

# ICDs extend the lives of heart attack survivors by an entire year: Study

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A landmark follow-up study found that heart attack survivors who receive implanted cardioverter defibrillators (ICDs) live longer the longer they have them, according to the results of late-breaking clinical trial presented today at the annual Scientific Sessions of the Heart Rhythm Society.

ICDs are devices designed to correct arrhythmias, electrical malfunctions that throw the [heart](#) out of rhythm and cause many of the sudden cardiac deaths each year in the United States. Most fatal arrhythmias in the aging are caused by scar tissue left behind by heart attacks that interferes with the heart's electrical system.

The study that first tested the effectiveness of ICDs, the 2002 MADIT II trial (Multicenter Automatic Defibrillator Implantation Trial II), changed medical guidelines nationwide and made thousands of heart attack survivors eligible for ICD therapy. Led by Arthur Moss, M.D., professor of Medicine in the Department of Medicine at the University of Rochester Medical Center, the study found that the devices reduced risk of [sudden cardiac death](#) by 31 percent in [heart attack](#) survivors. At the same time, the ICD therapy could extend the average patient's life by about two months over a follow-up period that averaged about 2 years per patient. While that survival benefit was meaningful to patients, some critics argued that it did not make sense for the healthcare system to pay for \$25,000 a device that provided a modest extension of life in patients with chronic cardiac disease.

The current study watched the same patients for eight years, and found that over that time, patients with ICDs implant lived an average of more than a year longer, "greatly amplifying" the value of the treatment and arguing that it is dramatically more cost effective as a chronic therapy. Specifically, the new study found that MADIT II patients who had an ICD for eight years had a 37 percent lower chance of death from any cause than those without

one, which translates into 1.2 life-years saved.

"These results show that ICDs extend the long-term survival of patients with life-threatening of heart conditions," said Ilan Goldenberg, M.D., research associate professor within the Heart Research Follow-up Program at the University of Rochester Medical Center, and lead author of the new study. "These results emphasize the life-saving value of ICDs as chronic therapy for high-risk cardiac [patients](#)."

Source: University of Rochester Medical Center ([news](#) : [web](#))

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