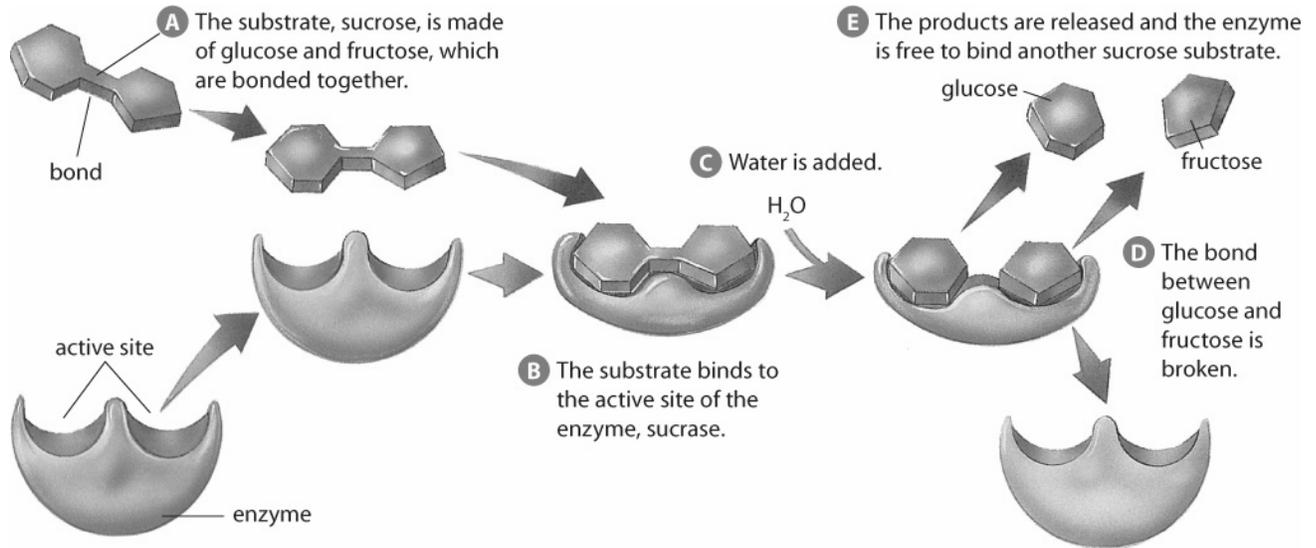


1.



2. How enzymes speed up chemical reaction rates:

- An enzyme is a protein molecule that acts as a catalyst to increase the rate of chemical reactions in living organisms.
- Catalysts function by lowering the amount of energy required to initiate a reaction.
- Each enzyme has a precise three-dimensional shape that is specific to the kind of reactant molecule with which it can combine.
- The enzyme physically fits with a specific substrate—its reactant molecule.
- The enzyme is specific because it has a particular shape that can combine only with its substrate molecule.
- The part of the enzyme that binds to the substrate is called the active site.
- When the substrate binds to the active site, its bonds become less stable and, thus, more likely to be altered and form new bonds.
- Enzymes are recovered unchanged after they have been used and can be used over and over again for the same task.