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Embryonic stem cells could restore damaged heart  
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New York, Aug. 28 -- Human embryonic stem cells could restore damaged hearts and improve heart function, American scientists say.

The scientists claim that they have found a way to boost the survival of these cells by creating a survival cocktail. The cells, which received this cocktail, were placed in the damaged hearts of mice, reported health portal Medical News Today.

They found virtually 100 percent of the rats had human heart muscle grafts in them after receiving the treated stem cells.

Scientists divided the rats into four groups: Rats receiving the treated (with cocktail) cells, those receiving cocktail but no cells, rats receiving non-cardiac cells and those receiving just water injections.

The rats not given heart cells eventually had heart failure. Those that did receive the human heart muscle grafts implanted in them had a complete reversal of the progression of heart failure, according to Charles Murry, the lead researcher.

"In patients who had suffered a heart attack, if we were able to re-muscularize their heart with stem cell that would prevent them from developing heart failure. The rub is that the rat is not a person," Murry said.

Stem cells have the ability to self-replicate and give rise to specialized cells. They can be found at different stages of foetal development and are present in a wide range of adult tissues.

The developing human is known as an embryo for about its first two months in the womb. Stem cells derived from the embryo are known as embryonic stem cells.

Previous attempts with stem cells had been disappointing and several of the cells rapidly died after being transplanted into the heart.

The experiment that appeared in the journal of Nature Biotechnology is seen as a possible major breakthrough in the repair of damaged heart muscles.

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