

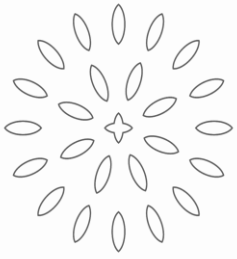
What is cholesterol?

Labs

Complications

Medications

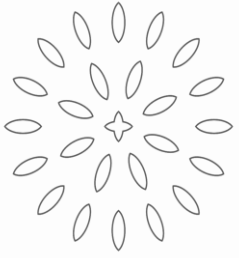
Other studies



# What is cholesterol?

- What is cholesterol?
- How do we get cholesterol?
- Is cholesterol bad?



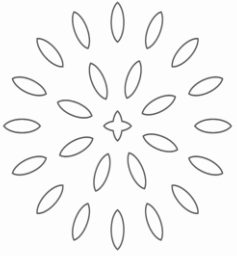


# Labs

- What comes in a lipid panel?
- What do we do with all the different numbers in the lipid panel?
- How often should we repeat the lipid panel?



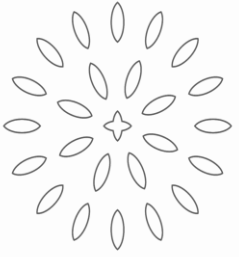




# Medications

- What medication should we use for hyperlipidemia and when?
- Should people take other medications for hyperlipidemia?





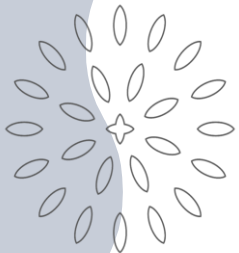
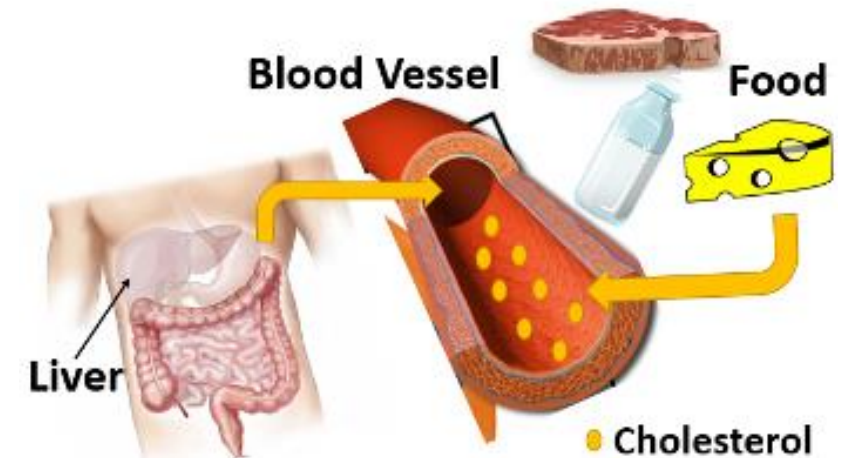
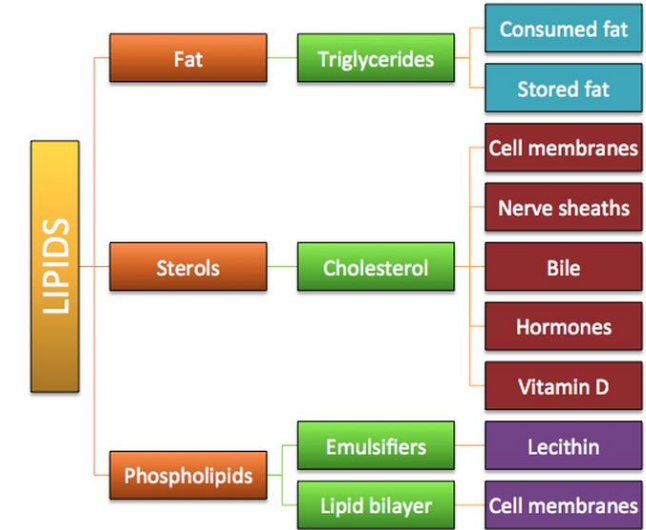
## Other studies

- Are there other studies that should be routinely ordered to evaluate a person's hyperlipidemia?



# What is cholesterol?

- Cholesterol is a fat-like substance found in the cells of our bodies.
- Our liver makes cholesterol and it is also in the food we eat.
- Cholesterol is used to make vitamins, hormones and cell membranes, it is only bad when it sticks to our arteries and causes blockages







# Complications

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- High cholesterol can cause plaques in arteries
- Plaques can narrow arteries causing decreased blood flow
  - Decreasing nutrients and oxygen
  - Causes angina, PAD, carotid disease
- Pieces of the plaque can rupture and cause a heart attack or stroke by:
  - clogging/occluding the artery downstream
  - Occluding the artery from platelet aggregation (clot/scab on the inside of a vessel)

Healthy artery



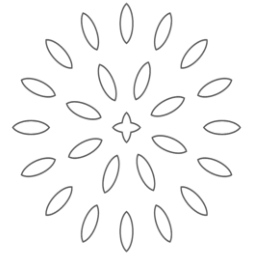
The plaque formation



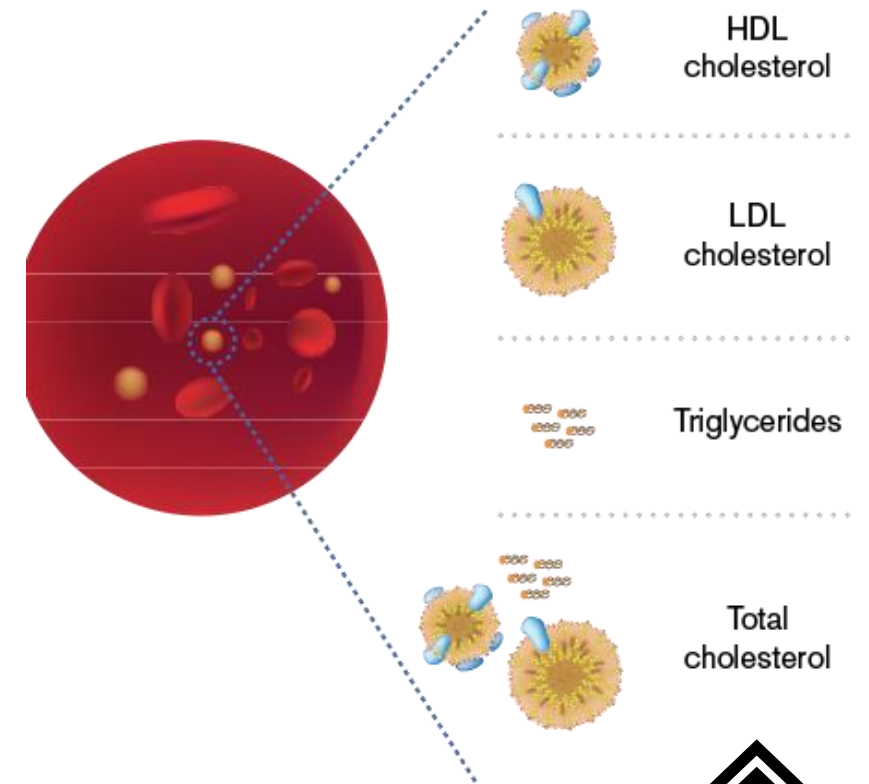
Thrombosis

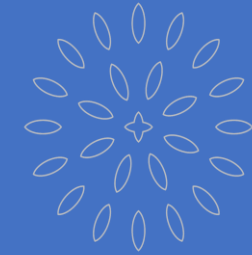


# Labs





- LDL: lousy, you want it low
  - HDL: healthy, you want it high
  - Trigs: fat, does not cause MI or CVA
  - Total: all of 'dem
- 
- The total cholesterol and HDL are combined with patient risk factors like smoking, BP, HTN, DM, age, sex in the [ASCVD calculator](#) to estimate the patient's risk of having heart attack or a stroke in the next 10 years.
  - Based on the [USPSTF recommendation](#) if a patient is of average risk the lipid panel should be repeated every 5 years if not on a statin (not necessary to repeat if on a statin).





# Medications

- Per [USPSTF guidelines](#) a statin should be started if a person has  $\geq 1$  risk factor plus:
  - an ASCVD of  $\geq 10\%$ , start low-mod dose
  - High dose statin if they have a hx of:
    - Heart attack, CAD
    - Stroke, TIA
    - PAD
    - Symptomatic carotid disease
    - LDL  $\geq 4.9\text{mmol/L}$
- Although [other medications](#) like niacin, fibrates and omega-3 can change a lipid panel they do not decrease incidence of CV disease
- Low dose aspirin should only be started if the person has a hx of MI/CAD, stroke/TIA, PAD or symptomatic carotid artery disease

STATIN	Low intensity	Moderate intensity	High intensity
Atorvastatin		10 – 20 mg	40 – 80 mg
Rosuvastatin		5 – 10 mg	20 – 40 mg
Simvastatin	10 mg	20 – 40 mg	
Lovastatin	20 mg	40 mg	
Pravastatin	10 – 20 mg	40 – 80 mg	
Fluvastatin	20 - 40 mg	40 mg bid	
Pitavastatin	1 mg	2 – 4 mg	



# Other studies

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Do not routinely screen:

- [carotid arteries](#)
- [echo](#)
- [EKG](#)
- [hsCRP](#)
- [CAC](#)
- [ABI](#)



*An initiative of the ABIM Foundation*

