

PROTEIN DENATURATION

<http://www.blinkx.com/watch-video/protein-denaturation/PQegXzjmNmuSYBenFvHtFg>

1. Complete the sentences:

- a. One of the most important processes in cooking is protein denaturation or the breaking of the protein structure by the application of Many foods which we eat contain proteins which consist of There are hundreds of them found in our nature. But only the structures of twenty are contained in
- b. Proteins are created by connecting amino acids, end to end, like in a chain.
- c. The primary structure determines the final that allows the protein to perform a particular task. Change the amino acids even slightly and it might affect the structure enough to create a new protein with an entirely different function.
- d. Heating protein increases the or within them, so they start vibrating more and more intensely. More more motion. Eventually if enough heat is applied, the molecular motion will cause the bonds that keep the protein folded to break. The protein denatures returning to the structure.
- e. Adding acids to proteins like the in lemon juice causes the change of their It causes denaturation very similarly to adding heat. Alternatively proteins can be denatured through the physical force of This happens when we use a manual or electric beater to whip eggs.

2. Match the number of protein structure to the correct function.

- a. primary structure
 - b. secondary structure
 - c. tertiary structure
 - d. quaternary structure
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- formation of patterns within the protein
 - side chain interaction leading to the stability of single protein molecules

- a chain of amino acids
- association of multiple protein molecules

3. Decide: true (T) or false (F)?

- a. Essential amino acids are amino acids, which must be provided by the diet.
- b. Most proteins denature at 50 degrees Celsius.
- c. Coagulation is the bonding of proteins into a solid mass. In egg whites the change from white to pink is due to coagulation.
- d. The temperature you feel when you get sick is your body's attempt to denature your viral proteins.