerosis (>90%)
- Embolisation
- Coronary spasm
- Vasculitis
- Ostial stenosis
- Severe LVH
- Congenital anomalies of the coronary artereis (e.g anomalous origin of LAD artery from pulmonary artery) /RAD branches from post., between two big arteries (pulmonary + aorta) → becomes pressed with strenuous exercise.

rare

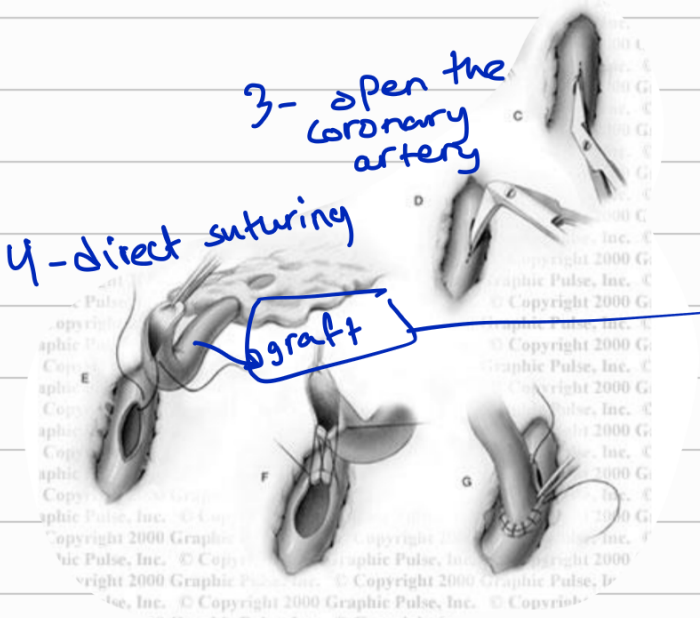
CABG

indications &
- narrowing of 3 vessels
- 50% narrowing of lt. main artery
- unstable angina
- complications of PTCA

sequence &
1- sternotomy
2- heart-lung bypass machine:
cannula in RA, and one in ascending aorta

deox → oxegynation → ox blood

→ stop the heart by giving a solution rich in K^+



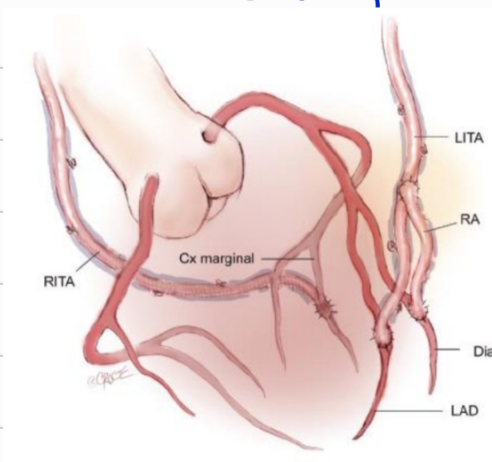
3- open the coronary artery

4- direct suturing graft

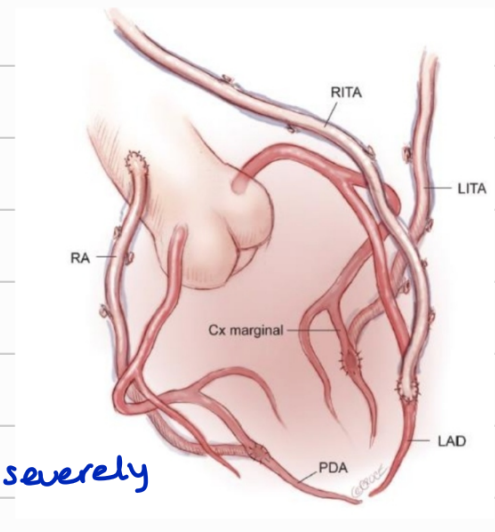
[conduits] &
→ arterial
mammary / radial
(lima, Rima)

→ venous
great saphenous

* Best result surgeries → total arterial revascularization (using arteries as grafts)



different ways.
Points to follow:
- LITA for LAD
- Radial artery for severely narrowed.



best conduit

* Mammary artery is a better graft than saphenous vein, why?
  - its endotheluim secretes NO → vasodilation
  - histology
  - vein is thin walled → when exposed to pressure of aorta → new intima will be formed which might narrow the lumen.
  - vein has valves (areas of turbulance → thrombosis)

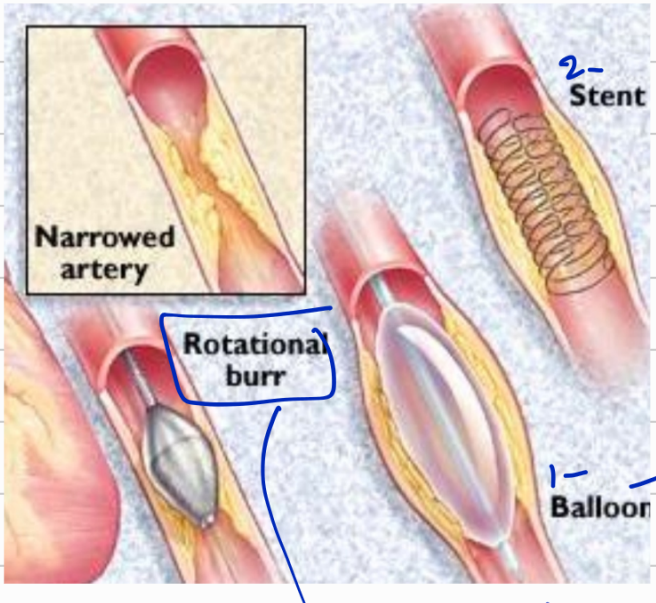
- radial artery has thick muscular layer which tends to spasm

PTCA

Percutaneues transluminal Coronary Angioplasty

⇒ Put balloon or stent.

indications: single artery disease (max. 2)



use drill if artery doesn't open easily.

OPCAB

off-Pump Coronary Artery Bypass:
operating on the heart while it's beating

Median sternotomy of varying sizes.

↓

Depending on the physiology of the patient, the smallest incision will be made.

↓

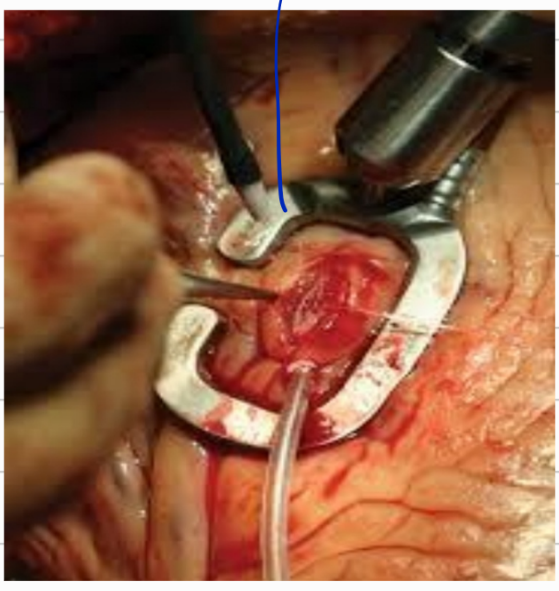
Arteries or veins can be harvested from the patients chest wall, arm, and or leg.

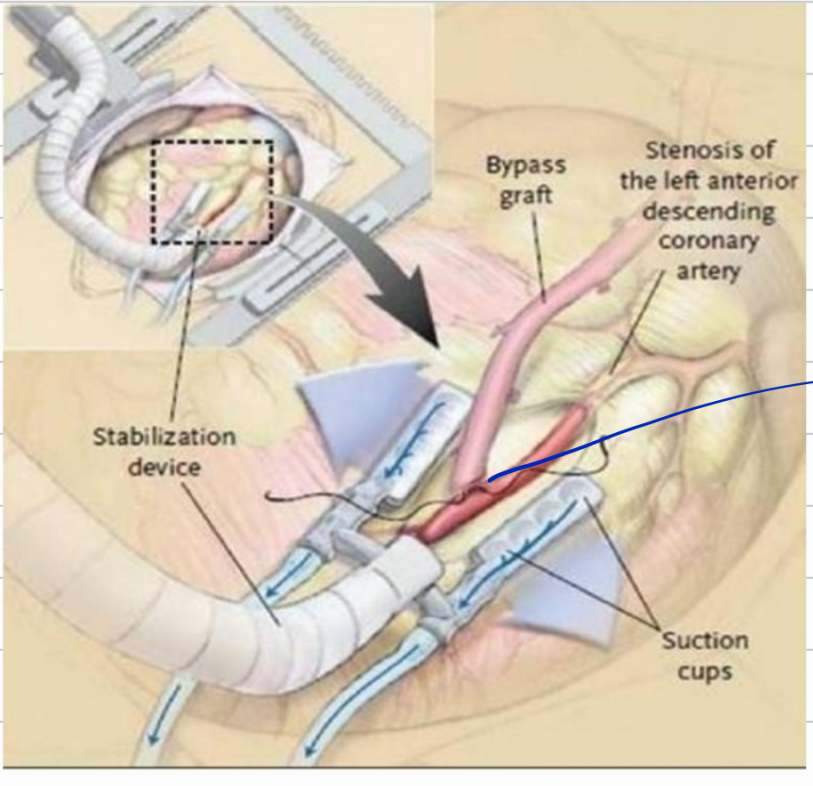
↓

Adenosine and Esmolol are used to slow the heart rate.

↓

Deep pericardial sutures and the use of specialized instruments to prop the heart in a position that will allow the surgeon to access occluded arteries.





anastomose