

Design a Delayed-Release Tablet

Name: _____

Date: _____

Student quiz — *Answer key*

Directions: Indicate the correct answer(s) for each question below.

1. Explain why some medicines are packaged as coated capsules while others come as solid pressed (uncoated) tablets.

For medicines to be effective, they have to be inside the body at the right place and at the right time. When a capsule is coated, the release of the active ingredient is delayed, whereas an uncoated tablet releases its active ingredient immediately. This means that, depending on where in the patient's body it is needed, medicine may be prescribed in the form of a tablet or a capsule.

2. Describe in your own words what a delayed-release drug is.

Delayed-release drugs are medications, such as tablets or pills, which do not immediately disintegrate when taken. Because of this, the active ingredient is released slowly in smaller portions, rather than immediately after being administered.

3. How can you achieve the delayed release of an active ingredient?
 - a. Press the active ingredient into tablet form.
 - b. Make the active ingredient insoluble in water.
 - c. Coat the active ingredient with a material that can dissolve inside the body.
 - d. Inject the active ingredient directly into the bloodstream.

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4. Name one important material property that a substance used to coat a delayed-release tablet should have.

Two examples are that the substance should be able to dissolve inside the body and should be non-toxic.

5. Below, draw a picture of what happens to a polymer-coated delayed-release drug inside the body over time. Label the important components.

