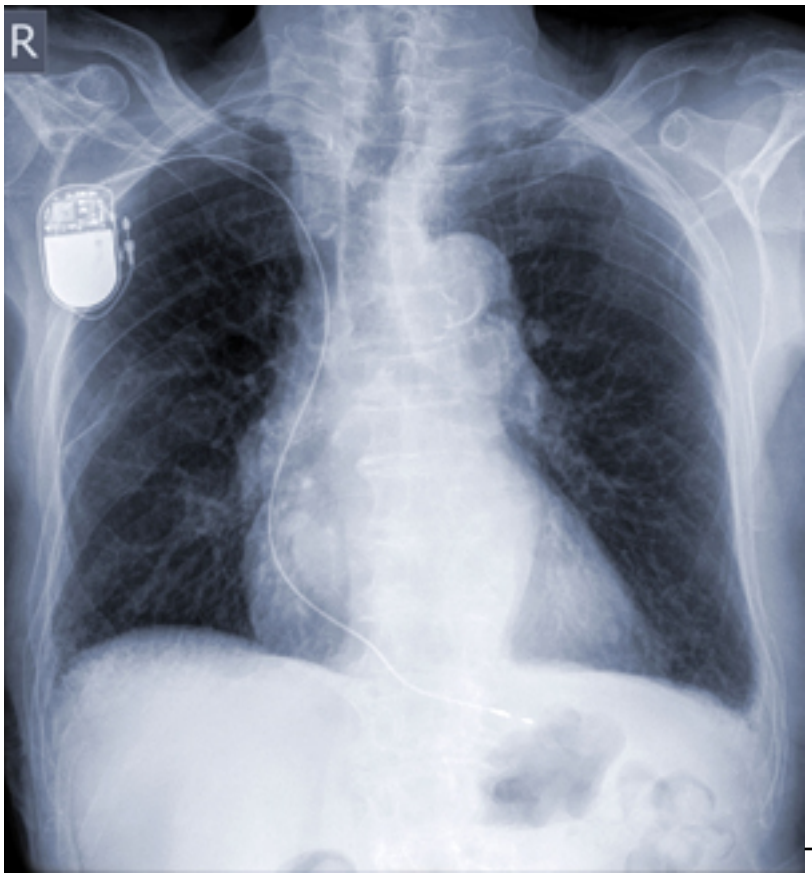
Vigorous athletic activity is safe with implanted arrhythmia devices

Yale UniversityYale University



There has long been concern that people with implantable cardioverter-defibrillators (ICDs) should not participate in any kind of strenuous sports activity for fear that their devices could fail. But a new Yale study finds that many athletes with ICDs can engage in vigorous and competitive sports without physical injury or failure to stop cardiac arrhythmia, despite ICD shocks that may occur to the heart during athletic activities.

The study appears in Circulation, a journal of the American Heart Association.

ICDs are small devices that deliver a jolt of electricity to the hearts of patients when it detects an irregular heartbeat, or arrhythmia. The Yale researchers studied 372 athletes with ICDs between the ages of 10 and 60 who were participating in organized or high-risk sports. Running, basketball, and soccer were the most common sports. Over a follow-up period lasting between 21 and 46 months, there were no occurrences of death, resuscitated arrest, arrhythmia, or shock-related injury during sports participation. When athletes did experience shocks during competitions, practice, or at rest — even for potentially life-threatening heart rhythms — the ICD terminated all episodes and restored normal heartbeat.

“This study will provide a basis for more informed physician and patient decision-

making for athletes with ICDs who wish to participate in strenuous sports activities," said lead author Dr. Rachel Lampert, associate professor of medicine at Yale School of Medicine.

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