

Cell division

**What are chromosomes?**

Cell division

**How are chromosomes found in body cells?**

Cell division

**What are the three overall stages of the cell cycle?**

Cell division

**What happens to the DNA before a cell divides?**

Cell division

**What happens in mitosis?**

Cell division

**Why is mitosis important in multicellular organisms?**

Cell division

**What is a stem cell?**

Cell division

**What can stem cells from human embryos do?**

Normally in pairs.

Structures in the nucleus made of DNA molecules. Each carries a large number of genes.

It replicates to form two copies of each chromosome.

Growth and DNA replication; mitosis; division of the cytoplasm and cell membranes.

It is important for growth and development (and repair and replacement).

One set of chromosomes is pulled to each end of the cell and the nucleus divides.

They can be cloned and made to differentiate into most different types of human cell.

An undifferentiated cell capable of giving rise to many more cells of the same type, and from which certain other cells can arise from differentiation.

Cell division

**What can stem cells from adult bone marrow do?**

Cell division

**What is meristem tissue?**

Cell division

**What is therapeutic cloning?**

Cell division

**Give two risks or objections to using stem cells.**

Cell division

**How can plant stem cells be used?**

Tissue in plants whose stem cells can differentiate into any type of plant cell, throughout the life of the plant.

Form many types of cell, including blood cells.

Risk of transfer of viral infection; some people have ethical or religious objections.

An embryo is produced with the same genes as the patient, so stem cells from it are not rejected by the patient's body.

To clone rare species to protect them from extinction, and to clone crop plants with desirable features such as disease resistance.