

Quiz

Answer Key

Question

An accident victim is wheeled into the hospital with many open cuts. Doctors immediately assess the patient's blood type as AB⁻.

The doctors must find compatible blood types for transfusion. They check the blood banks and find the following blood types available:

Table 1: Availability of Blood Types in Blood Bank

Blood Type	O ⁺	O ⁻	A ⁺	A ⁻	B ⁺	B ⁻	AB ⁺	AB ⁻
Availability	Yes	Yes	Yes	Yes	Yes	No	Yes	No

Upon further investigation, the victim's medical history shows that he suffers from a condition which results in thrombocytopenia (reduced blood platelets).

a) Identify the compatible blood type(s) that are available.

Explain your answer.

b) Should the doctors be concerned about his medical condition?

Explain your answer.

a) Patient AB⁻



The patient has antigen A & antigen B, therefore his/her body will recognize these antigens. The patient's body will not recognize antigen Rh. If antigen Rh enters the body, the WBCs will mark it as a foreign invader and produce antibodies (anti-antigen Rh) to destroy them. This will result in agglutination. Therefore, O⁺, A⁺, B⁺ and AB⁺ cannot be donated. O⁻, A⁻, B⁻ and AB⁻ can be used but only O⁻ and A⁻ are available.

ANS: O⁻ and A⁻

b) Yes. Platelets play a role in blood coagulation which is important in healing (helps stop blood flow from wounds). Since the patient has many open cuts, the doctors should be concerned.