

Worksheet: Stem Cells



Q1: Where are stem cells found in plants?

A Root hair cells

B Meristem

C Pollen

D Chloroplasts

E Palisade cells

Q2: True or False: Stem cells could be used to treat a range of disorders and diseases, including paralysis, dementia, and infertility.

A True

B False

Q3: What is the key difference between a stem cell and a normal body cell?

- A Normal body cells are specialized to carry out a particular function, whereas stem cells are unspecialized.
- B Normal body cells contain genetic material, whereas stem cells do not.
- C Stem cells can divide and replicate, whereas normal body cells cannot.
- D Stem cells are specialized to carry out a particular function, whereas normal body cells are unspecialized.
- E Stem cells are only found in embryos, whereas normal body cells are only found in adults.

Q4: Macular degeneration is when the light-sensitive cells in the center of your eye stop working. Which of the following best explains how stem cells could be used to treat someone with macular degeneration?

- A Stem cells can be stimulated to differentiate into light-sensitive cells to replace the damaged ones.
- B Stem cells cannot be used to treat this condition.
- C Stem cells can be inserted into the eye to fix the damaged cells.
- D Stem cells can stimulate the immune response to repair the damaged cells.
- E Stem cells can be used to create an entire eyeball and replace the eye of someone with this condition.

Q5: Which of the following is a benefit of having stem cells in the body of a human adult?

- A Adult stem cells contain large amounts of hemoglobin to carry oxygen around the body.
- B Adult stem cells can transmit electrical impulses to allow a rapid response to danger.
- C Adult stem cells can be used in reproduction.
- D If cells are damaged by injury or disease, stem cells can divide and create new cells to replace them.
- E Adult stem cells can specialize into all the different types of cells in the body.

Q6: Which of the following is the correct definition of stem cells?

- A Stem cells are undifferentiated cells that stay unspecialized.
- B Stem cells are specialized cells found in the body that carry out certain functions.
- C Stem cells are undifferentiated cells that can develop into any type of specialized cell.
- D Stem cells are undifferentiated cells that are only found in adult tissue.
- E Stem cells are undifferentiated cells found only in plants.

Q7: What is the key difference between embryonic and adult stem cells?

- A Embryonic stem cells can differentiate to become any type of specialized cell, but adult stem cells can only become certain types of cells.
- B Embryonic stem cells can divide rapidly to make new cells, but adult stem cells take a long time to divide and generate new cells.
- C Adult stem cells can differentiate to become any type of specialized cell, but embryonic stem cells can only become certain types of cells.
- D They do not differ in any of their properties.
- E Adult stem cells can divide rapidly to make new cells, but embryonic stem cells take a long time to divide and generate new cells.