

再生医療 幹細胞で失われた機能を取り戻す

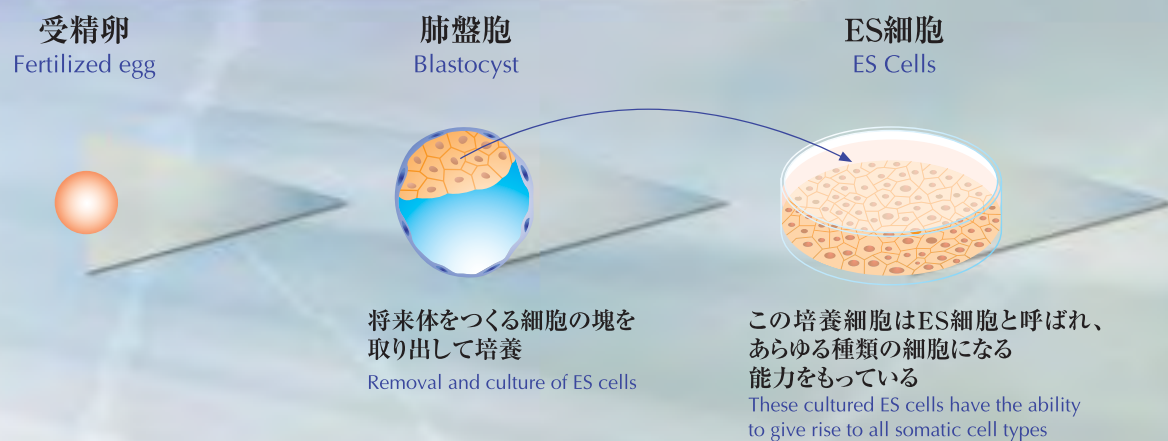
Regenerative medicine

Stem cells may one day be used therapeutically to restore the function of damaged tissues and organs

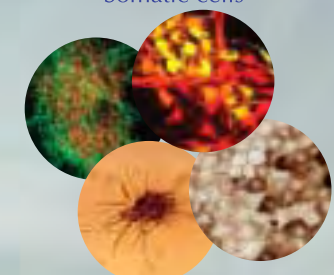
再生医療にはいろいろな幹細胞が活かされます。

胚性幹細胞(ES細胞)を用いた細胞治療

Cell replacement therapies using embryonic stem cells(ES cells)

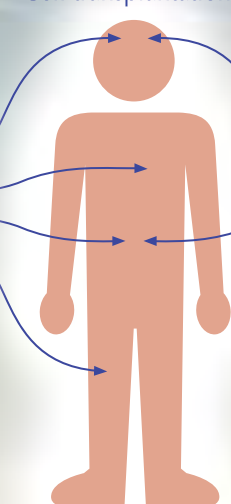


神経細胞、血管細胞など
Somatic cells



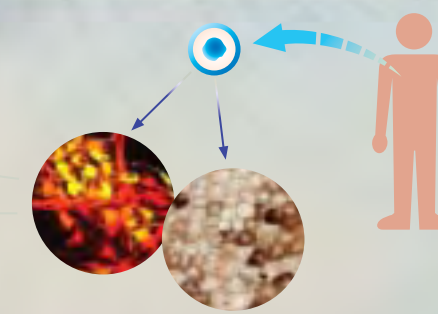
培養環境を調節し、目的の細胞に誘導する
ES cells can be guided to differentiate into specific types of cells by adjusting the culture conditions

細胞移植
Cell transplantation



組織幹細胞を用いた細胞治療

Tissue stem cell-based therapy



体の中にある組織幹細胞を取り出して目的の細胞に誘導する
Modes of treatment in which multipotent stem cells are taken from the body and guided to produce the types of cells required to treat a medical condition

どんな病気が治せるようになるの?

Diseases that may one day be treated by stem cell-based therapies



効率よく目的の細胞を誘導する方法や、移植免疫、生命倫理など未解決の問題に取り組んでいます。

A number of fundamental questions concerning targeted differentiation, immune system response and ethical issues must be resolved before these promising therapies can be used in human patients.