

Agonists & Antagonists

Nursing

What the drug does to the body: receptor occupancy and the response.

Agonist

- Binds the receptor and activates it
- Mimics the endogenous messenger
- Full agonist gives maximal response
- Partial agonist gives a submaximal ceiling
- Example class: beta-2 agonist bronchodilators

Antagonist

- Binds the receptor and blocks it
- Produces no response of its own
- Competitive block is surmountable by dose
- Non-competitive block is not
- Example class: beta-blockers, antihistamines

THE DIFFERENCE THAT MATTERS

Effect depends on which receptors exist where — the same block is useful in the heart and unwanted in the airway.

Educational reference. Receptor selectivity is relative and falls away at higher doses, which is why monitoring is class-specific.