



Pharmaceutics I Unit IV

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Suppositories: Definition, types, advantages and disadvantages, types of bases, methods of preparations. Displacement value & its calculations, evaluation of suppositories.

Pharmaceutical incompatibilities: Definition, classification, physical, chemical and therapeutic incompatibilities with examples.

1. Definition of suppository:

- a) A solid dosage form for oral administration.
- b) A solid dosage form for topical application.
- c) A solid dosage form inserted into a body cavity for local or systemic action.
- d) A liquid dosage form for injection.

2. Types of suppositories:

- a) Rectal only.
- b) Rectal and vaginal.
- c) Rectal, vaginal, and urethral.
- d) All of the above.

3. Advantages of suppositories:

- a) Bypasses first-pass metabolism.
- b) Convenient for patients with swallowing difficulties.
- c) Provides localized action.
- d) All of the above.

4. Disadvantages of suppositories:

- a) Can be irritating to the rectum.
- b) Unpleasant sensation of fullness.
- c) Slow onset of action compared to some routes.
- d) All of the above.

5. Types of suppository bases:

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- a) Water-soluble only (e.g., polyethylene glycol).
- b) Fat-soluble only (e.g., theobroma oil).
- c) Water-soluble and fat-soluble.
- d) None of the above.

6. Methods of suppository preparation:

- a) Molding.
- b) Compression.
- c) Both molding and compression.
- d) Neither molding nor compression.

7. Displacement value:

- a) The volume occupied by 1 gram of the suppository base.
- b) The weight of the suppository base required to displace a specific volume of water.
- c) The amount of drug that can be incorporated into a suppository.
- d) A measure of the suppository's melting point.

8. Calculating displacement value:

- a) Displacement Value = Weight of base / Volume of displaced water
- b) Displacement Value = Volume of displaced water / Weight of base
- c) Displacement Value = Drug amount / Base amount
- d) Displacement Value = Melting point / Displacement value

9. Evaluation of suppositories:

- a) Weight variation.
- b) Uniformity of content.
- c) Melting point/dissolution rate.
- d) All of the above.

10. Which of the following suppository bases is water-soluble?

- a) Theobroma oil

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- b) Cocoa butter (another name for theobroma oil)
- c) Polyethylene glycol
- d) Stearyl alcohol

11. Suppositories are most commonly used to deliver medications for:

- a) Chronic conditions
- b) Localized conditions
- c) Antibacterial purposes
- d) Pain relief

12. Which of the following statements about suppository storage is CORRECT?

- a) They should be stored at room temperature.
- b) They should be refrigerated.
- c) Storage temperature depends on the base type.
- d) They should be stored in a tightly sealed container regardless of temperature.

13. Patients with nausea and vomiting may have difficulty using suppositories because of:

- a) The suppository may irritate the rectum.
- b) The medication may not be absorbed properly.
- c) It may trigger the gag reflex.
- d) All of the above.

14. Suppositories for children are typically:

- a) Larger than adult suppositories.
- b) Smaller than adult suppositories.
- c) The same size as adult suppositories.
- d) Not recommended for use in children.

15. When inserting a suppository, it's important to:

- a) Wash hands thoroughly before and after insertion.
- b) Moisten the suppository with water.

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- c) Insert it as deeply as possible.
- d) Lie down for 30 minutes after insertion.

16. If a suppository expels shortly after insertion, it could be a sign of:

- a) Incorrect storage.
- b) An improper dose.
- c) The medication is not effective.
- d) Constipation.

17. Which of the following medications is NOT typically administered via suppository?

- a) Anti-nausea medication (for some cases)
- b) Pain medication (for localized pain)
- c) Antidepressants
- d) Anti-diarrheal medication

18. For suppositories to be effective, they need to:

- a) Dissolve quickly at body temperature.
- b) Remain solid for an extended period.
- c) Be uncomfortable to insert.
- d) Have a strong odor.

19. Suppositories can be a good alternative for patients who have difficulty with:

- a) Swallowing pills.
- b) Injections.
- c) Taking medication orally.
- d) All of the above.

20. It's important to consult with a healthcare professional before using suppositories, especially if:

- a) You are pregnant or breastfeeding.
- b) You have any underlying rectal conditions.

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- c) You are taking other medications.
- d) All of the above.

21. Definition: Pharmaceutical incompatibility refers to:

- a) The inability of a medication to work effectively.
- b) Interactions between drug and food that affect absorption.
- c) Undesirable interactions between different drug components or with excipients.
- d) The breakdown of a drug due to improper storage.

22. Classification of incompatibilities:

- a) Physical and chemical only.
- b) Physical, chemical, and therapeutic.
- c) Dosage form and route of administration.
- d) Age and gender of the patient.

23. Example of a physical incompatibility:

- a) Antagonistic effect between two medications.
- b) Formation of a precipitate when mixing solutions.
- c) Increased blood sugar levels due to a drug-food interaction.
- d) Medication causing drowsiness in an elderly patient.

24. Example of a chemical incompatibility:

- a) Combining an acidic and basic medication, leading to neutralization.
- b) A medication not being absorbed properly due to food intake.
- c) Two medications with similar actions causing an additive effect.
- d) A medication causing nausea in a child.

25. Therapeutic incompatibility:

- a) Occurs when medications have opposing therapeutic effects.
- b) Results in changes in the physical appearance of a medication.
- c) Affects the absorption rate of a drug due to food interaction.

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d) Leads to the breakdown of a medication due to improper storage.

26. Example of a therapeutic incompatibility:

- a) Mixing an antibiotic with a laxative.
- b) Combining two medications for pain relief, leading to an increased effect.
- c) A medication causing a bad taste in the mouth.
- d) A suppository melting too quickly at room temperature.

27. Identifying and preventing incompatibilities is important for:

- a) Ensuring medication effectiveness and patient safety.
- b) Reducing the cost of medications.
- c) Improving the taste of medications.
- d) Extending the shelf life of medications.

28. Pharmacists play a crucial role in:

- a) Identifying potential incompatibilities in prescriptions.
- b) Recommending alternative medications if necessary.
- c) Educating patients on proper medication storage and use.
- d) All of the above.

29. When encountering an incompatibility, a pharmacist may:

- a) Dispense the medication as prescribed.
- b) Inform the prescriber and suggest alternative options.
- c) Adjust the dosage of one of the medications.
- d) Recommend a different route of administration for one medication.

30. Resources for pharmacists to check for incompatibilities include:

- a) Drug compendia and references.
- b) Manufacturer information for specific medications.
- c) Both a and b.
- d) Patient medication history.

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31. Continuous education for pharmacists is essential to stay updated on:

- a) New medications and potential interactions.
- b) Changes in recommended prescribing practices.
- c) Advancements in pharmaceutical technology.
- d) All of the above.

32. Which of the following statements about physical incompatibilities is true?

- a) They always result in a loss of medication potency.
- b) They can be visually identified by changes in appearance.
- c) They are not a major concern for pharmacists.
- d) They can be overcome by adjusting the dosage form.

33. Chemical incompatibilities can lead to:

- a) Formation of precipitates or gas.
- b) Changes in color, odor, or taste.
- c) Loss of medication effectiveness.
- d) All of the above.

34. Combining a diuretic with lithium can be an example of:

- a) Physical incompatibility.
- b) Chemical incompatibility.
- c) Therapeutic incompatibility.
- d) Dosage form incompatibility.

35. It's important to consider therapeutic incompatibilities when prescribing medications for:

- a) The same condition.
- b) Different conditions that can interact.
- c) Both a and b.
- d) None of the above.

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36. When dispensing medications, a pharmacist should provide instructions on:

- a) Potential interactions with food or other medications.
- b) Proper storage and handling of medications.
- c) How and when to take the medications.
- d) All of the above.

37. Patients should be encouraged to:

- a) Inform their pharmacist about all medications they are taking.
- b) Report any unusual side effects they experience.
- c) Not take expired medications.
- d) All of the above.

38. By working together, pharmacists and healthcare professionals can:

- a) Minimize the risk of medication errors.
- b) Ensure optimal patient care and medication safety.
- c) Improve patient adherence to medication regimens.
- d) All of the above.

39. Incompatibilities can affect the:

- a) Stability of a medication.
- b) Absorption rate of a drug.
- c) Release profile of a medication.
- d) All of the above.

Answers

1. **Definition of suppository:** c) A solid dosage form inserted into a body cavity for local or systemic action.
2. **Types of suppositories:** d) All of the above.
3. **Advantages of suppositories:** d) All of the above.
4. **Disadvantages of suppositories:** d) All of the above.
5. **Types of suppository bases:** c) Water-soluble and fat-soluble.
6. **Methods of suppository preparation:** c) Both molding and compression.

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7. **Displacement value:** a) The volume occupied by 1 gram of the suppository base.
8. **Calculating displacement value:** a) Displacement Value = Weight of base / Volume of displaced water.
9. **Evaluation of suppositories:** d) All of the above.
10. **Which of the following suppository bases is water-soluble?** c) Polyethylene glycol.
11. **Suppositories are most commonly used to deliver medications for:** d) Pain relief.
12. **Which of the following statements about suppository storage is CORRECT?** c) Storage temperature depends on the base type.
13. **Patients with nausea and vomiting may have difficulty using suppositories because of:** d) All of the above.
14. **Suppositories for children are typically:** b) Smaller than adult suppositories.
15. **When inserting a suppository, it's important to:** a) Wash hands thoroughly before and after insertion.
16. **If a suppository expels shortly after insertion, it could be a sign of:** d) Constipation.
17. **Which of the following medications is NOT typically administered via suppository?** c) Antidepressants.
18. **For suppositories to be effective, they need to:** a) Dissolve quickly at body temperature.
19. **Suppositories can be a good alternative for patients who have difficulty with:** d) All of the above.
20. **It's important to consult with a healthcare professional before using suppositories, especially if:** d) All of the above.
21. **Definition: Pharmaceutical incompatibility refers to:** c) Undesirable interactions between different drug components or with excipients.
22. **Classification of incompatibilities:** b) Physical, chemical, and therapeutic.
23. **Example of a physical incompatibility:** b) Formation of a precipitate when mixing solutions.
24. **Example of a chemical incompatibility:** a) Combining an acidic and basic medication, leading to neutralization.
25. **Therapeutic incompatibility:** a) Occurs when medications have opposing therapeutic effects.
26. **Example of a therapeutic incompatibility:** a) Mixing an antibiotic with a laxative.
27. **Identifying and preventing incompatibilities is important for:** a) Ensuring medication effectiveness and patient safety.
28. **Pharmacists play a crucial role in:** d) All of the above.
29. **When encountering an incompatibility, a pharmacist may:** b) Inform the prescriber and suggest alternative options.
30. **Resources for pharmacists to check for incompatibilities include:** c) Both a and b.
31. **Continuous education for pharmacists is essential to stay updated on:** d) All of the above.
32. **Which of the following statements about physical incompatibilities is true?** b) They can be visually identified by changes in appearance.
33. **Chemical incompatibilities can lead to:** d) All of the above.
34. **Combining a diuretic with lithium can be an example of:** c) Therapeutic incompatibility.
35. **It's important to consider therapeutic incompatibilities when prescribing medications for:** c) Both a and b.
36. **When dispensing medications, a pharmacist should provide instructions on:** d) All of the above.
37. **Patients should be encouraged to:** d) All of the above.
38. **By working together, pharmacists and healthcare professionals can:** d) All of the above.
39. **Incompatibilities can affect the:** d) All of the above.