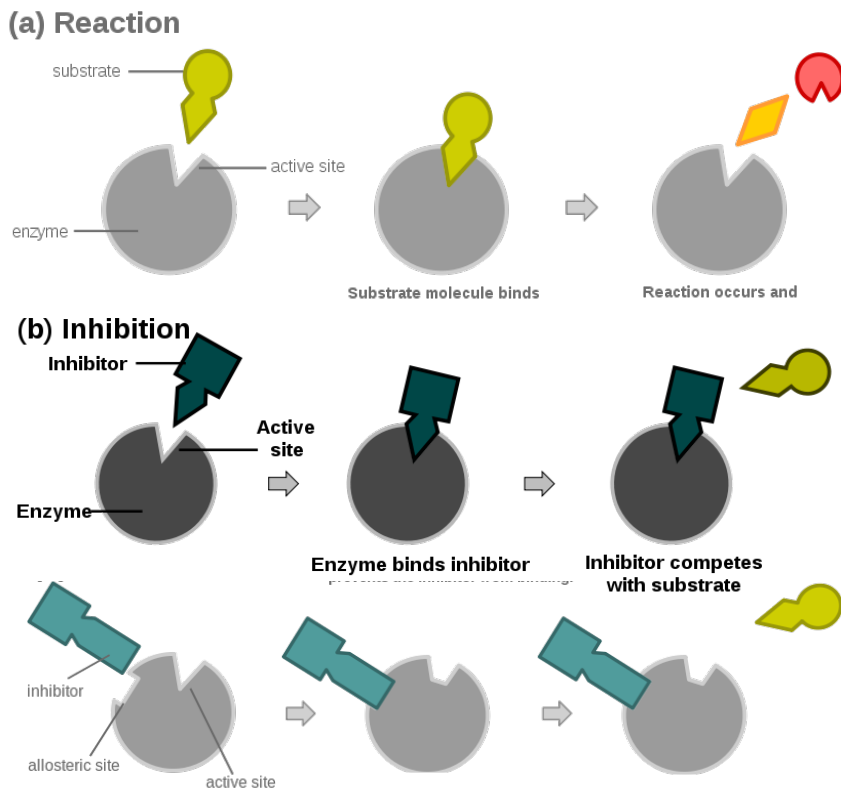


CONCEPT: ENZYME INHIBITION

- Enzyme **inhibitors** decrease enzymatic _____
 - There are two main types of enzyme inhibitors: *reversible* and *irreversible*
 - **Irreversible** inhibitors bind tightly to the enzyme through covalent bonds to inhibit function (ex. Nerve gas)
 - **Reversible** inhibitors bind weakly through noncovalent interactions and come in two types
 - *Competitive*: Compete with substrate for active site
 - *Non-competitive (allosteric)*: Do not compete with substrate for active site
 - Enzyme inhibitors are crucial to _____ cellular chemical reactions
 - They can also be harmful (poisons)

EXAMPLE: Competitive vs. Non-competitive reversible inhibitors of enzymes



PRACTICE

1. Which of the following is not true regarding enzyme inhibition?
 - a. Enzyme inhibition can be irreversible
 - b. Enzyme inhibition is crucial to regulate chemical reactions
 - c. Enzyme inhibitors can be reversible
 - d. Enzyme inhibition always occurs through competitive inhibitors, which block substrates from binding the active site

2. Which of the following enzyme inhibitors binds through covalent bonds?
 - a. Reversible
 - b. Irreversible

3. Which of the following enzyme inhibitors binds to the enzymes active site to inhibit the enzyme?
- a. Reversible
 - b. Irreversible
 - c. Competitive
 - d. Non-Competitive