

Bandages for Faster Healing

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Introduction

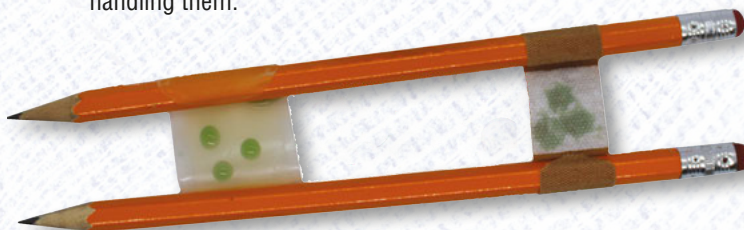
Have you ever fallen and scraped your elbow or knee so badly that it bled? If so, you or an adult probably cleaned the wound, stopped the bleeding, and then placed a bandage over it. Try this activity to compare how two different types of bandages work with your body!

Question to Investigate

Which type of bandage, regular or hydrocolloid, absorbs water (or fluid from the body) better?

Procedure

1. Add and mix 1 drop of food coloring to 5 mL of water in the cup.
2. Remove the outside wrappers from both the regular bandage (RB) and the hydrocolloid bandage (HB).
3. Peel away only part of the paper that covers the HB and stick a pencil to one side of it. Now place a second pencil parallel to the first on the other side of the bandage with at least an inch between the pencils, as shown.
4. For the RB, peel away the paper to expose both the sticky ends and stick them to the pencils, leaving the gauze exposed. The sticky pad of HB and the gauze portion of the RB should both be facing up.
5. Look closely at the surface of each bandage. Answer Question 1 in the chart.
6. Using either a dropper or cotton swab, add one drop of water unto the wound-covering area of each bandage. If using a cotton swab, dip one end in water and squeeze the tip to release a small amount of water onto each bandage. Then answer Question 2.
7. Wait at least one hour. Observe the bandages, feel their texture, and answer questions 3 and 4.



Comparing regular and hydrocolloid bandages			
		Regular bandage	Hydrocolloid bandage
Questions to answer immediately			
1	What does the wound-covering part of the bandage look and feel like?		
2	Does the bandage absorb the water immediately? (Yes/No)		
Questions to answer after one hour			
3	What evidence do you notice that shows the bandage absorbed the water?		
4	Touch the front and back of the bandages. How do they feel?		



How does it work?

Regular bandages have a small rectangular piece of cotton gauze that quickly absorbs the fluid that comes from a wound as it heals. Once the fluid is absorbed, holes in the sticky portion of the bandage allow it to evaporate quickly. Keeping wounds clean and dry prevents infection and aids healing.

Hydrocolloid bandages have two layers. The outer layer is waterproof and keeps the wound clean. The inner layer contains

gel-like hydrocolloid material. This gel slowly absorbs liquid from the wound and creates an environment that supports healing.

Hydrocolloid bandage makers claim that wounds covered with these bandages heal faster than wounds covered by a regular bandage or a scab (which is your body's own "bandage"). But they tend to be more expensive than regular bandages. Which of these bandages have you used before?