PHARM.D • YEAR 1

Pharmaceutics

CHAPTER 8

Suppositories and Pessaries

PPT CHAPTER COVER



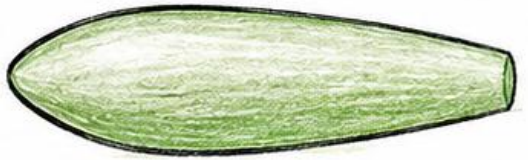
DOCTOR OF PHARMACY

Suppositories: The Basic Idea

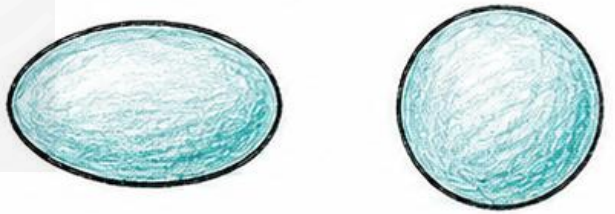
Solid medicated preparations are inserted into a body cavity.

The base melts, softens or dissolves to release the drug.

RECTAL: commonly torpedo-shaped; local or systemic action.



VAGINAL: medicated pessaries; often oval or globular.



URETHRAL: slender preparations for specialized use.



Shape, dimensions, base and drug content must suit the route.

These products are not interchangeable between body cavities.

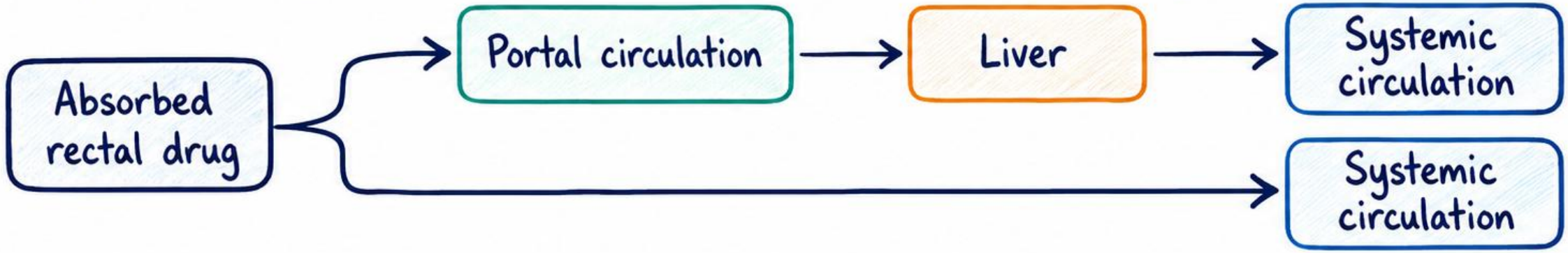
SUPPOSITORIES: BENEFITS AND LIMITS

BENEFITS

- Alternative when swallowing or oral administration is unsuitable.
- Can deliver treatment directly to a local site.
- Rectal delivery may partly avoid hepatic first-pass metabolism.

LIMITS

- Absorption may be variable or incomplete.
- Discomfort, leakage and acceptance can limit use.
- Heat sensitivity and drug-base incompatibility affect quality.



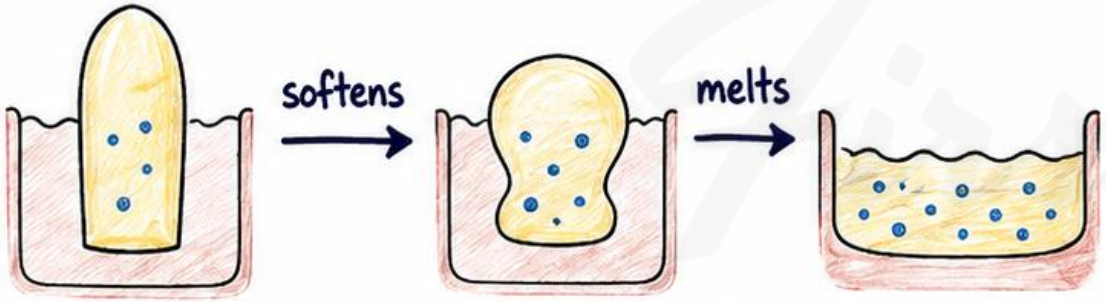
Rectal administration does not guarantee complete avoidance of first-pass metabolism.

CHOOSING A SUPPOSITORY BASE

The base carries the drug and controls its release.

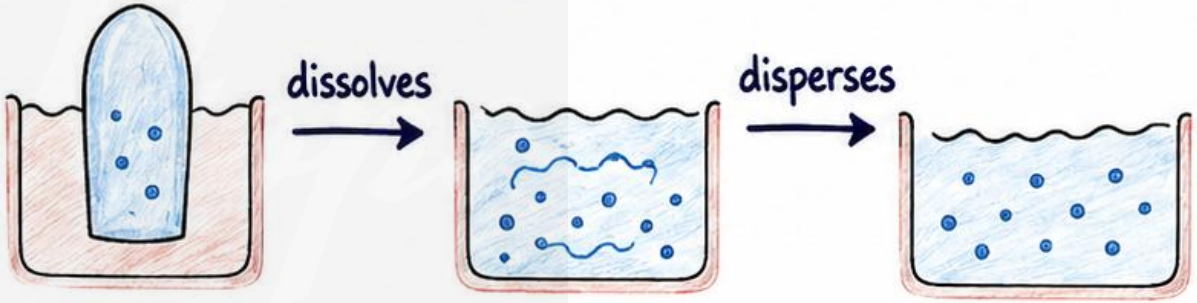
LIPOPHILIC BASES

Cocoa butter and suitable hard-fat bases usually release drug as the base softens or melts.



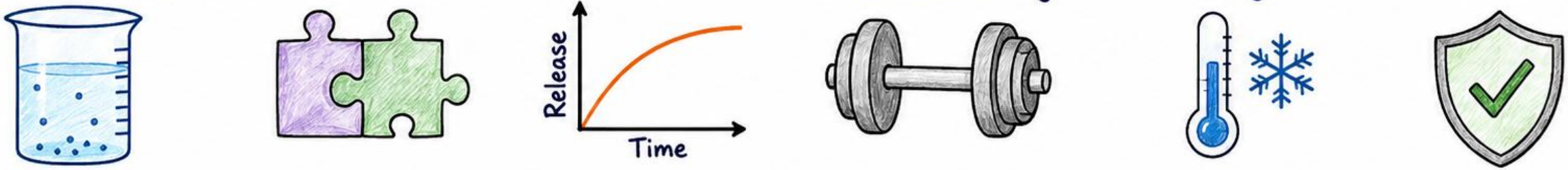
HYDROPHILIC BASES

PEG blends and glycerinated gelatin release drug through dissolution or dispersion in body fluids.



CHOOSE BY

Drug solubility • compatibility • release • mechanical strength • storage • route tolerance



A drug's affinity for the base affects how readily it enters surrounding fluid.

Cocoa Butter: Key Properties



Also called theobroma oil; a naturally derived fatty base.

- Solid at ordinary room temperature and softens near body temperature.
- Can give a smooth, non-gritty preparation.
- Has polymorphism: different crystal forms have different melting behaviour.
- Excessive heating and unsuitable cooling can produce a softer product.
- Some ingredients lower its melting range.

Use controlled processing and assess compatibility, rancidity and warm-climate storage.



Controlled heating



Controlled cooling

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