

'World's smallest pacemaker' appears promising in human trial

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(HealthDay)—The world's smallest pacemaker is safe and effective in patients with symptomatic bradycardia, according to the first human clinical trial of the device. The findings were scheduled to be presented at the annual meeting of the Heart Rhythm Society, held from May 13 to 16 in Boston.

The new miniaturized pacemaker—called the Micra transcatheter pacing system—is implanted through the femoral vein and placed directly inside the heart's [right ventricle](#). The new device is 93 percent smaller than conventional transvenous pacemakers.

This new study was led by Philippe Ritter, M.D., of the Hôpital Haut-Lévêque in Bordeaux, France, and included the first 60 patients to receive the pacemaker. The team reported that it took an average of 37

minutes to implant the pacemaker, and at one and three months after implantation all electrical measurements were within expected ranges. Serious adverse events occurred in 5.7 percent of patients, which is comparable to other pacemakers, the researchers said. There were no deaths. Based on data gathered so far, the estimated lifespan of the device is about 10 years.

"The results of this study are very promising and we have seen firsthand how the device size and minimally invasive procedure truly can improve the quality of life for [patients](#)," Ritter said in a Heart Rhythm Society news release. "The new miniaturized pacemaker not only eliminates many of the traditional complications associated with conventional transvenous pacing, but it also has the potential to advance patient care and set a new standard for single chamber [pacemakers](#)."

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