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## **Editorial Note on Regenerative Medicine**

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## **Editorial**

Regenerative medicine "is aimed at replacing or repairing human cells, or regenerating tissues and organs to restore normal function," the commissioner said in a report. By emphasizing "normal function", this approach to medical treatment is distinguished from many commonly used drugs that tend to treat symptoms but cannot address the underlying cause. For example, people with type 1 diabetes cannot produce insulin. Instead, daily insulin injections are needed to control blood sugar levels. Regenerative medicine seeks to solve this problem by regenerating the islets of Langerhans, which allows individuals to produce insulin. This means that insulin injections are gone and normal glucose metabolism is restored. Although it is not yet realistic to treat type 1 diabetes in this way, there are some areas of regenerative medicine that are well established in the medical setting.

The earliest form of cell therapy was blood transfusion, which is now common in most clinical settings. The next list was bone marrow transplant. This gave patients suffering from radiation sickness or blood cancer the opportunity to make new healthy blood cells from the donor's bone marrow stem cells. Cell therapy using the patient's own cells is also used for severe burns and burns when the patient does not have enough intact skin for skin grafting. Here, skin cells are isolated from a small biopsy and proliferated in a specialized laboratory. Millions of cells can grow in a relatively short amount of time and be transplanted into burns to accelerate healing. However,

despite these successes and the fact that scientists around the world are focused on new therapies, regenerative medicine treatments still find a way to common medical practices in most medical disciplines. According to a report by The Lancet, "It has the potential to significantly reduce the burden of illnesses in some common conditions (stroke, heart disease, progressive neurological disorders, autoimmune diseases, trauma, etc.). Therapy significantly improves health-related issues. Quality of life for many patients with chronic illness."

An army of scientists around the world is working on new regenerative medicine solutions for common illnesses and injuries. Last year alone, Medical News Today announced a chip technology that could transform one cell type into another to heal an entire organ, a new method of spraying biomaterials onto an injured heart using minimally invasive surgery, and we reported on growth factors that may reverse osteoporosis. Regenerative medicine treatments tend to be very expensive and often require specialized manufacturing facilities and highly skilled personnel. Due to tight medical budgets in many countries, high costs are an obstacle to the realization of such treatments.

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