

Stem cell therapies look promising for heart disease

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Stem cell therapies work as a complement to standard treatments, potentially cutting the number of deaths after a year, suggests evidence from the latest Cochrane review: Stem cell therapy for chronic ischaemic heart disease and congestive heart failure. Taking stem cells from a patient's bone marrow and injecting them into their damaged heart may be an effective way to treat heart disease.

The new review, published today in *The Cochrane Library*, uses data involving 1,255 people from 23 randomised controlled trials, where all participants received standard treatments. Compared to standard treatment alone or with placebo, stem cell therapy using [bone marrow](#) cells resulted in fewer deaths due to heart disease and [heart failure](#), reduced the likelihood of patients being readmitted to hospital, and improved heart function. However, researchers say that with much larger clinical trials underway, the findings are awaited to enable more certainty about the effects.

Dr Enca Martin-Rendon, author of the review, Cochrane Heart Review Group, and based at NHS Blood and Transplant and the University of Oxford, UK, said: "This is encouraging evidence that stem cell therapy has benefits for heart disease patients. However, it is generated from small studies and it is difficult to come to any concrete conclusions until larger clinical trials that look at longer- term effects are carried out."

Stem cell therapies are experimental treatments that are currently only available in facilities carrying out medical research. If eventually found

to be effective, they might offer an alternative or complementary treatment to standard drug and surgical treatments for some patients with chronic [heart disease](#). The procedure involves collecting [stem cells](#) from a patient's own blood or bone marrow and using them to repair damaged tissues in the patient's heart and arteries.

Although within the first year there were no clear benefits of stem cell therapy over standard treatment alone, when longer term data were analysed a year or more later about 3 per cent of people treated with their stem cells had died compared with 15 per cent of people in the control groups. Hospital readmissions were reduced to 2 in every 100 people compared to 9 in the control group, and adverse effects were rare.

Dr Martin-Rendon continued, "It isn't clear which types of stem cells work best or why [stem cell therapies](#) seem to work for some people but not for others. We need to find out what's different in the people who aren't responding well to these treatments as it might then be possible to tailor therapies to these patients, so that they work better."

Dr David Tovey, Editor-in-Chief, Cochrane, said: "This review should help to raise awareness of the potential of stem cell therapy to improve patient outcomes, but it also demonstrates the importance of recognising the uncertainty of initial findings and the need for further research. A Cochrane review aims to analyse all available data to give a clear picture of what the evidence shows. Ensuring health decision makers, health professionals and the general public has access to up-to-date, relevant evidence research will help to raise awareness of the effectiveness of treatments and medications and therefore improve health care."

More information: Fisher SA, Brunskill SJ, Doree C, Mathur A, Taggart DP, Martin-Rendon E. Stem cell therapy for chronic ischaemic heart disease and congestive heart failure. *Cochrane Database of*

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