

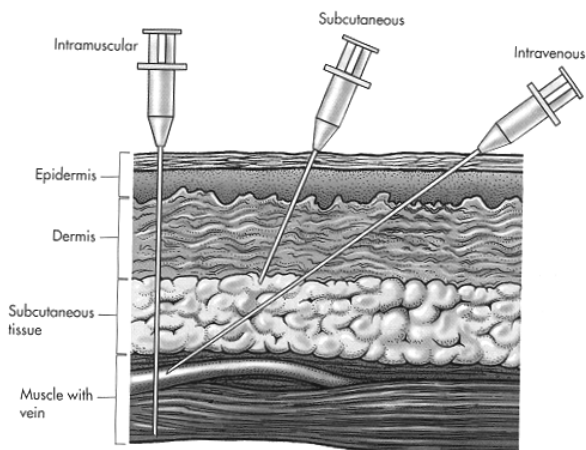
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ROUTES for DRUG ADMINISTRATION

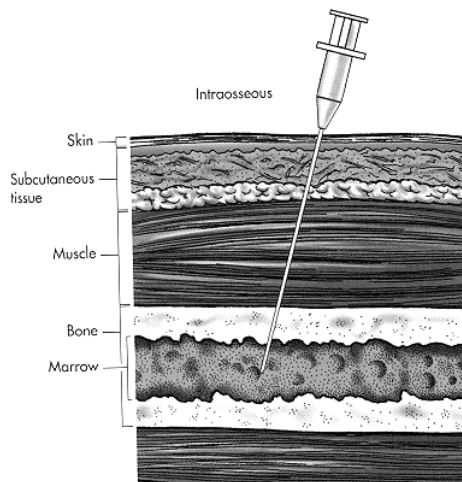
Drugs can be administered by many routes. The goal is to deliver the drug to the target organ or tissue so it can exert its therapeutic effect. EMS personnel can deliver drugs by a number of routes. An understanding of possible methods to deliver a drug is required as part of using the drug for therapeutic benefit.

Routes for administration of drugs and time until effect

Route for administration	Time until effect
intravenous	30-60 seconds
intraosseous	30-60 seconds
endotracheal	2-3 minutes
inhalation	2-3 minutes
sublingual	3-5 minutes
intramuscular	10-20 minutes
subcutaneous	15-30 minutes
rectal	5-30 minutes
ingestion	30-90 minutes
transdermal (topical)	variable (minutes to hours)



Intramuscular, subcutaneous, and intravenous routes



Intraosseous route