

Common BioMolecules

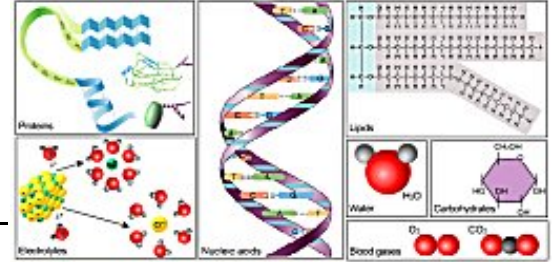
Directions:

Insert and install your Interactions: Foundations CD.

- a. Click the "Contents" button.
- b. Open the *Chemistry Level of Organization* file.
- c. Click on *Anatomy Overview*.
- d. Work through *Common BioMolecules*.

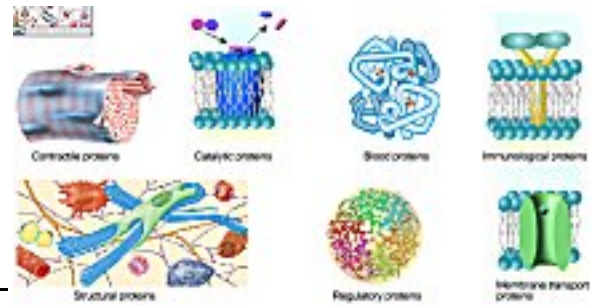


- 1. Many different molecule types are needed to carry out the complex functions that support life. How much of the body is water and how much is other organic compounds?



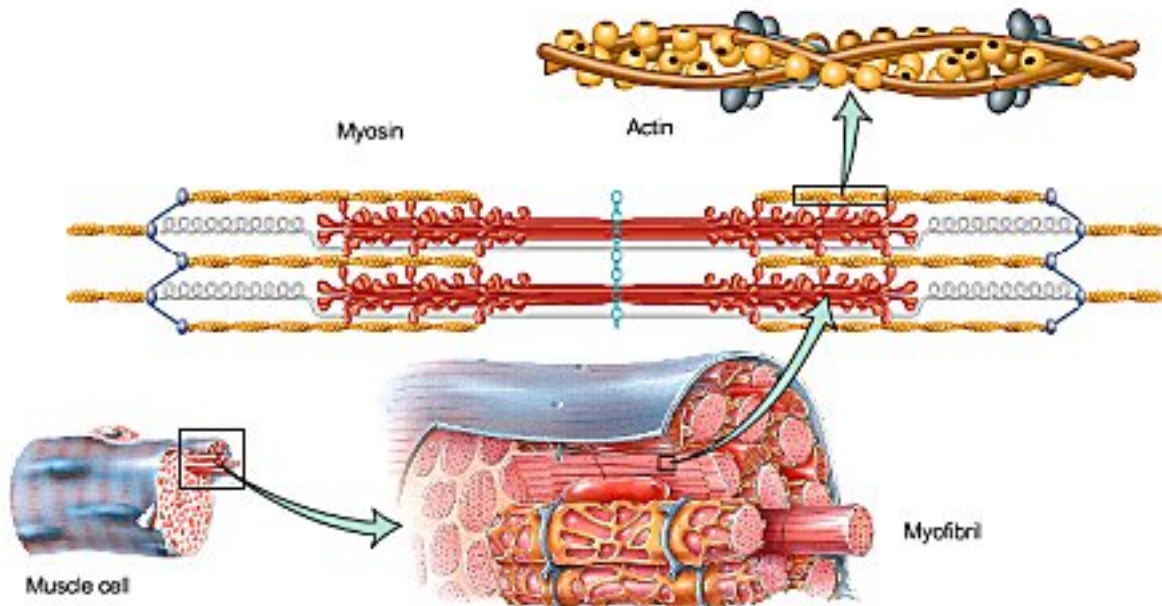
- 2. Click on Proteins to explore their role in the body.

- a. Describe protein structure and how it is tied to function.



- 3. Click *Contractile Proteins*.

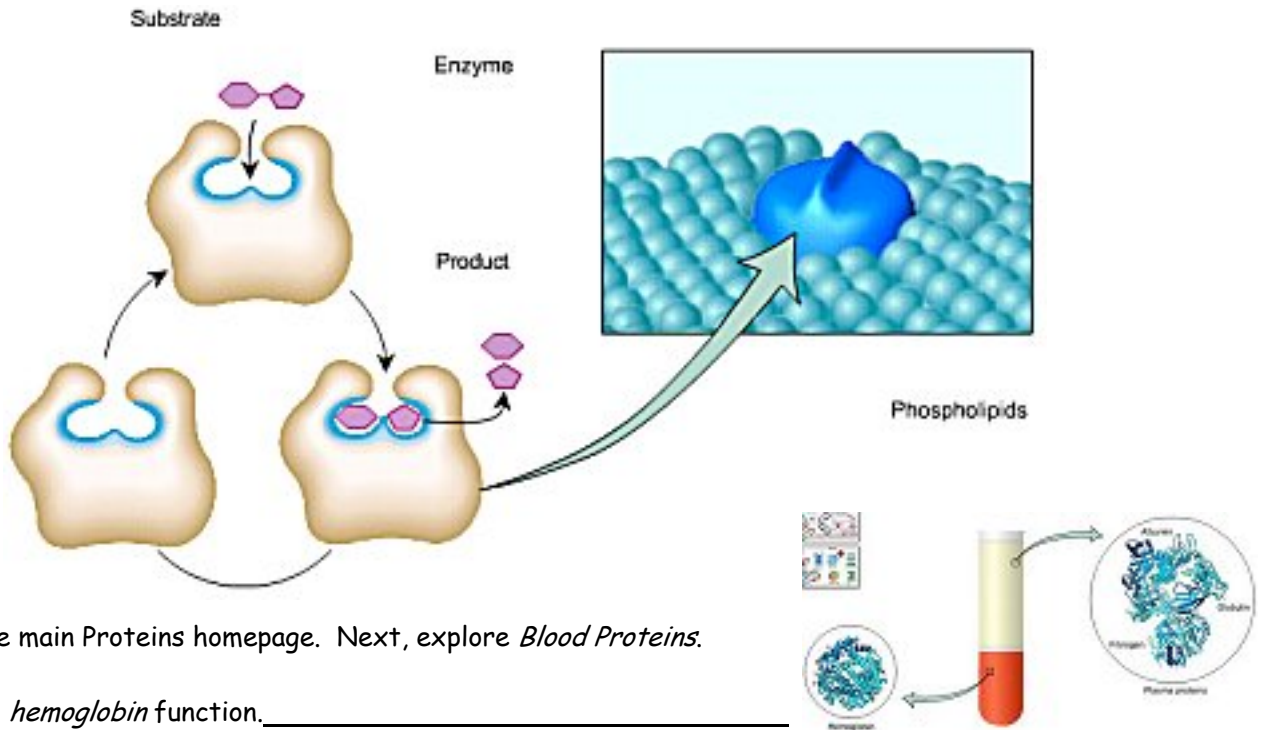
- a. What is the function of actin and myosin?
- b. Identify actin and myosin proteins.



4. Return to the main Proteins homepage and click on *Catalytic Proteins*.

a. What is the function of catalytic proteins? _____

b. Identify substrate, enzyme, and product molecules.



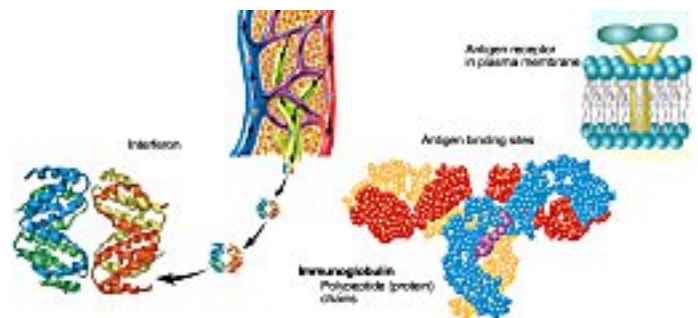
5. Return to the main Proteins homepage. Next, explore *Blood Proteins*.

a. Describe *hemoglobin* function. _____

b. Describe *plasma protein* function. _____

6. Return to the main Proteins homepage and explore *Immunological Proteins*.

a. What is the function of proteins such as *interferons*?



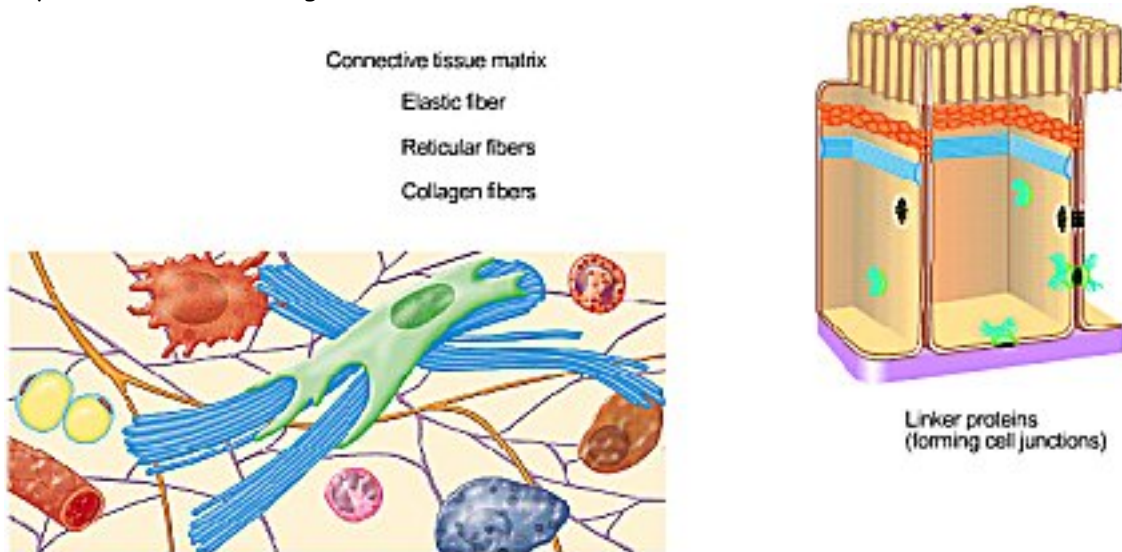
b. What is the function of plasma membrane *protein receptors*? _____

c. What is the function of *antibodies* like immunoglobulins? _____

7. Return, again, to the main Protein homepage. This time, explore *Structural Proteins*.

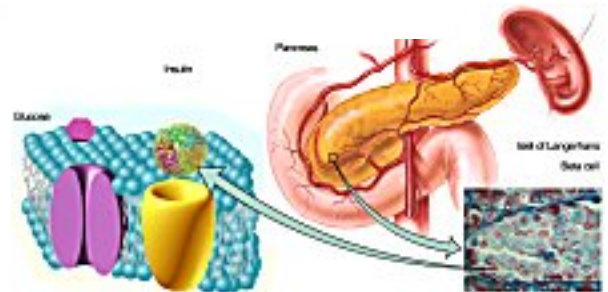
a. What are structural protein functions? _____

b. Identify each of the following:



8. Back again to the Protein homepages. This time explore *Regulatory Proteins*.

a. Define *regulatory proteins*. _____

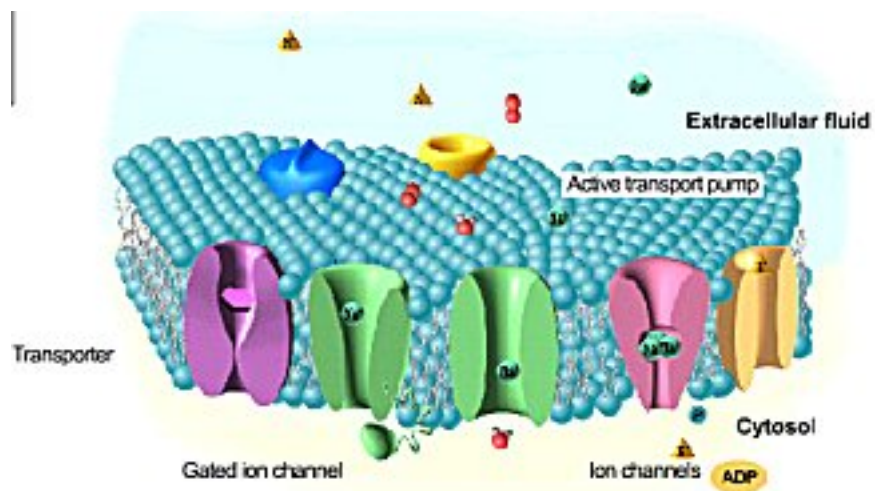


b. What are their functions? _____

9. Once last time, return to the Protein homepage and click on *Membrane Transport Proteins*.

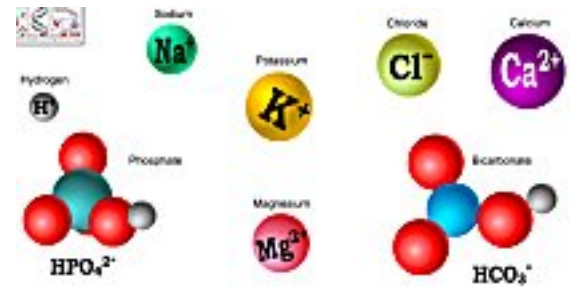
a. What is the function of *transport proteins*?

b. Identify *transporter*, *gated ion channel*, and *ion channel* proteins.



10. Return all the way back to the Biological Molecules homepage and click on *Electrolytes*.

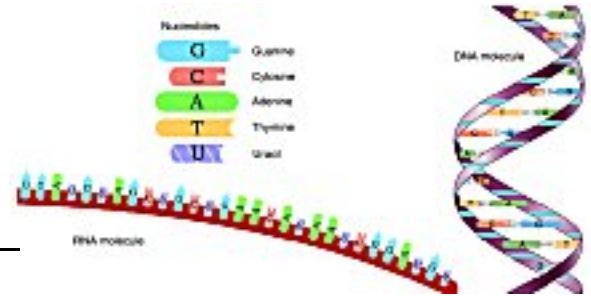
a. Describe four primary electrolyte functions.



11. Back, again, to the Biological Molecules homepage. This time click on *Nucleic Acids*.

a. Describe nucleic acid structure and function.

b. Differentiate between DNA and RNA functions.



12. Return to the Biological Molecules homepage and click on *Lipids*.

a. Describe the general structure and function of the following:

triglycerides -

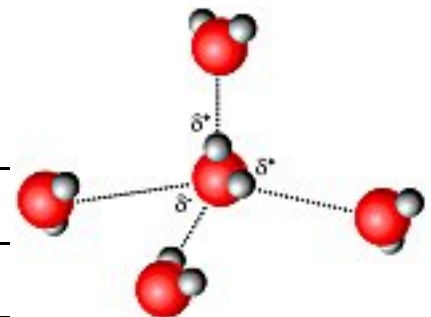
phospholipids -



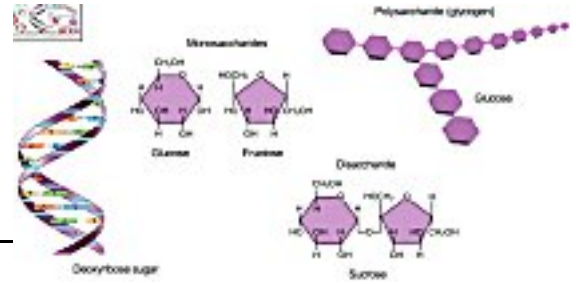
13. Back again to the Biological Molecules homepage and explore *Water*.

a. Describe water's importance to the life's chemical reactions.

b. Describe the importance of *hydrogen bonding*.



14. Once again from the Biological Molecules homepage, explore *Carbohydrates*.



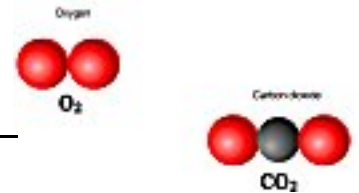
a. Describe the role(s) of the following:

monosaccharides - _____

disaccharides - _____

polysaccharides - _____

15. One last time, return to the Biological Molecules homepage to explore *Blood Gases*.



a. What is the primary of blood oxygen? _____

b. Where does blood carbon dioxide come from and what does it regulate? _____
