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Study Identifies Heart Patient's Best Friend

By [LAWRENCE K. ALTMAN](#)

DALLAS, Nov. 15 - For people hospitalized with advanced [heart disease](#), it is better to have visitors than to lie quietly alone. But one type of visitor seems to be especially beneficial, researchers reported on Tuesday.

That visitor is a dog.

In the first controlled study of the effects of pet therapy in a random sample of acute and critically ill heart patients, anxiety as measured on a standard rating scale dropped 24 percent for those visited by a dog and a human volunteer, by 10 percent for those visited by a volunteer alone and not at all for those with no visitors. Similar results were found in measures of heart and lung function.

In a separate study reported here on Tuesday at the annual meeting of the American Heart Association, German scientists found that riding roller coasters may set off dangerously abnormal heart rhythms in people with heart disease.

The senior author of the pet therapy study, Kathie M. Cole, a nurse at the University of California, Los Angeles, said 76 patients with heart failure, a condition that affects an estimated five million Americans, were randomly assigned one of the three visit types. The dogs, from 12 breeds, were screened for behavior and disease before participating in the study.

Some patients in the first group, Ms. Cole said, "began to smile and immediately engaged in conversation with dog and volunteer." Their worries seemed to vanish from their faces, she said.

The researchers examined the patients three times: right before the 12-minute visit, eight minutes into it and four minutes after it was over.

Besides the anxiety measurement, researchers found, patients' levels of epinephrine, a hormone the body makes when under stress, dropped 17 percent when visited by a person and a dog, and 2 percent when visited by only a person. Epinephrine levels rose an average of 7 percent in the unvisited group in the study, which was financed by the Pet Care Trust Foundation, a nonprofit group.

Pressure in the heart's top left chamber dropped 10 percent after a visit by volunteer and dog. The same pressure rose 3 percent for those visited by a volunteer and 5 percent for the unvisited group. Pressure in the pulmonary artery dropped 5 percent during and after a visit by volunteer and dog, but rose in the other two groups.

Ms. Cole recommended further studies to determine how long the benefits lasted.

"Dogs are a great comfort," she said. "They make people happier, calmer and feel more loved. That is huge when you are scared and not feeling well."

The roller coaster study, conducted in Hassloch, Germany, involved 55 adults and Expedition GeForce, a 120-second ride that starts with a 203-foot ascent followed by a free fall. The coaster has changes in gravity of six G's in four seconds, and a maximum speed of 75 miles an hour.

The author, Dr. Jürgen Kuschyk, a cardiologist at the University of Mannheim, found that one participant's heart rate reached 200 beats a minute, which could cause dangerous rhythm abnormalities.

All participants were screened for heart disease before the experiment, and their heart rates were monitored throughout the ride. Heart rates appeared to rise more from psychological stress and fear at the beginning of the ride, rather than from the increased G force, Dr. Kuschyk said. After the ride, about half the participants had abnormal heartbeats even though their heart rates had returned to a normal range.

Dr. Kuschyk, whose main research field is sudden death, said his interest in roller coasters began when a journalist asked about their dangers on the heart. When he searched databases, he found no studies in scientific journals. His concerns rose as he learned that more roller coasters were being built in many countries to be taller and faster.

One potential danger is a coaster's magnetic brakes, which can interfere with the function of pacemakers and [defibrillators](#), Dr. Kuschyk said. He said he knew of one heart-related roller coaster death, a man in Germany who was initially resuscitated but died three days later.

"Individuals who have suffered a heart attack, have heart disease or irregular heart rhythms should not ride a roller coaster," Dr. Kuschyk said in an interview. "For healthy people, I don't see any problem."

On Tuesday, the medical examiner's office in Orange County, Fla., attributed the death of a 4-year-old boy to an abnormal rhythm from a congenital heart condition after he went on a rocket-ship ride at Walt Disney World in Orlando, The Associated Press reported.

The boy, Daudi I. Bamuwanye, of Sellersville, Fla., died in June after riding Mission: Space, which spins riders in a giant centrifuge and subjects them to twice the normal force of gravity.