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Dog Tips

Can Your Dog Improve Your Brain Health?

Discover what researchers found about spending time with your furry friend. A new study reveals surprising effects on your brain and well-being, showing how simple actions with your pet can lead to unexpected and significant improvements.

STORY AT-A-GLANCE

- A recently published study was one of the first of its kind to distinguish what particular interactions with dogs (e.g., feeding, playing, grooming) are the most beneficial to human moods and concentration levels
- The results showed that playing with and walking your dog can bring about a relaxed and wakeful state; massaging, grooming, or playing with your dog can heighten your concentration without increasing your stress
- Hopefully, this research can trigger future studies into the correlation between types of activities and their brain effects, potentially helping to develop different types of interventions for people suffering from different types of psychological woes

Animal-assisted interventions (e.g., therapy dogs) are used in a wide variety of scenarios such as hospitals and schools to help reduce anxiety, relieve stress, and promote feelings of trust.

Traditionally, research into the potential benefits of animal interactions often takes a holistic approach, comparing people's mood or hormone levels before and after spending time with a service animal. The drawback to this approach is that it doesn't distinguish between different types of interactions, such as feeding, playing with, or grooming an animal, to further our understanding of how these activities affect mood.

Recently, a team of researchers at Konkuk University in South Korea set out to do a deeper dive into the subject, the results of which were published in the journal PLOS One.[1]

Human Participants Showed Heightened Relaxation, Concentration

Lead study author Onyoo Yoo and colleagues recruited a small sample of 30 adults to perform eight different activities with a well-trained dog. The activities included:

- Meeting the dog
- Grooming the dog
- Playing with the dog
- Taking photos of the dog
- Feeding the dog
- **Hugging the dog**

- Massaging the dog
- Walking the dog

The human study participants wore EEG electrodes to record electrical activity in their brain while they interacted with the dog for three uninterrupted minutes. In addition, each participant recorded his or her mood immediately following each activity.

The experiments revealed that while participants played with and walked the dog, alpha-band oscillations in the brain increased in strength, suggesting a relaxed and wakeful state. When they were massaging, grooming, or playing with the dog, beta-band oscillation strength increased, which indicates heightened concentration, though without stress.

Bottom line, when playing with the dog, both relaxation and concentration were boosted, and the mood assessment revealed significantly lower levels of fatigue, depression, and stress after virtually all the different types of interactions with the dog. As Science Daily explains it:

> *"The relative strength of alpha-band oscillations in the brain increased while participants played with and walked the dog, reflecting a state of relaxed wakefulness. When grooming, gently massaging, or playing with the dog, relative beta-band oscillation strength increased, a boost typically linked to heightened concentration. Participants also reported feeling significantly less fatigued, depressed, and stressed after all dog-related activities."*[2]

The authors noted that a potential bias in the results could exist based on the fact that a fondness for animals likely motivated the participants to take part in the experiment. However, they believe the unique relationships between specific activities and their physiological effects could benefit future targeted animal-assisted interventions. They feel their study "provides valuable information for elucidating the therapeutic effects and underlying mechanisms of animal-assisted interventions."

As licensed clinical psychologist Andrea Bonior Ph.D., who reviewed the study, writes in Psychology Today:

> *"With not only popular culture embracing time with dogs as potentially playing a role in the fight against ever-increasing stress, anxiety, and depression, but also the medical, psychiatric, and gerontology fields taking dogs seriously for their potential role in well-being, it is imperative that we learn more about what emotional and cognitive effects dogs can have, and why. This research helps start the conversation about what types of activities might be more correlated with what types of brain effects, and it could potentially help target different types of interventions for people suffering from different types of psychological woes."*[3]

12 Science-Backed Reasons Pets Make Us Healthier and Happier

According to Pet Partners, an organization that provided the first comprehensive, standardized training program in animal-assisted activities and therapy for healthcare professionals and volunteers, the following are just a few evidence-based examples of the benefits of the human-animal bond to both pets and people:[4]

1. A therapy dog has a positive effect on patients' pain level and satisfaction with their hospital stay following total joint arthroplasty.
2. Fibromyalgia patients spending time with a therapy dog instead of in an outpatient waiting area at a pain management facility showed significant improvements in pain, mood and other measures of distress.

3. A walking program that matched sedentary adults with therapy animals resulted in an increase in walking over a 52-week graduated intervention with the participants stating their motivation for adherence was “the dogs need us to walk them.”
4. The presence of an animal can significantly increase positive social behaviors among **children with autism spectrum disorder**.
5. Children made fewer errors in match-to-sample categorization task in the presence of a dog relative to a stuffed dog or human. Similar studies may indicate presence of a dog serves as both a source of motivation and a highly salient stimulus for children, allowing them to better restrict their attention to the demands of the task.
6. Therapy animals in pediatric cancer studies improved motivation to participate in treatment protocol, to maintain their motivation over time, and to want to “get better” or stay optimistic.
7. Pet ownership, perhaps by providing social support, lowers **blood pressure** response to mental stress.
8. Pet owners have higher one-year survival rates following heart attacks.
9. Recognizing and nurturing the connection between animals and humans has potential implications for individual stability and health, improved economic outputs and healthcare cost savings. This conclusion was based on a number of studies.
10. Pet ownership, particularly dog ownership, may be reasonable for **reduction in cardiovascular disease risk**.
11. Pet ownership was associated with a reduced risk for Non-Hodgkin’s lymphoma and diffuse large cell lymphoma.
12. Human health savings of $3.86 billion over 10 years have been linked to pet ownership as related to a decrease in doctor visits in studies in Austria and Germany.

Whether it’s a dog who prompts his human to get outside for daily exercise, a cat who provides cozy company for a shut-in, or a therapy pet who helps her person manage anxiety, animal companions have a tremendous positive effect on human health and happiness.

Sources and References

[1] Yoo, O. et al. PLOS One, March 13, 2024

[2] Science Daily, March 13, 2024

[3] Psychology Today, March 24, 2024

[4] Pet Partners