

cell differentiation

As an organism develops, cells differentiate to form different types of cells

- Most animal cells differentiate at an early stage.
- Many plant cells retain the ability to differentiate throughout their lives.

Stem cells are undifferentiated.

There are 3 types:

embryonic stem cells	} Animals
Adult stem cells	
Meristem cells	} Plant

Therapeutic cloning

- The process of cloning cells to create embryonic stem cells which are then used to treat a condition
- **advantage** - treating illness, less chance of rejection
- **disadvantages** - could be unethical, possibly painful.

Questions

- What are the advantages of therapeutic cloning compared to traditional embryonic stem cell therapies?
There is less chance of rejection in therapeutic cloning as it is ~~you~~ the patients own genetic info.
- What treatments could stem cells be used for?
you could make insulin producing cells for diabetes patients, nerve cells for spinal injuries, etc.
- How could Meristem cells be useful?
they could be used to quickly and cheaply clone plants to help prevent extinction of rare species.