

# NIH News in Health

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## The Power of Pets Health Benefits of Human-Animal Interactions

Nothing compares to the joy of coming home to a loyal companion. The unconditional love of a pet can do more than keep you company. Pets may also decrease stress, improve heart health, and even help children with their emotional and social skills.

An estimated 68% of U.S. households have a pet. But who benefits from an animal? And which type of pet brings health benefits?

Over the past 10 years, NIH has partnered with the Mars Corporation's WALTHAM Centre for Pet Nutrition to answer questions like these by funding research studies.

Scientists are looking at what the potential physical and mental health benefits are for different animals—from fish to guinea pigs to dogs and cats.

### Possible Health Effects •

Research on human-animal interactions is still relatively new. Some studies have shown positive health effects, but the results have been mixed.

Interacting with animals has been shown to decrease levels of cortisol (a stress-related hormone) and lower blood pressure. Other studies have found that animals can reduce loneliness, increase feelings of social support, and boost your mood.

The NIH/Mars Partnership is funding a range of studies focused on the relationships we have with animals. For example, researchers are looking into how animals might



influence child development. They're studying animal interactions with kids who have autism, attention deficit hyperactivity disorder (ADHD), and other conditions.

"There's not one answer about how a pet can help somebody with a specific condition," explains Dr. Layla Esposito, who oversees NIH's Human Animal-Interaction Research Program. "Is your goal to increase physical activity? Then you might benefit from owning a dog. You have to walk a dog several times a day and you're going to increase physical activity. If your goal is reducing stress, sometimes watching fish swim can result in a feeling of calmness. So there's no one type fits all."

NIH is funding large-scale surveys to find out the range of pets people live with and how their relationships

with their pets relate to health.

"We're trying to tap into the subjective quality of the relationship with the animal—that part of the bond that people feel with animals—and how that translates into some of the health benefits," explains Dr. James Griffin, a child development expert at NIH.

### Animals Helping People •

Animals can serve as a source of comfort and support. Therapy dogs are especially good at this. They're sometimes brought into hospitals or nursing homes to help reduce patients' stress and anxiety.

"Dogs are very present. If someone is struggling with something, they know how to sit there and be loving," says Dr. Ann Berger, a physician and researcher at the NIH Clinical Center in Bethesda, Maryland. "Their attention is focused on the person all the time."

Berger works with people who have cancer and terminal illnesses. She teaches them about mindfulness to help decrease stress and manage pain.

"The foundations of mindfulness include attention, intention, compassion, and awareness," Berger says. "All of those things are things

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that animals bring to the table. People kind of have to learn it. Animals do this innately.”

Researchers are studying the safety of bringing animals into hospital settings because animals may expose people to more germs. A current study is looking at the safety of bringing dogs to visit children with cancer, Esposito says. Scientists will be testing the children’s hands to see if there are dangerous levels of germs transferred from the dog after the visit.

Dogs may also aid in the classroom. One study found that dogs can help children with ADHD focus their attention. Researchers enrolled two groups of children diagnosed with ADHD into 12-week group therapy sessions. The first group of kids read to a therapy dog once a week for 30 minutes. The second group read to puppets that looked like dogs.

Kids who read to the real animals showed better social skills and more sharing, cooperation, and volunteering. They also had fewer behavioral problems.

Another study found that children with autism spectrum disorder were

calmer while playing with guinea pigs in the classroom. When the children spent 10 minutes in a supervised group playtime with guinea pigs, their anxiety levels dropped.

The children also had better social interactions and were more engaged with their peers. The researchers suggest that the animals offered unconditional acceptance, making them a calm comfort to the children.

“Animals can become a way of building a bridge for those social interactions,” Griffin says. He adds that researchers are trying to better understand these effects and who they might help.

Animals may help you in other unexpected ways. A recent study showed that caring for fish helped teens with diabetes better manage their disease. Researchers had a group of teens with type 1 diabetes care for a pet fish twice a day by feeding and checking water levels. The caretaking routine also included changing the tank water each week. This was paired with the children reviewing their blood glucose (blood sugar) logs with parents.

Researchers tracked how consistently these teens checked their blood glucose. Compared with teens who weren’t given a fish to care for, fish-keeping teens were more disciplined about checking their own blood glucose levels, which is essential for maintaining their health.

While pets may bring a wide range of health benefits, an animal may not work for everyone. Recent studies suggest that early exposure to pets may help protect young children from developing allergies and asthma. But for people who are allergic to certain animals, having pets in the home can do more harm than good.

**Helping Each Other** • Pets also bring new responsibilities. Knowing



## Wise Choices

### Health Risks from Your Pet

Kids, pregnant women, and people with weakened immune systems are at greater risk for getting sick from animals. Take these steps to reduce your risk:

- Wash your hands thoroughly after contact with animals.
- Keep your pet clean and healthy, and keep vaccinations up to date.
- Supervise children when they’re interacting with animals.
- Prevent kids from kissing their pets or putting their hands or other objects in their mouths after touching animals.
- Avoid changing litter boxes during pregnancy. Problems with pregnancy may occur from exposure to toxoplasmosis, a parasitic disease spread through the feces of infected cats.

how to care for and feed an animal is part of owning a pet. NIH/Mars funds studies looking into the effects of human-animal interactions for both the pet and the person.

Remember that animals can feel stressed and fatigued, too. It’s important for kids to be able to recognize signs of stress in their pet and know when not to approach. Animal bites can cause serious harm.

“Dog bite prevention is certainly an issue parents need to consider, especially for young children who don’t always know the boundaries of what’s appropriate to do with a dog,” Esposito explains.

Researchers will continue to explore the many health effects of having a pet. “We’re trying to find out what’s working, what’s not working, and what’s safe—for both the humans and the animals,” Esposito says. ■

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**Editor** Harrison Wein, Ph.D.

**Managing Editor** Tianna Hicklin, Ph.D.

**Graphics** Alan Defibaugh (illustrations),  
Bryan Ewsichek (design)

**Contributors** Tianna Hicklin and Geri Piazza

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Office of Communications & Public Liaison  
Building 31, Room 5B52  
Bethesda, MD 20892-2094  
email: [niHnewsinhealth@od.nih.gov](mailto:niHnewsinhealth@od.nih.gov)  
phone: 301-451-8224



**Web Links**

For more about pets and health, see “Links” in the online article: [newsinhealth.nih.gov/2018/02/power-pets](http://newsinhealth.nih.gov/2018/02/power-pets)

# The Problem That Piles Up

## When Hoarding Is a Disorder

You may have seen reality TV shows about people who hoard mail, gadgets, cats, and even trash. Or, maybe for you, the reality is a little closer. It could be a neighbor or a family member.

When people aren't able to throw things away, piles can grow to the ceiling. These piles can make it impossible to use bathrooms, bedrooms, and kitchens. The piles may fall over, trap, and injure people. They can catch on fire. Cluttered homes and yards may attract pests. Neighbors may call the police. Parents may lose custody of children.

People don't choose to be hoarders. And they aren't being sloppy or lazy. "This is a very real mental disorder," says hoarding disorder expert Dr. David F. Tolin of Hartford Hospital's Institute of Living. "It is important to recognize that people with hoarding disorder have lost control of their decision-making abilities."

Tolin's NIH-funded research suggests why it's hard for people with this disorder to part with items, even

things with no real-world value. He found that brain activity was different between people with hoarding disorder and healthy people.

"We're always puzzled by the fact that many people with hoarding disorder often don't seem terribly bothered by their circumstance," he says. "If they don't have to make a decision, the parts of their brain that are largely in charge of becoming bothered are underactive."

But if they are forced to decide about whether to discard something, that part of the brain becomes overactive. "And so, the brain is essentially screaming that everything is important."

Doctors don't know what causes hoarding disorder. There's no X-ray or blood test for a diagnosis. Instead, doctors assess how well people are functioning in their lives.

Hoarding disorder can start during a person's teens or later. It may grow more severe over the decades.

Do you know someone who may need help? For ideas about how to bring up the topic, see the Wise Choices box. Try to be gentle, calm, and patient. It may take several conversations before the person agrees to work on the problem.

Try not to start an argument. "If a person is not really motivated to do something about the problem, they can dig in their heels. Arguing can even make the problem worse," Tolin warns.

There's no effective medication for hoarding disorder, although studies are in progress. Tolin says, "Right now, cognitive behavioral therapy is the only evidence-based treatment we have for hoarding." This is a type of talk therapy that teaches



people how to change their thinking patterns and react differently to situations.

Tolin's team hopes to improve cognitive behavioral therapy so that it's even better at helping people to discard items. They're analyzing the brain activities of people before and after they're successfully treated for hoarding disorder. If the research team can identify the biological mechanisms of successful treatments, they may be able to develop treatments that are even better.

Some people with hoarding disorder are helped by joining a support group with others who have the disorder. There are also organizing professionals who specialize in helping people get rid of clutter. To find more resources for this and other mental health issues, visit [www.nimh.nih.gov/health/find-help](http://www.nimh.nih.gov/health/find-help). ■



### Wise Choices

#### How to Help a Person Who Hoards

Explain why you're concerned:

- "I'm worried that you could fall or become trapped."
- "I'm concerned that you may lose custody of your children."
- "I'm afraid your home will catch on fire."

Then say how to get help:

- "I can help you find a therapist who specializes in hoarding."
- "We can look for a self-help program on how to let things go."
- "We can find support groups for people who hoard."
- "We can ask the county for resources."



### Web Links

For more about hoarding, see "Links" in the online article: [newsinhealth.nih.gov/2018/02/problem-piles-up](http://newsinhealth.nih.gov/2018/02/problem-piles-up)



## Health Capsules

For links to more information, please visit our website and see these stories online.

### Unexplained Cases of Allergic Reactions Linked to Red Meat

Researchers found that some people's repeated, severe allergic reactions stemmed from a red meat allergy linked to a specific type of tick bite.

Doctors analyzed 70 patients who had repeated episodes of a severe allergic reaction, called anaphylaxis, from unknown causes. Anaphylaxis can cause a host of problems, such as trouble breathing and passing out. It requires immediate

medical attention to prevent severe consequences, even death.

The researchers found that six of the patients had an allergy to a sugar molecule called alpha-gal, which is found in red meats. Most food allergy symptoms develop within a half hour. People with the alpha-gal allergy showed symptoms between three to six hours after eating meat.

Previous studies have linked lone star tick bites to this unusual food

allergy. The patients with the alpha-gal allergy lived in the central and southern United States, where lone star ticks thrive. All six confirmed that they had been bitten by ticks in the past.

"Alpha-gal allergy appears to be yet another reason to protect oneself from tick bites," says Dr. Anthony S. Fauci, director of NIH's National Institute of Allergy and Infectious Diseases (NIAID). ■

### How to Find a Cancer Doctor

Cancer changes your life and the lives of those around you. Finding the right cancer doctor (called an oncologist) and treatment facility is an important step to getting the treatment and support you need.

Doctors specialize in different types of cancer and treatment methods. It's important for you to find a doctor with experience treating your type of cancer. You also need to feel good about the doctor

you choose. You'll be working with this person closely as you make decisions about your treatment.

Your primary care doctor can suggest cancer specialists. Or, you may be able to get a recommendation from a friend or family member. Also, your local hospital should be able to provide you with a list of specialists who practice there.

You can check with your local or state medical society, which may

maintain a list of doctors in each specialty of cancer care. A nearby medical school may be able to suggest cancer specialists as well.

NIH's *Finding Health Care Services* webpage provides a list of several online directories to cancer specialists. Visit [www.cancer.gov/about-cancer/managing-care/services](http://www.cancer.gov/about-cancer/managing-care/services) to find this and other cancer resources. ■



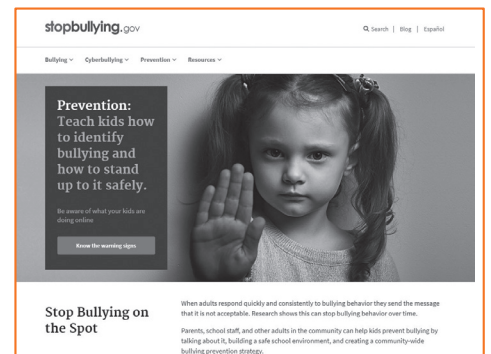
### Featured Website

#### Bullying Prevention

[stopbullying.gov](http://stopbullying.gov)

Bullying is any unwanted aggressive behavior among peers where there is power imbalance. The behavior is repeated over time and includes actions such as threats, spreading rumors, attacking someone, and excluding someone on purpose.

Bullying can affect kids' health and well-being. Federal partners created [stopbullying.gov](http://stopbullying.gov) to help you learn how to prevent bullying. Find out how to spot the signs and respond to bullying and cyberbullying. Visit today for the latest resources.



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