

Cell Therapy Encyclopedia Article

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Cell Therapy

Cell therapy is a treatment intended to regenerate or rejuvenate the body by injecting it with healthy live or freeze-dried cells derived from animal organs or embryos. It is sometimes called fresh or live cell therapy.

The purposes of cell therapy include:

- Stimulation of the immune system.
- Slowing the effects of aging, including memory loss and sexual dysfunction as well as external appearance.
- Revitalization of specific body organs.
- Treating specific diseases and disorders, including arthritis, lupus, **cancer**, HIV infection, cardiovascular and neurological disorders, and Parkinson's disease.

Cell therapy was developed in Switzerland in the 1930s by Dr. Paul Niehans, following emergency treatment of a dying patient with cells taken from an animal's parathyroid gland. Dr. Niehans then worked with scientists from the Nestle Company, who had successfully developed a method of freeze-drying coffee, to develop a method of freeze-drying cells to guarantee the sterility of preparations as well as preserving the cells. The freeze-dried cells currently used in cell therapy undergo a process of ultrafiltration to remove the cell surface coatings and minimize the risk of an allergic reaction.

Studies conducted in German universities found that injected cells tagged with radioisotopes migrate to the organ in the human body corresponding to the organ in the animal from which they were taken. The reasons for the effectiveness of cell therapy, however, are not yet understood. It is thought that live cells may revitalize an "old" organ by "reprogramming" its genetic material. Another theory holds that the fresh cells stimulate secretions that restore the proper functioning of the targeted organ.

Cell therapy cannot be practiced within the United States because of Food and Drug Administration (FDA) restrictions on importing cellular materials intended for injection. Patients must travel to Mexico, the Bahamas, England, or Germany for treatment. The cost of the therapy is approximately \$2,500 for initial injections and \$1,500 for booster treatments. The treatment consists of several injections of organ cells into the muscles of the buttocks. Patients are asked to limit alcoholic beverages and smoking during the course of treatment. Patients with kidney or liver disease, short-term infections, or inflammatory disorders should not be treated with cell therapy. In addition, patients who have an allergic reaction to the test injection should not proceed with therapy.