

# NIH News in Health

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**Inside News:** 3 Thyroid Diseases 4 Colon Cancer Risk... Parkinson's Therapy... Aim for a Healthy Weight

## Can Pets Help Keep You Healthy? Exploring the Human-Animal Bond

You take good care of your pet. But what's your pet done for you lately? Scared intruders from your door? Fetched your slippers? Given you a loving nuzzle? People have lots of reasons for owning pets. Now a small but growing body of research suggests that owning or interacting with animals may have the added benefit of improving your health.

People and animals have a long history of living together and bonding. Perhaps the oldest evidence of this special relationship was discovered a few years ago in Israel—a 12,000-year-old human skeleton buried with its hand resting on the skeleton of a 6-month-old wolf pup. "The bond between animals and humans is part of our evolution, and it's very powerful," says Dr. Ann Berger, a physician and researcher at the NIH Clinical Center in Bethesda, Maryland.

Today animal companions are more popular than ever. The pet population nationwide has been growing dramatically for nearly a half century, from about 40 million pet cats and dogs in 1967 to more than 160 million in 2006. About two-thirds of U.S. households now own at least one pet.

"When you see how long we've had pets in our lives, and how

important they are to us today, I think it's amazing that the study of human-animal interactions is still so new," says Dr. Sandra Barker, director of the Center for Human-Animal Interaction at Virginia Commonwealth University. "Researchers have only recently begun to explore this wonderful relationship and what its health benefits might be."

It's true that scientific study of the human-animal bond is still in its infancy. Several small or anecdotal studies have uncovered intriguing connections between human health and animal interactions. However, more rigorous follow-up studies have often shown mixed results.

"The general belief is that there are health benefits to owning pets, both in terms of psychological growth and development, as well as physical health benefits," says Dr. James Griffin, a scientist at NIH's Eunice Kennedy Shriver National Institute of Child Health and Human Development. "But there have been relatively few well-controlled studies. That's the state of the science, in a nutshell."

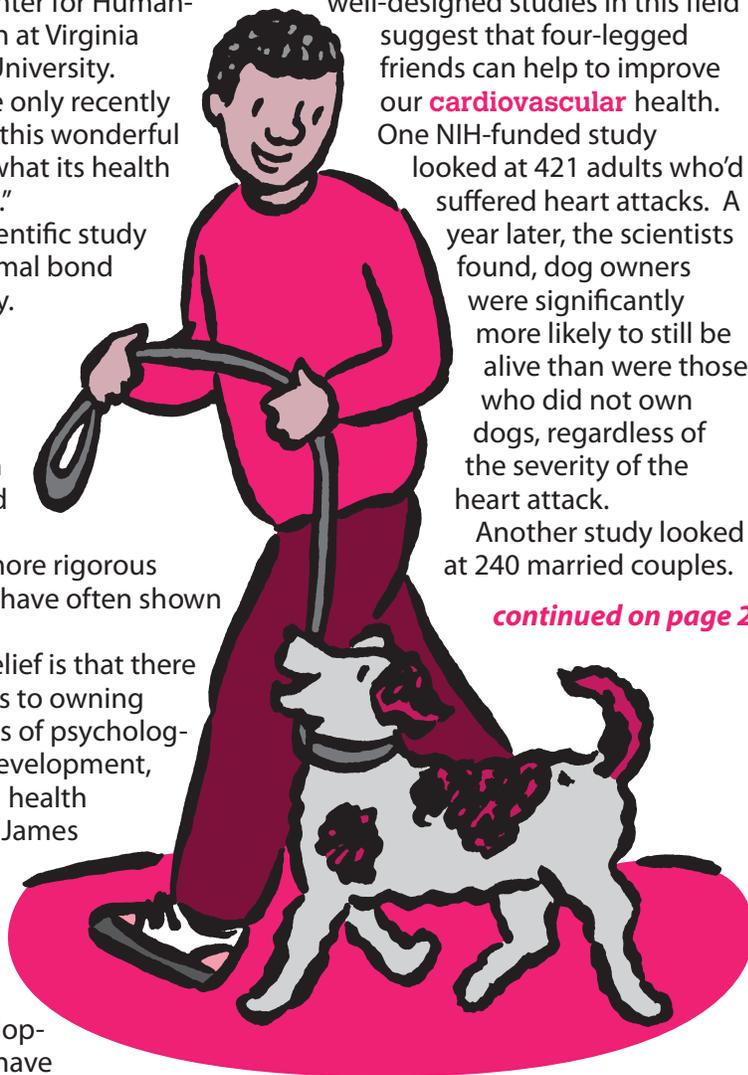
This past year, NIH hosted several meetings to bring together leading experts in the field of human-animal

interactions. The investigators discussed findings to date and ways to improve ongoing research.

Some of the largest and most well-designed studies in this field suggest that four-legged friends can help to improve our **cardiovascular** health. One NIH-funded study looked at 421 adults who'd suffered heart attacks. A year later, the scientists found, dog owners were significantly more likely to still be alive than were those who did not own dogs, regardless of the severity of the heart attack.

Another study looked at 240 married couples.

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### Definitions

#### Cardiovascular

The system of heart and vessels that circulates blood throughout the body.

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Those who owned a pet were found to have lower heart rates and blood pressure, whether at rest or when undergoing stressful tests, than those without pets. Pet owners also seemed to have milder responses and quicker recovery from stress when they were with their pets than with a spouse or friend.

Several studies have shown that dog owners may get more exercise

and other health benefits than the rest of us. One NIH-funded investigation looked at more than 2,000 adults and found that dog owners who regularly walked their dogs were more physically active and less likely to be obese than those who didn't own or walk a dog. Another study supported by NIH followed more than 2,500 older adults, ages 71-82, for 3 years. Those who regularly walked their dogs walked faster and for longer time periods each week than others who didn't walk regularly. Older dog walkers also had greater mobility inside their homes than others in the study.

Man's best friend may help you make more human friends, too. Several studies have shown that walking with a dog leads to more conversations and helps you stay socially connected. And studies have clearly shown that people who have more social relationships tend to live longer and are less likely to show mental and physical declines as they grow older. "It's hard to walk a dog and not have someone talk to you or interact with you, compared to walking alone," says Barker.

Other research suggests that pet ownership may hold special benefits during childhood. "When children are asked who they talk to when they get upset, a lot of times their first answer is their pet," says Griffin, an expert in child development and behavior. "This points to the importance of pets as a source of comfort and developing empathy. In fact, therapists and researchers have reported that children with autism

**Web Links**

For links to more information about pets, animals and human health, see this story online:

<http://newsinhealth.nih.gov/2009/February/feature1.htm>

are sometimes better able to interact with pets, and this may help in their interactions with people."

Several research teams are examining the potential benefits of bringing specially trained animals into clinical settings. These animal-assisted therapies are increasingly offered in hospitals and nursing homes nationwide. Although there is little solid scientific evidence confirming the value of this type of therapy, clinicians who watch patients interacting with animals say they can clearly see benefits, including improved mood and reduced anxiety.

"You can see the difference it makes in so many of these patients when the dog is at their bedside," says Berger, who works to relieve pain in patients with life-threatening illnesses at the NIH Clinical Center. "Our patients are often here for a long period of time. I think the dogs add a bit of normalcy to a very difficult situation. The dog will sit calmly, and the patients don't have to talk to anyone. They can just pet. I think this helps with some of the suffering."

Berger and Barker recently wrapped up a preliminary clinical study looking at how well animal-assisted therapy relieves distress in hospitalized cancer patients coping with pain. The data have not yet been analyzed, but the researchers hope it will serve as a launching point for future investigations.

"I think we're just at the tip of the iceberg in terms of what we know about the human-animal bond and its potential health benefits,"

Barker says. "This area is primed for a lot of research that still needs to be done." ■

**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 hands thoroughly after contact with animals.
- Keep your pet clean and healthy, and keep vaccinations up to date.
- Supervise children under age 5 while 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. Problem pregnancies may arise from toxoplasmosis, a parasitic disease spread by exposure to cat feces.

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# Thyroid Diseases

## What You Need to Know

You can't see it, you can't feel it and most people have no idea what it does. In fact, most people don't know about their thyroid unless they've been affected by the often-elusive symptoms of thyroid disease.

The thyroid is a 2-inch-long, butterfly-shaped gland in the front of your neck weighing less than an ounce. It's one of the glands that make up your endocrine system. These glands produce, store and release **hormones** that travel through the bloodstream and direct the activity of the body's cells.

Thyroid hormones regulate metabolism—the way the body uses energy—and affect nearly every

organ in the body. They influence brain development, breathing, heart and nervous system functions, body temperature, muscle strength, skin dryness, menstrual cycles, weight and cholesterol levels.

When the thyroid gland produces more thyroid hormone than the body needs, it can cause many of the body's functions to speed up. This problem is called hyperthyroidism. Too little thyroid hormone, called hypothyroidism, causes many of the body's functions to slow down.

The symptoms of thyroid disease can vary from person to person. Common symptoms of hyperthyroidism are nervousness, irritability, fatigue, muscle weakness, trouble sleeping, heat intolerance, hand tremors, rapid and irregular heartbeat, frequent bowel movements or diarrhea, weight loss, mood swings and goiter, which is an enlarged thyroid that may cause your neck to look swollen.

Common symptoms of hypothyroidism are fatigue, weight gain, a puffy face, cold intolerance, joint and muscle pain, constipation, dry and thinning hair, decreased sweating, heavy or irregular menstrual periods, impaired fertility, depression and a slowed heart rate.

Women are much more likely than men to develop thyroid disease. It's also more common among people older than age 60.

It's particularly important if you're a woman with hyperthyroidism to



discuss your condition with your doctor before becoming pregnant. Uncontrolled hyperthyroidism raises the chance of miscarriage, preterm delivery and preeclampsia, a potentially serious complication that increases blood pressure.

Thyroid treatments aim to bring thyroid hormone levels back to normal. Treatment depends on the type of thyroid disease and its cause.

If you suspect you might have thyroid disease, talk to a health care professional. Several tests are available to help confirm a diagnosis and find its cause. The American Thyroid Association (which isn't affiliated with NIH) recommends that adults, particularly women, have a blood test every 5 years, starting at age 35, to detect thyroid problems. ■



### Wise Choices Concerned About Thyroid Disease?

Women are much more likely than men to develop thyroid disease. Certain other factors can increase your chance of developing thyroid disorders. You may need more regular testing if you:

- have had a thyroid problem before, such as goiter or thyroid surgery
- have a family history of thyroid disease
- have other autoimmune diseases including Sjögren's syndrome, pernicious anemia, type 1 diabetes, rheumatoid arthritis or lupus
- have Turner syndrome, a genetic disorder that affects girls and women
- are older than 60
- have been pregnant or delivered a baby within the past 6 months
- have received radiation to the thyroid or to the neck or chest



### Definitions

#### Hormone

A molecule sent through the bloodstream to signal another part of the body to grow or react a certain way.



### Web Links

For links to more about thyroid diseases, see this story online:

<http://newsinhealth.nih.gov/2009/February/feature2.htm>



# Health Capsules

For links to more information about these topics, visit this page online:  
<http://newsinhealth.nih.gov/2009/February/capsules.htm>

## Web Tool Predicts Colon Cancer Risk

A new online tool can help calculate your risk for **colorectal cancer** if you're age 50 or older. A better understanding of your risk will help you and your doctor make more informed choices about which screening tests you should take to detect signs of cancer before symptoms appear.

It takes only 5-8 minutes to answer about 15 questions at the online tool's web site. It will then calculate your risk for colorectal cancer.

The initial version of the risk assessment tool is only designed to assess cancer risk for non-Hispanic whites age 50 or older. But NIH scientists are now working to expand the tool to include additional ages and racial/ethnic groups.

Researchers stress that it's important to talk with your primary health care provider about the results.

The new tool is now available online at [www.cancer.gov/colorectalcancerrisk/about-tool.aspx](http://www.cancer.gov/colorectalcancerrisk/about-tool.aspx). ■



### Wise Choices Colorectal Cancer Screening Tests

- **Fecal occult blood test.** Analyzes your stool samples for tiny amounts of blood.
- **Digital rectal exam.** A doctor uses a gloved finger to feel for abnormal areas in your rectum.
- **Sigmoidoscopy.** A lighted tube looks into the rectum and the lower part of the colon.
- **Colonoscopy.** A long, flexible lighted tube looks inside the rectum and entire colon.
- **Double-contrast barium enema.** X-ray pictures look at your colon and rectum.



### Featured Web Site Aim for a Healthy Weight

<http://healthyweight.nhlbi.nih.gov>

Losing weight takes time and perseverance. This website can help jumpstart your efforts. Learn how to take small steps to change your lifestyle, and find tips for eating well at home and on the road as well as being more active.



### Definitions

#### Colorectal Cancer

Cancer of the colon or rectum, both part of the large intestine.

## Therapy Curbs Parkinson's Symptoms

A new study shows that a treatment called deep brain stimulation can improve quality of life for patients with Parkinson's disease and give them more daily hours without bothersome movement symptoms. However, brain stimulation also carries a greater risk of serious side effects.

Deep brain stimulation has been used for over a decade to treat patients whose Parkinson's symptoms are no longer effectively controlled with medication. The procedure involves surgically implanting tiny electrodes into brain regions that control movement. When the electrodes are stimulated, they inhibit the malfunctioning brain signals that cause the

movement problems of Parkinson's.

The new study looked at 255 patients with advanced Parkinson's disease. They were randomly assigned to receive either deep brain stimulation or standard therapy, including medication.

By 6 months after surgery, movement control improved in 71% of patients who received brain stimulation, compared to 32% in the standard therapy group. On the down side, serious problems like infection from surgery were seen in 40% of patients who received brain stimulation but just 11% in the other group. Most of the side effects, however, improved within a few months. ■

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