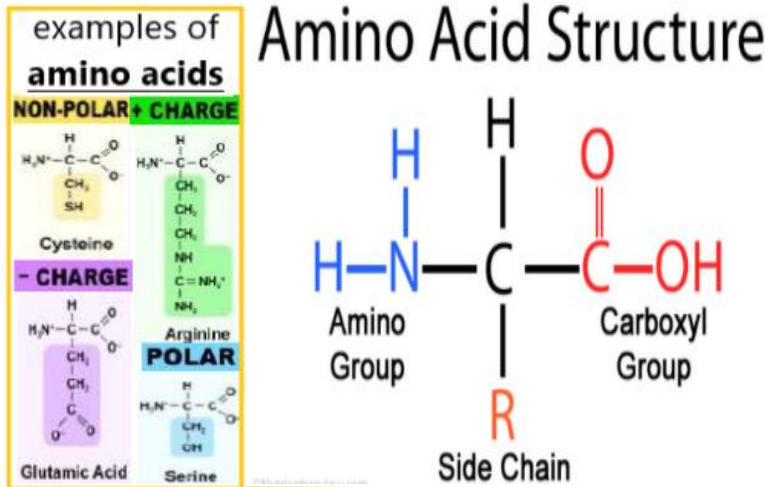
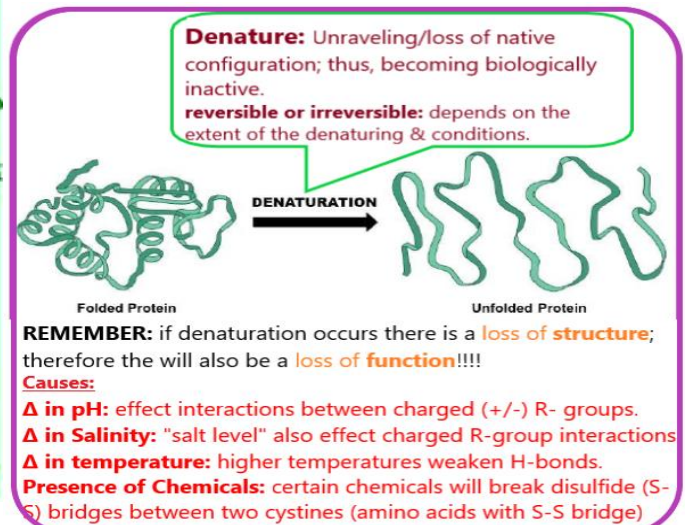
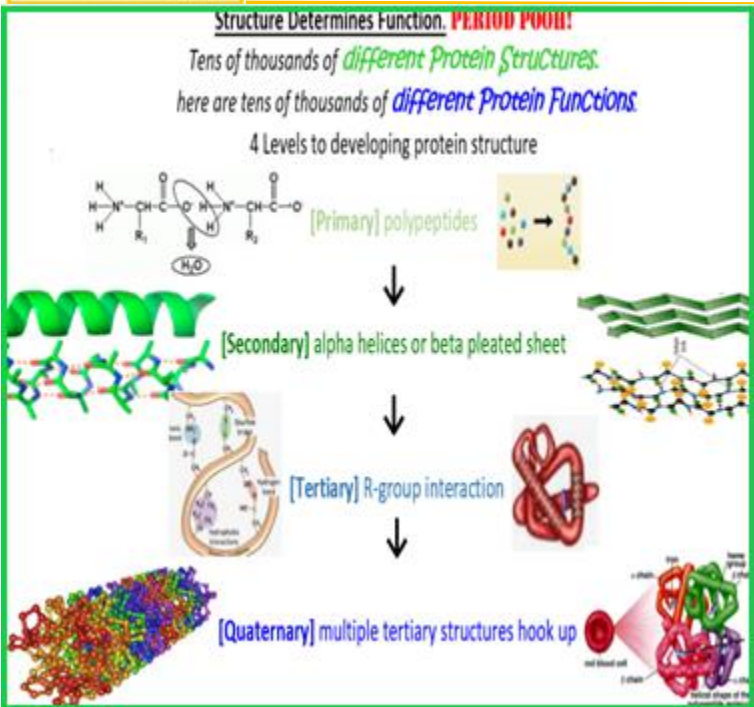


# PROTEIN

- ✓ Proteins are **VERY DIVERSE** (many Structures & Functions ).
- ✓ Due to the diversity of their Structures they have many different Functions .
- ✓ There are tens of thousands of different protein structures in the body. **ALL** have different Functions



Functions of Proteins		
Structure	Hair, Bird Feathers, Spider Silk, Cytoskeleton in cell, Collagen.	
Storage	Albumin (egg white), Casein (milk)	
Transport	Hemoglobin (blood)	
Hormones	Glucagon (↑ blood sugar), Insulin (metabolism of glucose)	
Membrane Proteins	Receptors (signals), Membrane Transport	
Movement	Muscles, Flagella, Motor Proteins	
Defense	Antibodies	



<b>Enzymes</b>	Biological Catalysts
<b>Catalysts</b>	Increases rate of chemical reaction without itself undergoing any chemical change.
<b>Activation Energy [E<sub>A</sub>]</b>	The input energy necessary for a chemical reaction to proceed (start)
<b>Substrate</b>	A specific chemical species
<b>Peptide</b>	two or more amino acids
<b>Polypeptide</b>	A chain of many amino acids
<b>Peptide Bond</b>	A bond between amino acid formed via dehydration synthesis
<b>Fibrous Protein</b>	Protein with elongated shape. Provide structure for cells and tissues.
<b>Globular Protein</b>	Spherical globe like proteins. Serve a variety of different roles in the body.
<b>Mutations</b>	Changes in Amino Acid /peptides can change the structure and therefore function of proteins
<b>Denature</b>	Process in which nucleic acids or proteins lose their quaternary structure.
<b>Salinity</b>	Salt level. How much salt is dissolved in the solution
<b>pH</b>	How acidic or basic the solution is. The human body typically should have a pH of around 7.4 which is just ever so slightly basic.

