



Guinea Pigs Are Autistic Child's Best Friend

By [Jan Hoffman](#)

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Photo



A child feeding a guinea pig while wearing a skin conductance monitor wrist band that measures arousal.

Guinea pigs do not judge.

They do not bully. They are characteristically amiable, social and oh-so-tactile. They tuck comfortably into child-size laps and err on the side of the seriously cute.

When playing with guinea pigs at school, children with autism spectrum disorders are more eager to attend, display more interactive social behavior and become less

anxious, according to a series of studies, the [most recent of which](#) was just published in *Developmental Psychobiology*.

In previous studies, researchers in Australia captured these results by [surveying parents and teachers](#) or asking independent observers [to analyze videotapes of the children playing](#). In the new report, however, the researchers analyzed physiological data pointing to the animals' calming effect on the children.

The children played with two guinea pigs in groups of three — one child who was on the spectrum and two typically developing peers. All 99 children in the study, ages 5 to 12, wore wrist bands that monitored their arousal levels, measuring electric charges that race through the skin.

Arousal levels can suggest whether a subject is feeling anxious or excited.

The first time that typically developing children played with the guinea pigs, they reported feeling happy and registered higher levels of arousal. The researchers speculate that the children were excited by the novelty of the animals.

Children with autism spectrum disorders also reported feeling elated, but the wrist band measurements suggested their arousal levels had declined. The animals seem to have lowered the children's stress, the researchers concluded.

Geraldine Dawson, the director of the Duke Center for Autism and Brain Development, described the work as "very promising." Autism, she said, is often associated with high levels of arousal and anxiety that interfere with social interaction.

This modest intervention, she said, could readily be adapted by teachers coping with a scarcity of resources.

"We don't know what the mechanisms are," Dr. Dawson said. "Maybe it's easier to interact with others when you have a third object, rather than face-to-face interaction."

Yet when children on the autism spectrum played with toys in the presence of the other two children, their levels remained elevated. "They found something about the animal itself that was helpful," Dr. Dawson said.

The project began because the lead researcher, Marguerite E. O'Haire, now an assistant professor at the Center for the Human-Animal Bond at Purdue University, wondered whether there were measurable benefits to having animals in the classroom, a common practice.

Her studies unfolded from 2009 to 2012 in 15 schools in Brisbane, Australia, where the trend is to include children of all abilities in a classroom whenever possible. Over eight-week stretches, groups of three children were pulled out for twice weekly sessions to play with two guinea pigs.

The overall results, which included 64 children with spectrum disorders and 128 typically developing children, [showed improved sociability for all children](#), according to surveys of parents and teachers.

The activities with guinea pigs were low-key and unscripted. The children could feed, pet, photograph, groom and draw the animals, and clean their cages. After eight weeks, said Dr. O’Haire, a research psychologist in human-animal interaction, many children, both typical and on the spectrum, described the guinea pig as “my best friend.”

“If you ask the children what the guinea pig is thinking,” Dr. O’Haire said, “a common answer would be, ‘That he loves me.’”

Children with autism, who have difficulty interacting socially, are vulnerable to being teased and excluded by mainstream peers. But after 16 sessions with guinea pigs, parents would tell Dr. O’Haire, “Now my child feels like she has friends she can sit with at school.”

In the new skin conductance study, arousal levels in the groups were assessed with four tasks. First, the children read silently. Then, each had to read aloud to the others. Next, they played with toys.

Each time, the arousal levels of the children with autism became elevated. Being with the other two children, no matter the task, made them anxious.

But when the guinea pigs — antically chirping, [squeaking](#), purring — were introduced, these children’s arousal levels dropped. Dr. O’Haire and her colleagues suggest that the animals may function as “social buffers” for these children, for whom social engagement is bewildering and taxing.

Many studies in the emerging field of human-animal interaction address the benefits of companion animals. But much of the work has been theoretical, or with small samples, or without a control group.

Hal Herzog, a psychology professor at Western Carolina University and author of “Some We Love, Some We Hate, Some We Eat,” about humans and animals, commended this study’s rigor. “They didn’t overextend their claims,” said Dr. Herzog, noting that the researchers were careful not to describe play with guinea pigs as a type of therapy.

Deborah Fein, an autism expert at the University of Connecticut, underscored that distinction. “People might think that if you lower the anxiety of these children, they’ll pick up social skills incidentally,” she said.

In fact, she said, they still need direct teaching of those skills. The presence of the guinea pigs would offer “a great ancillary treatment to practice those skills,” said Dr. Fein, a clinical neuropsychologist.

The animals could also be a means to introduce the children to empathy and responsibility. "There really is no downside to this intervention," she said.