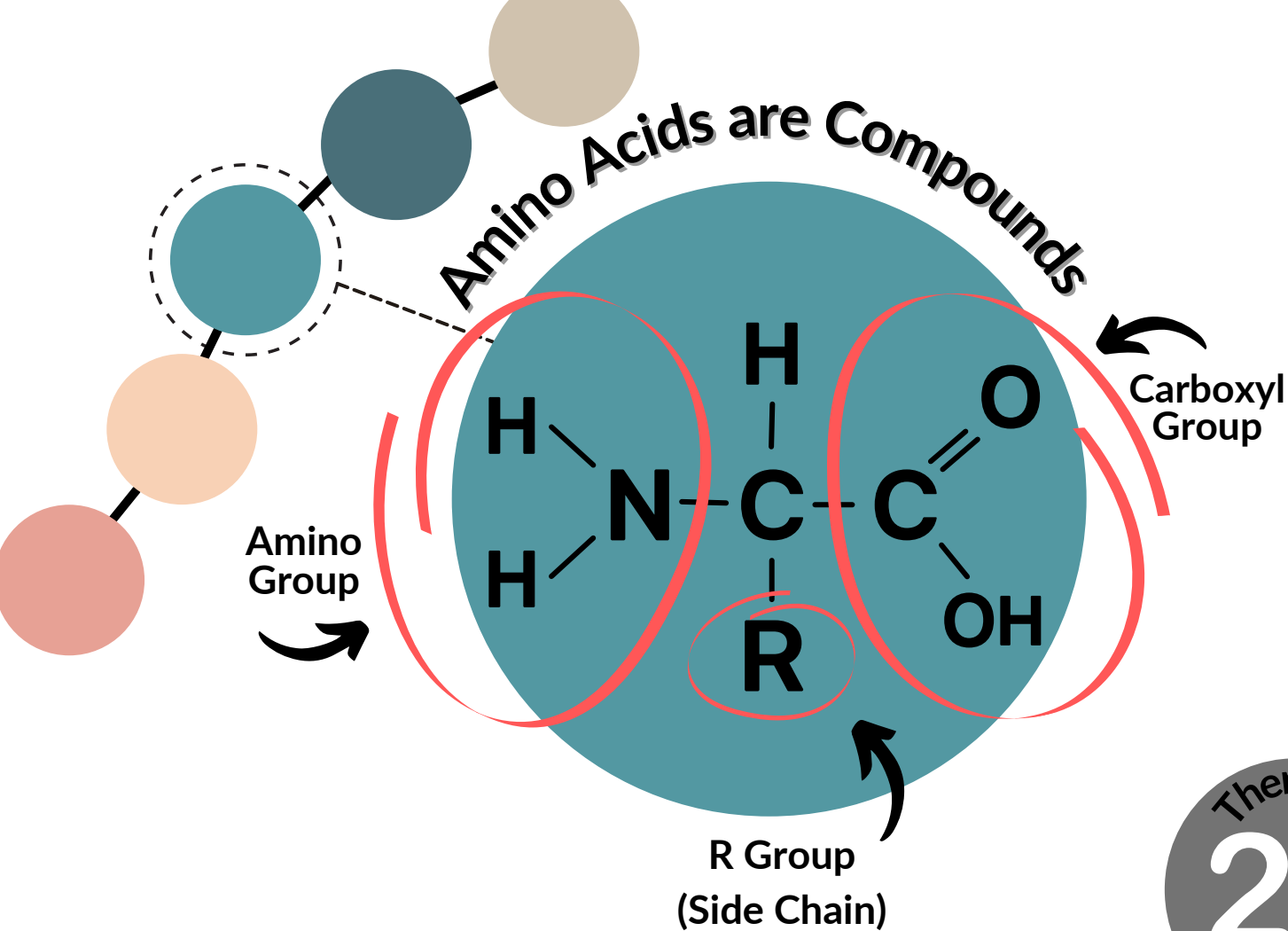


# Amino Acids are Compounds



**Polar amino acids are hydrophilic**

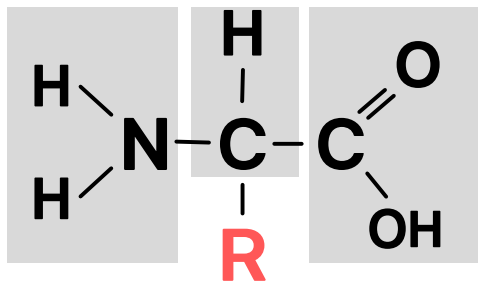
Polar amino acids have either an OH or NH<sub>2</sub> group and CAN make hydrogen bonds in the presence of water.

**Nonpolar amino acids are hydrophobic**

Nonpolar amino acids are comprised mostly of hydrocarbons and do not reside in a water environment.

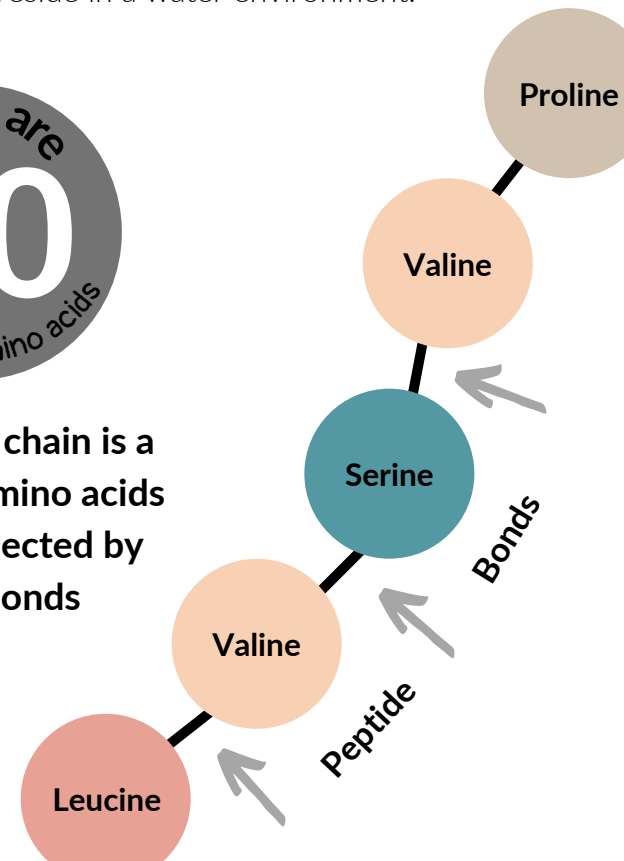
There are **20** different amino acids

The chemical structure of each amino acid is nearly the same.



The "R" group makes each amino acid unique.

A polypeptide chain is a sequence of amino acids that are connected by peptide bonds

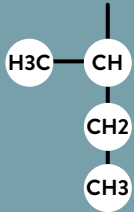


# Amino Acids

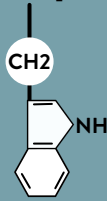
**Essential amino acid:** Our body must acquire essential amino acids from the food we eat.

**Nonessential amino acid:** Our body can make these amino acids if we consume enough protein in our diet..

Isoleucine



Tryptophan



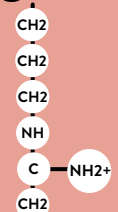
Methionine



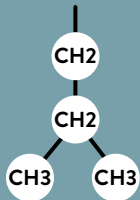
Glycine



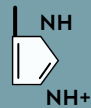
Arginine



Leucine



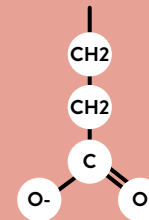
Histidine



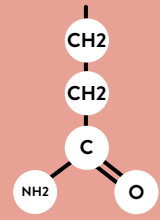
Alanine



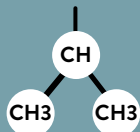
Glutamic Acid



Glutamine



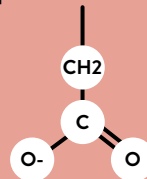
Valine



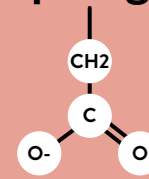
Lysine



Aspartic Acid



Asparagine



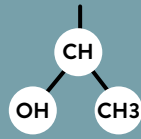
Tyrosine



Phenylalanine



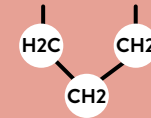
Threonine



Cysteine



Proline



Serine

