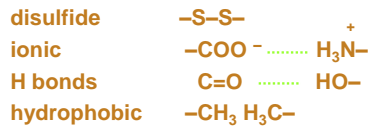




## Tertiary Structure

- Specific overall shape of a protein
- Cross links between R groups of amino acids in chain



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## Learning Check

Select the type of tertiary interaction as

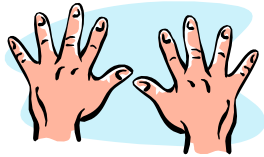
- (1) disulfide      (2) ionic  
(3) H bonds      (4) hydrophobic

- A. Leucine and valine  
B. Two cysteines  
C. Aspartic acid and lysine  
D. Serine and threonine

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## Chiral Objects

- Chiral compounds have the same number of atoms arranged differently in space.
- A chiral carbon atom has four different groups attached



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## Mirror Images

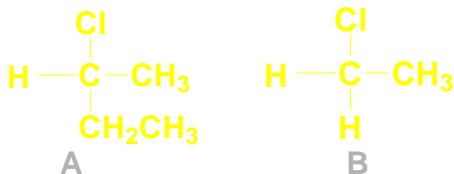
- The three-dimensional structure of a chiral compound has a mirror image.
- Your hands are chiral. Try to superimpose your thumbs, palms, back of hands, and little fingers. Is it possible? Why or why not?



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## Learning Check

Determine if there is a chiral carbon in each compound.



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## Globular and Fibrous Proteins

**Globular proteins**  
"spherical" shape

Insulin  
Hemoglobin  
Enzymes  
Antibodies

**Fibrous proteins**  
long, thin fibers

Hair  
Wool  
Skin  
Nails

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## Learning Check

Tannic acid is used to form a scab on a burn. An egg becomes hard boiled when placed in hot water. What is similar about these two events?

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