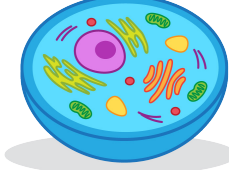


TOPIC: ERYTHROCYTES

Structure of Erythrocytes



- ♦ **Erythrocytes (Red Blood Cells/RBCs):** small, *biconcave-shaped* cells that _____ nucleus & many organelles.
 - Biconcave shape: increases the RBC's flexibility & surface _____ to volume ratio.
 - Meshwork of cytoplasmic proteins, including _____, helps maintain RBC's shape.
 - RBCs are packed with *hemoglobin* (____), a protein that functions in gas transport.

ERYTHROCYTES	MOST OTHER BODY CELLS
	
Smaller in size (~7.5 μm)	Larger in size (~25 μm)
Biconcave shape	Not biconcave-shaped
_____ a nucleus & organelles	Contain a nucleus & organelles
Coated with flexible proteins (<i>spectrin</i>)	Not coated with flexible proteins (<i>spectrin</i>)
Packed with <i>Hemoglobin</i> (Hb)	Not packed with Hemoglobin (Hb)

EXAMPLE

Which of the following statements about erythrocytes is false?

- a) They use mitochondria to make their own ATP.
- b) They are smaller than the average body cell.
- c) Their shape is flexible.
- d) They don't have a nucleus.

PRACTICE

What is the primary function of the protein spectrin in erythrocytes?

- a) To allow efficient gas exchange of oxygen and carbon dioxide into and out of erythrocytes.
- b) To maintain the shape of erythrocytes and allow them to change shape when needed.
- c) To make ATP, as there are no mitochondria in erythrocytes.
- d) To hold hemoglobin molecules in place.