1 | Structure of Lipids

1.1 | Fatty acids

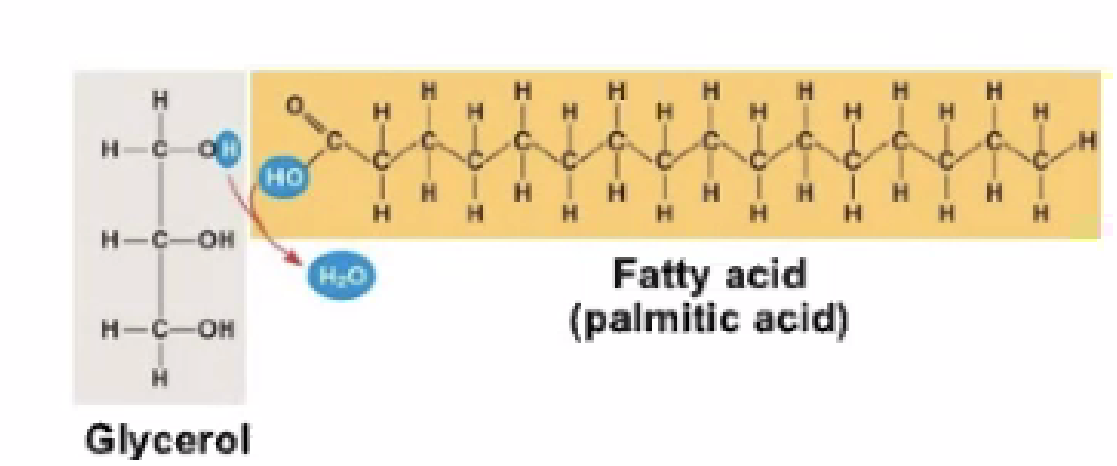


Figure 1: Screen Shot 2020-09-09 at 2.58.49 PM.png

A single penteine and embellishments. **Single Fatty acids = Glycerol**

1.2 | Trygricerol

Fat! (a.k.a. adapose tissue) = Triglycerol: three fatty acids together.

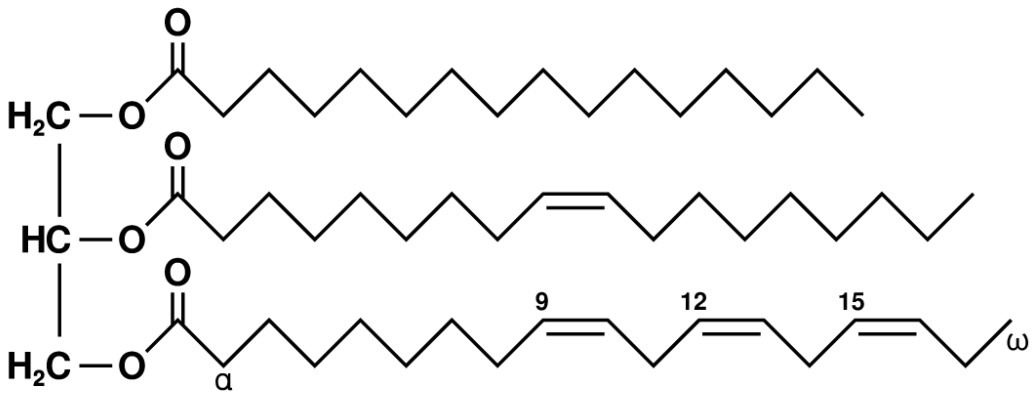


Figure 2: Fat$_{\text{triglyceride shorthand formula.png}}$

1.2.1 | Saturated vs. Unsaturated fats

Saturate Fats *No double bonds* in the carbon chain — think! butter

Unsaturated Fats *Double bonds* in the carbon chain — think! olive oils

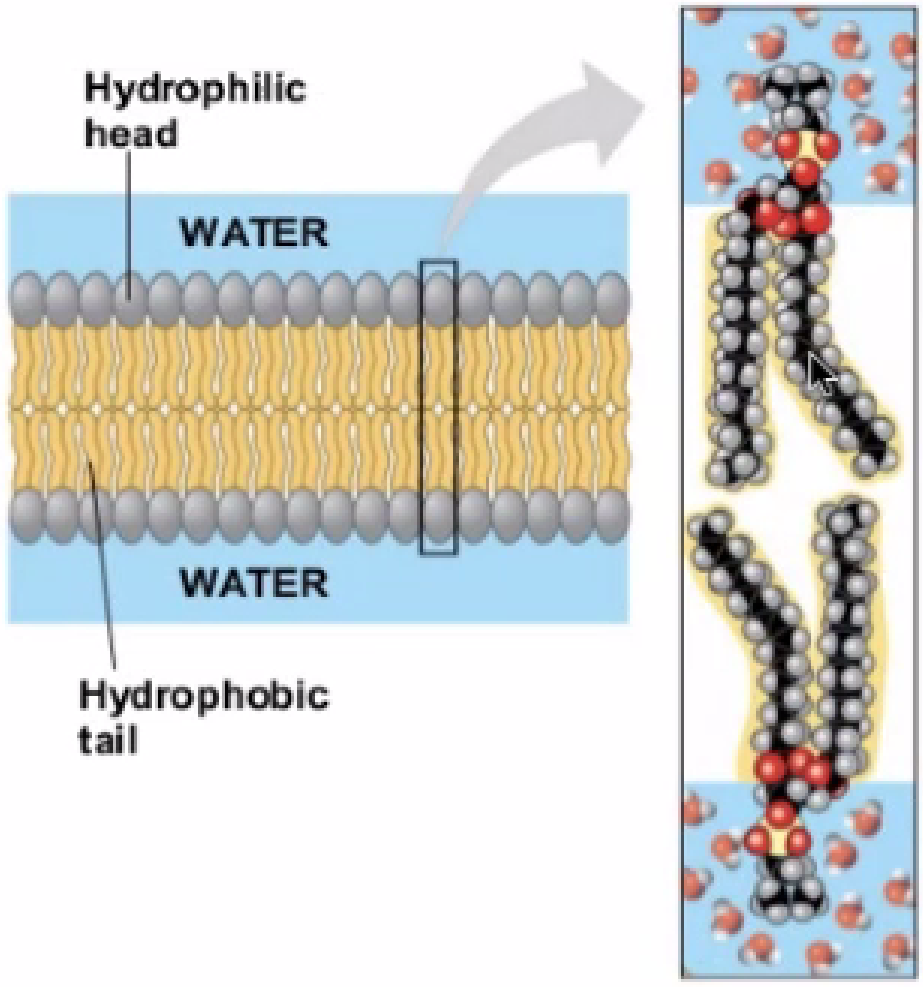
Saturated fats has a higher melting point then the unsaturated fats, but unsaturated fats have double bonds whereas saturated fats have single bonds only. Why?

- Double bonds, due to their caused VESPR geometry (and hence the -1 hydrogen), are curved. This makes it harder to stack together, causing a lower melting point
- Single bonds, due to their caused VESPR geometry, is flat. This makes them easier to stack together, causing a higher melting point.

1.3 | **Phosophilids**

2 fatty acids (hydrophobic) + phosphate group (hydrophillic)

A combination of many of these will end up with membrane:



The hydrophobic tail stays inside, and the hydrophillic head pokes outside and attracts water.

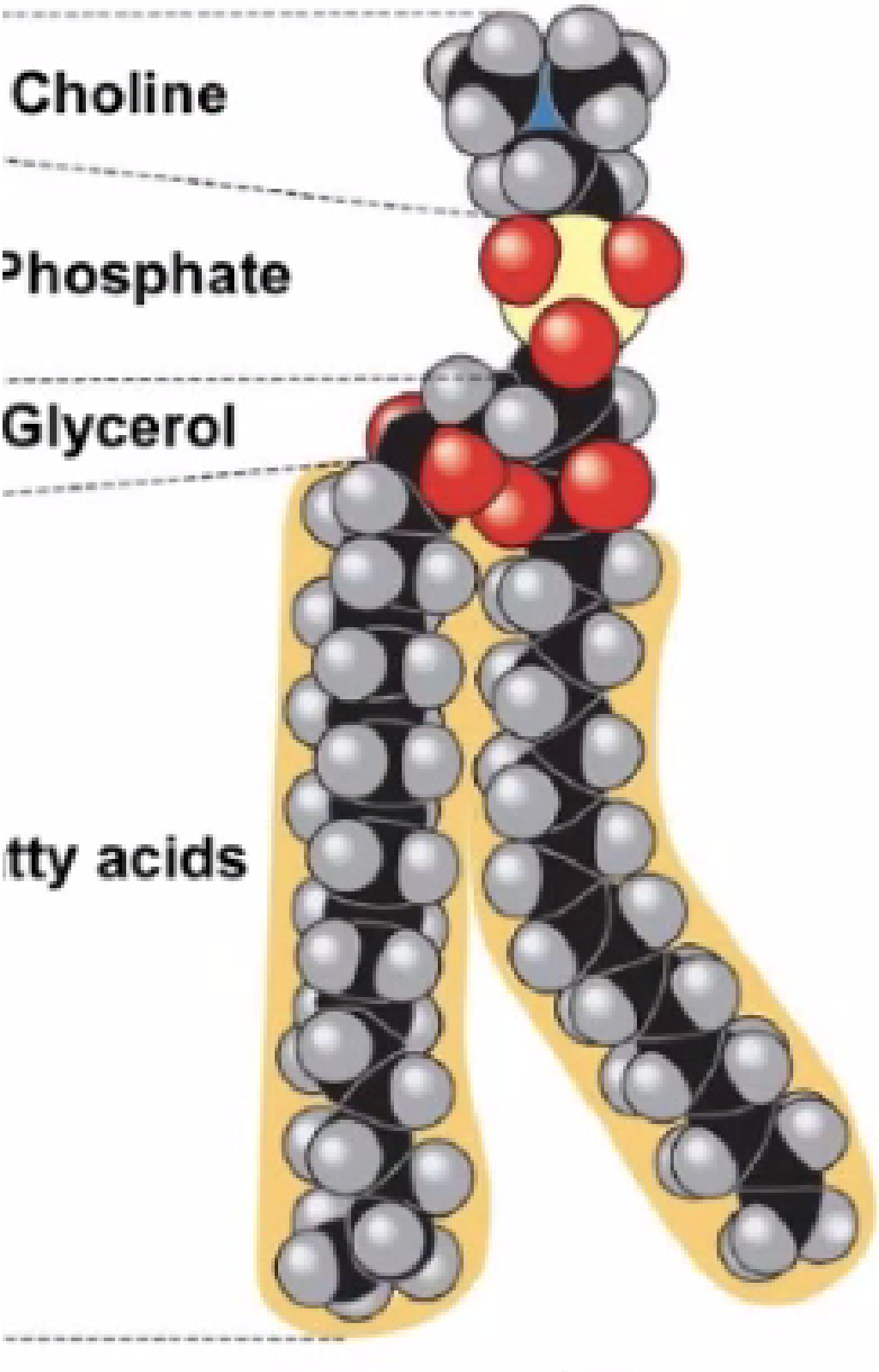


Figure 3: Screen Shot 2020-09-09 at 3.15.41 PM.png

1.4 | **Liposomes + micelles**

Lots of phosophillids

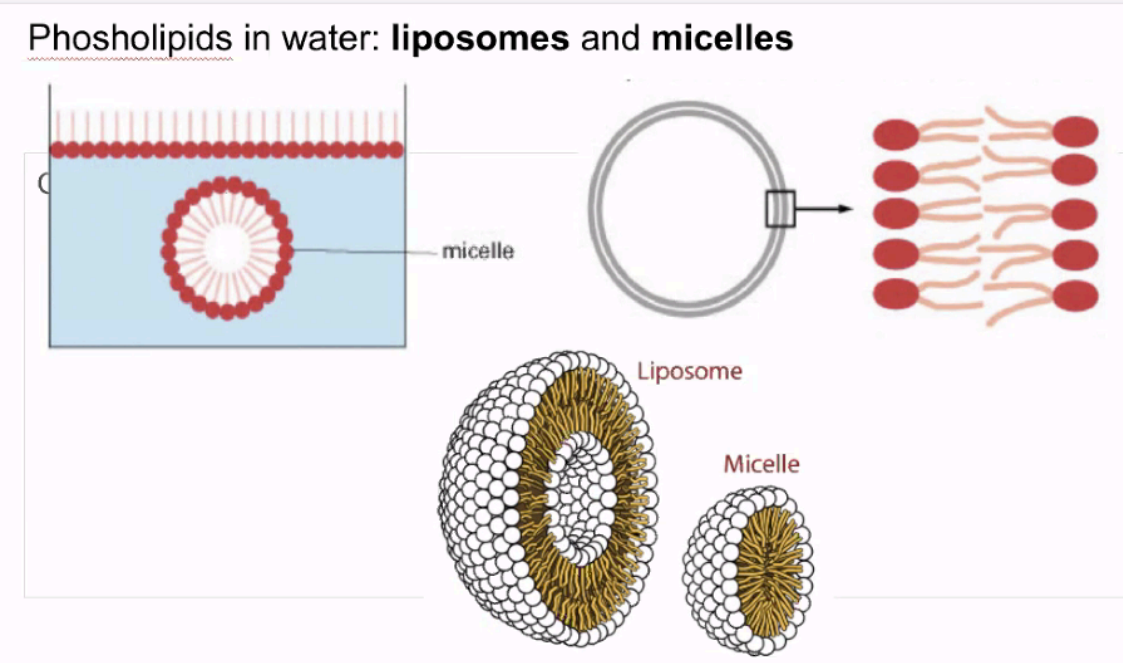


Figure 4: Screen Shot 2020-09-09 at 3.11.54 PM.png

A same idea as Phosophilids, but instead in a big wad of Phosolipids. this arrangement is also how basic cells form membranes. KBhBIO101CellMembraines

1.5 | **Steroids**

Steroids typically are lipids that contain a ring structure, which usually contains 17 carbon lipids with rings formed by 5-6 carbons each

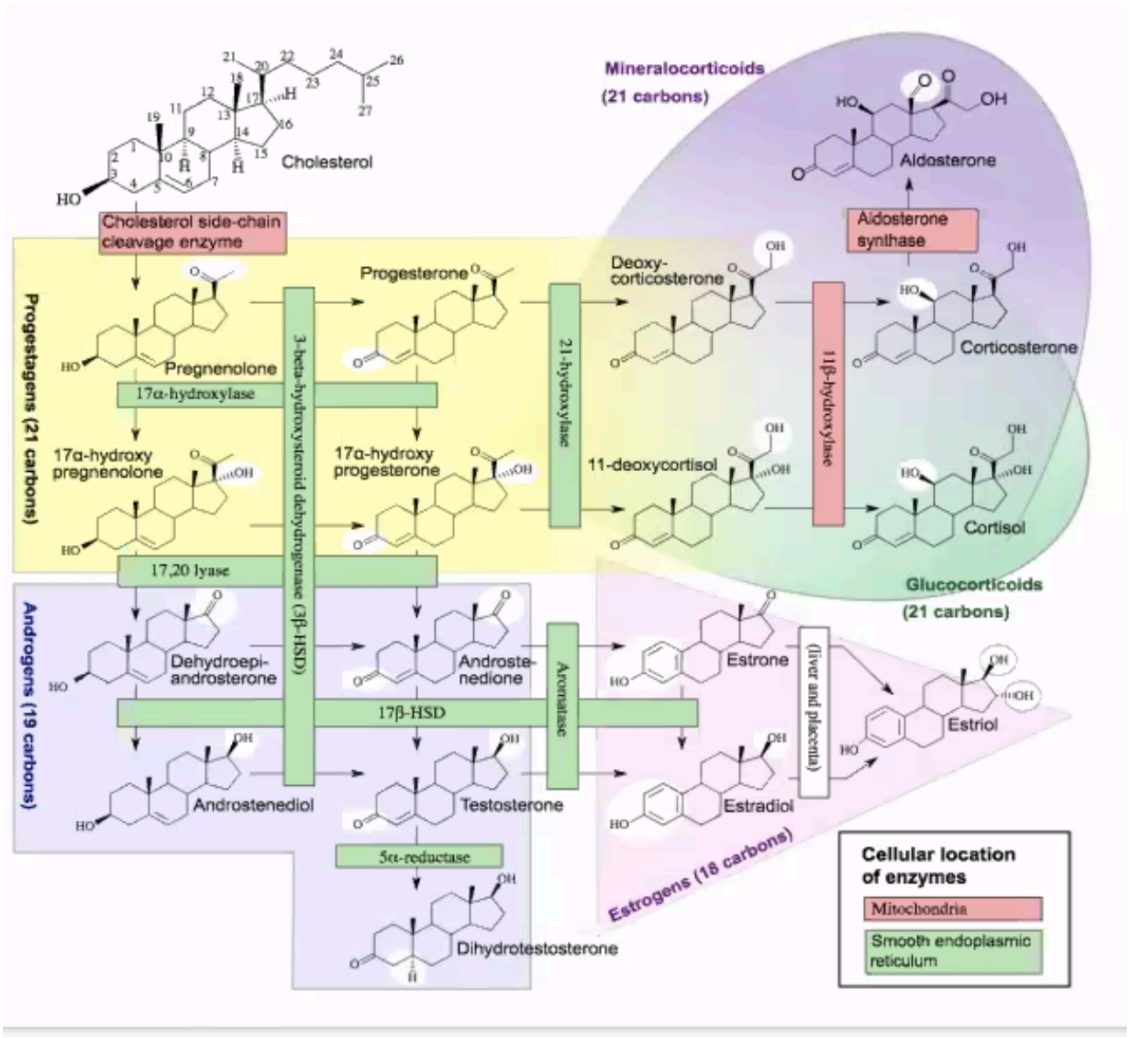


Figure 5: Screen Shot 2020-09-11 at 2.43.35 PM.png