

Sudden cardiac arrest survival odds greater at fitness facilities

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A study in the *Journal of the American College of Cardiology* found that people experiencing sudden cardiac death at an exercise facility had a higher rate of survival than at other indoor places, likely due to on-site AEDs. Credit: American College of Cardiology

People experiencing sudden cardiac arrest at exercise facilities have a

higher chance of survival than at other indoor locations, likely due to early CPR and access to an automated external defibrillator (AED), among other factors, according to a study published online today in the *Journal of the American College of Cardiology*. The findings underscore the importance of having AEDs in places where people exert themselves and are at greater risk of sudden cardiac arrest.

Previous studies have shown that regularly exercising greatly reduces a person's overall risk of sudden [cardiac arrest](#); however, during and immediately following exercise the risk of sudden cardiac arrest is slightly higher. Because AEDs have been proven to save lives when used quickly after sudden cardiac arrest, they are often placed in health clubs and [gyms](#). Less is known about the frequency of sudden cardiac arrest at other indoor locations where exercise takes place—such as bowling alleys, dance studios or community centers—but AED placement is less common.

This study looked at the frequency, treatment and outcomes of sudden cardiac arrest at both traditional and alternative exercise facilities. Researchers looked at 849 sudden cardiac arrests that occurred at public indoor facilities in Seattle and King County, Wash., from 1996-2008.

Location of the sudden cardiac arrest was categorized as occurring at a traditional exercise facility (health clubs, fitness centers), an alternative exercise facility (bowling alleys, workplace or hotel gyms, dance studio) or a non-exercise facility ([banks](#), [restaurants](#), shopping centers, [airports](#)).

In total, 52 sudden cardiac arrests occurred at traditional exercise facilities, 84 at alternative exercise facilities and 713 at non-exercise facilities. Survival rates were 56 percent, 45 percent and 34 percent, respectively. Where information was available on the activity at the time of arrest, in 77 percent of cases the sudden cardiac arrest occurred during exercise, with only 18 percent occurring after exercise and 4

percent before exercise.

Researchers also collected information on what type of exercise people were doing when the sudden cardiac arrest occurred. The most common activity was basketball, with 20.5 percent of occurrences. Basketball is often played at non-traditional exercise facilities, like community centers or church gyms. Following basketball were dancing and "working out," both at 11.6 percent; treadmill at 8.9 percent; tennis at 6.3 percent; bowling at 5.4 percent; and swimming at 4.5 percent.

"Our findings should encourage broader implementation of and adherence to recommendations for AED placement and sudden cardiac arrest response protocols at traditional exercise facilities," said Richard L. Page, MD, FACC, lead author of the study and chair of the Department of Medicine at the University of Wisconsin School of Medicine and Public Health. "In addition, these standards should be extended to alternative fitness facilities, where [sudden cardiac arrest](#) incidence is comparable to that seen at traditional exercise facilities."

Provided by American College of Cardiology

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