

AP Biology Topic 2.7 Facilitated Diffusion

1. Why are membrane proteins necessary for facilitated diffusion?
2. What substances get across the cell membrane through facilitated diffusion?
3. What does active transport rely upon? What do they require?
4. What is cotransport?
 - What is Symport transport?
 - What is Antiport transport?
5. How do membranes become polarized?
 - What is membrane potential?
6. How does the sodium potassium work?
7. A human kidney filters about 200 liters of blood each day. Approximately two liters of liquid and nutrient waste are excreted as urine. The remaining fluid and dissolved substances are reabsorbed and continue to circulate throughout the body. Antidiuretic hormone (ADH) is secreted in response to reduced plasma volume. ADH targets the collecting ducts in the kidney, stimulating the insertion of aquaporins into their plasma membranes and an increased reabsorption of water.

If ADH secretion is inhibited, which of the following would initially result?

- A. The number of aquaporins would increase in response to the inhibition of ADH.
- B. The person would decrease oral water intake to compensate for the inhibition of ADH.
- C. Blood filtration would increase to compensate for the lack of aquaporins.
- D. The person would produce greater amounts of dilute urine.

Explain why this is the correct answer.