CONCEPT: DRUG INTERACTIONS

◆ Drug interactions occur when 2 or more substances taken _____ affect each other's effectiveness or side effects.

Interactions include: 1. Synergism, 2. Antagonism, 3. Inhibition, 4. Intolerance, 5. Cross-tolerance.

Drug Interactions		
Interactions	**Effects**	**Examples**
1. Synergism 	▸ Drug effects are _____ multiplied. - Can be dangerous & lead to death.	▸ Alcohol taken with benzodiazepines. - Both are depressants, dangerously slow heart rate.
2. Antagonism 	▸ Drugs work at same receptor. - _____ the action of another.	▸ Naloxone taken with opioids. - Reverses the effects of opioid overdose.
3. Inhibition 	▸ ____ or prevents metabolism of another. - Decreases drug efficacy.	▸ Grapefruit juice inhibits break down of cholesterol medication.
4. Intolerance 	▸ Drugs _____ to produce uncomfortable side effects.	▸ Disulfiram taken with alcohol. - Causes nausea, headache, vomiting.
5. Cross-tolerance 	▸ Tolerance for one drug ____ effects of another.	▸ Alcohol tolerance might produce benzodiazepine tolerance.

EXAMPLE

Diego wants to quit smoking, and his doctor prescribes Nicotrolix (made-up medication) that causes some unpleasant side effects such as dizziness and nausea when combined with smoking. What type of drug interaction does this represent?

a) Intolerance b) Tolerance c) Inhibition d) Antagonism

PRACTICE

College student takes a prescription ADHD medication and later drinks a large energy drink before taking an exam. What is the most likely interaction combining the two substances will result in?

a) Cross-tolerance b) Antagonistic c) Synergistic d) Intolerance