

05 - Intravenous routes

Intravenous routes

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1. Size of drug particle
2. Solubility of the drug
3. Properties of intestinal fluid (e.g. p H)

Intramuscular administration With IM administration, absorption occurs over 10-30 minutes. It avoids most of the first pass metabolism. This route could be used in an emergency (acute disturbance, sedation etc.) or for maintenance medications (depot injections). The rate of absorption of drugs administered intramuscularly is dependent on blood flow and aqueous solubility. Lipid soluble drugs are rapidly absorbed; drugs with a relative low molecular weight are better absorbed. Increased muscle blood flow e.g. after muscular exercise increases the rate of absorption. Depot preparations of solutions of drugs in inert oil allowing delay absorption.

Intravenous routes IV administration is the most rapid method of absorption and quickest route for achieving therapeutic concentration. It is used mainly in emergency situations. IV administered drug enters systemic circulation rapidly with no first-pass metabolism (100% bioavailability). IV route also carries the higher risk of sudden and life-threatening adverse effects.

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