

A Stem Cell Story Quick Quiz: Answers

1. What is a stem cell?

<i>A cell that can make copies of itself AND make more specialized types of cell</i>	A ✓
A cell that helps to fight against infections	B
A cell that is specialized	C
A cell that can produce all the cell types of the body	D

2. Where can scientists obtain stem cells?

Only from an embryo	A
Only from tissues in the body	B
Only from the brain	C
<i>From an embryo or tissues in the body</i>	D ✓

Note: Stem cells can also be obtained from a fetus, umbilical cord blood or by using a recently developed technique to 'reprogramme' specialized body cells so that they behave like embryonic stem cells. These 'reprogrammed' cells are known as induced pluripotent stem cells (iPS cells).

3. Embryonic stem cells can differentiate into which types of cell?

Only brain stem cells and specialized brain cells	A
<i>All types of specialized cells in the body</i>	B ✓
Only cells that can produce insulin	C
Only cells that can produce artificial skin	D

4. Neural stem cells from the brain can differentiate into which types of cell?

<i>Only specialized brain cells</i>	A ✓
Specialized brain cells and specialized skin cells	B
All types of specialized cells	C
Only specialized blood cells	D

5. In the treatment of burns, scientists can use stem cells to help them replace...

All parts of the patient's skin	A
Hair follicles and sweat glands	B
<i>The outermost layer of the skin</i>	C ✓
All parts of the skin except sweat glands	D

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6. What are cells 'fed' when they are grown in a lab?

Antibodies	A
Proteins and sugars	B ✓
Salts	C
Other cells	D

7. A blastocyst is...

A very early stage embryo	A ✓
A type of stem cell	B
Part of the blood system	C
A type of brain cell	D

8. When are blastocysts created in a laboratory?

At weekends	A
When blood supplies are low	B
During fertility treatment	C ✓
Whenever scientists are studying cells	D

9. What are the roles of stem cells in our bodies?

We are not sure what roles stem cells play in the body	A
They produce new specialized cells to replace cells that die or are used up	B ✓
They fight against infections	C
They perform specialized roles in the body (e.g. produce insulin, transmit signals in the nervous system, ...)	D

10. What are stem cell scientists investigating today?

When and how embryonic stem cells make decisions to produce more specialized cells	A
How stem cells work in the body	B
How stem cells might be used to treat disease	C
All of the above	D ✓