

White Paper on Adult vs. Embryonic Stem Cells

Adult stem cell research made great strides vs. embryonic. Total research articles listed in the National Library of Medicine for major adult stem cell types vs. Embryonic (as of 5/6/09):

If we compare the National Library of Medicine searches for the following items:

Cartilage Repair: 230 articles on embryonic vs. **1,113 for just one adult stem cell line** (mesenchymal stem cells)

Myocardial Infarction: 186 for embryonic stem cells vs. **341 for adult mesenchymal stem cells, 69 for endothelial progenitor cells**

Wound Healing: 114 for embryonic stem cells vs. **330 for adult mesenchymal stem cells, 565 for adult epithelial stem cells**

To delve further, the first 20 references for myocardial infarction for adult stem cells are almost all devoted to actual animal models of treatment, advanced concepts such as dosing, etc... Almost none of the 20 references in the same search for embryonic stem cells reveal any animal testing; the focus being review articles what about might be theoretically possible. **The conclusion, adult stem cells are much farther along in their development with regard to real world treatments.**

What have these actual animal and early human models shown that adult stem cells are capable of healing?

- Orthopedic tissues such as cartilage, bone, muscle, tendon, spinal disc, and ligament[1-25]
- Heart [26-40]
- Pancreas (Diabetes)[41-50]
- Wound Healing[51-61]

- Lungs[62-70]
 - Brain (stroke, brain injury, Multiple Sclerosis, ALS)[71-94]
 - Spinal Cord (Spinal Cord Injury)[95-99]
 - Liver[100-110]
 - Kidney[111-125]
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