

The mechanism by which a drug leaves the body

After medications are metabolized, they exit the body through:

Kidneys – most common (in urine)

Liver

Bowel

■ Lungs

■ Exocrine glands

■ Bile

■ Breast milk

Elimination of a drug is usually affected by:

■ Renal filtration

■ Secretion

■ Reabsorption

Renal clearance

- Is the sum total of three renal processes
 - $R_{cl} = R_F + S - R$
 - Drug clearance
 - is the measure of the ability of the body to eliminate drug
 - it is the apparent volume of blood that is cleared of drug per unit time
- $CL = \text{rate of elimination} / \text{plasma concentration}$

Common terms

- **Onset:** The time after administration when the body initially responds to the drug
- **Peak Plasma Level:** The highest plasma level achieved by a single dose when the elimination rate of a drug equals the absorption rate
- **Drug Half-Life** (Elimination half-life): The time required for the elimination process to reduce the concentration of the drug to one-half what it was at initial administration

