

Stem Cells 'Can treat Diabetes'

An experimental stem cell treatment has enabled patients with type 1 diabetes to go for as long as four years without insulin injections

A US-Brazilian project with 23 patients found most were able to produce their own insulin after a transplant of stem cells from their own bone marrow. Even those who relapsed needed less insulin than before. But writing in the journal JAMA, the team warned the treatment may only work in those very recently diagnosed. The treatment is designed to stop the immune systems of those with type 1 diabetes, a condition which usually develops in childhood, from mistakenly destroying the cells which create insulin. To measure its effectiveness, team from Northwestern University in the US and the Regional Blood Centre in Brazil, looked at levels of C-peptides, which show how well the body is producing insulin. Twenty of the 23 patients who received the treatment became insulin-free - one for as long as four years. Eight had to return to insulin injections, but at reduced levels. The treatment did not work in three of the patients, and it was also unlikely to work in patients more than three months after diagnosis of diabetes, said Dr Richard Burt of Northwestern. This was because by this stage, the immune system had destroyed the body's islet cells. It was also unlikely to be have any therapeutic benefits for those with type 2 diabetes, mainly associated with obesity, as these patients still make insulin. Dr Iain Frame, director of research at Diabetes UK, said: "although this remains an interesting area of research, the importance of a limited extension to this study should not be overstated - this is not a cure for Type 1 diabetes." He added: "we would like to see this experiment carried out with a control group for comparison of results and a longer-term follow up in a greater number of people. "It is important that the researchers look at the causes of the apparent improvement in insulin production and C-peptide levels in some participants. In particular, it is crucial to find out whether this is associated with the timing of the treatment or possible side effects of it rather than the stem cell transplant itself. "It would be wrong to unnecessarily raise the hopes of people living with diabetes about a new treatment for the condition on the back of the evidence provided in this study."