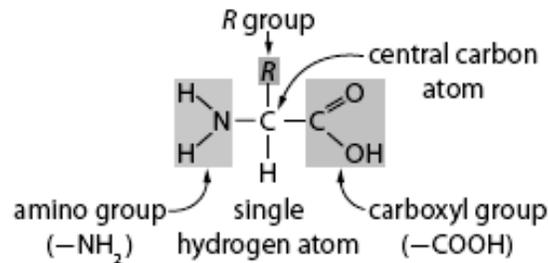
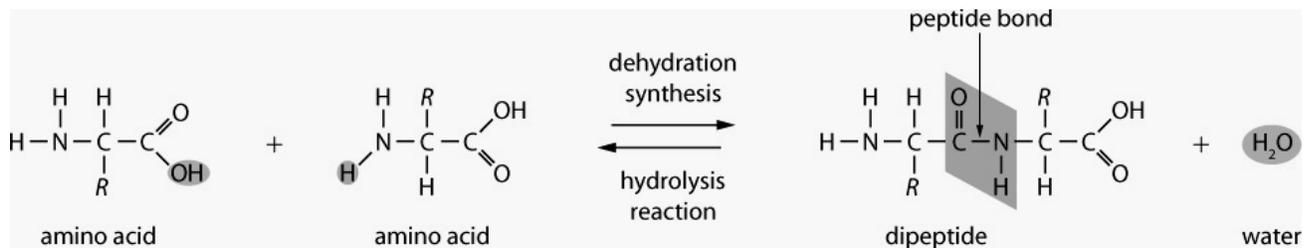


For a cell to get the proteins it needs, it must translate the codons along a stretch of mRNA into amino acid sequences. At the ribosomes, tRNA carries a particular amino acid to the correct mRNA codon site.



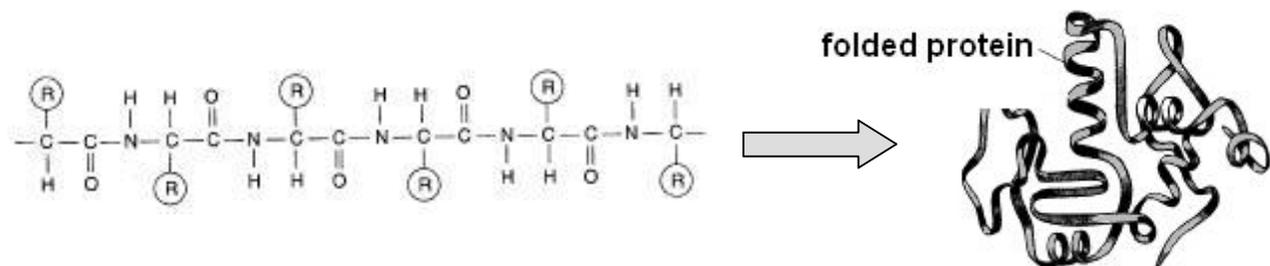
An amino acid is a subunit of proteins. It is composed of an amino group, a carboxyl group, and one of 20 R groups attached to a central atom. The R group determines the identity of each unique amino acid.

Amino acids are chemically bonded to form polypeptides at the ribosome via a reaction known as dehydration synthesis.



In dehydration synthesis, two amino acids form a two-subunit molecule called a dipeptide.

Finally, different amino acids within the polypeptide repel and attract each other, causing it to twist and coil into a three-dimensional protein.



Several amino acids are bonded together to form a polypeptide.