

# **Study: The family dog could help boost physical activity for kids with disabilities**

May 10 2017

---



Researcher Megan MacDonald. Credit: Oregon State University College of Public Health and Human Sciences

The family dog could serve as a partner and ally in efforts to help children with disabilities incorporate more physical activity into their daily lives, a new study from Oregon State University indicates.

In a [case study](#) of one 10-year-old boy with [cerebral palsy](#) and his family's dog, researchers found the intervention program led to a wide range of improvements for the [child](#), including [physical activity](#) as well as [motor skills](#), quality of life and human-animal interactions.

"These initial findings indicate that we can improve the quality of life for children with disabilities, and we can get them to be more active," said Megan MacDonald, an assistant professor in OSU's College of Public Health and Human Sciences and corresponding author on the study. "And in this case, both are happening simultaneously, which is fantastic."

The researchers detailed the child's experience in the adapted physical [activity](#) intervention program in a case study just published in the journal *Animals*. Co-authors are Monique Udell of the OSU College of Agricultural Sciences; Craig Ruaux of the OSU College of Veterinary Medicine; Samantha Ross of the OSU College of Public Health and Human Sciences; Amanda Tepfer of Norwich University and Wendy Baltzer of Massey University in New Zealand. The research was supported by the Division of Health Sciences at OSU.

Children with physical disabilities such as cerebral palsy spend

significantly less time participating in physical activity compared to their peers and are considered a health disparity group, meaning they generally face more health concerns than their peers.

Researchers designed an adapted physical activity, animal-assisted intervention where the family dog would serve as a partner with the child in physical activities designed to help improve overall physical activity, motor skills and quality of life. The family dog is a good choice for this type of intervention because the animal is already known to the child and there is an existing relationship - and both the dog and the child will benefit from the activities, MacDonald said.

Researchers took initial assessments of the child's daily physical activity, motor skills and quality of life before starting the eight-week intervention. A veterinarian examined the dog's fitness for participation and the human-animal interaction between the dog, a year-old Pomeranian, and the child was also assessed.

Then the pair began the eight-week intervention, which included a supervised physical activity program once a week for 60 minutes and participation in activities such as brushing the dog with each hand; playing fetch and alternating hands; balancing on a wobble board; and marching on a balancing disc.

"The dog would also balance on the wobble board, so it became a challenge for the child - if the dog can do it, I can, too," MacDonald said. "It was so cool to see the relationship between the child and the dog evolve over time. They develop a partnership and the activities become more fun and challenging for the child. It becomes, in part, about the dog and the responsibility of taking care of it."

The dog and the child also had "homework," which included brushing the dog, playing fetch and going on daily walks. The child wore an

accelerometer to measure physical activity levels at home.

At the conclusion of the intervention, researchers re-assessed and found that the child's quality of life had increased significantly in several areas, including emotional, social and physical health, as assessed by the child as well as the parent. In addition, the child's sedentary behavior decreased and time spent on moderate to vigorous activity increased dramatically.

"The findings so far are very encouraging," MacDonald said. "There's a chance down the road we could be encouraging families to adopt a dog for the [public health](#) benefits. How cool would that be?"

The researchers also found that the relationship between the dog and the child improved over the course of the therapy as they worked together on various tasks. The dog's prosocial, or positive, behavior toward the child is a sign of wellbeing for both members of the team, said Udell, who is director of the Human-Animal Interaction Lab at OSU.

"A closer child-dog bond increases the likelihood of lasting emotional benefits and may also facilitate long-term joint activity at home, such as taking walks, simply because it is enjoyable for all involved," she said.

This study is one of the first to evaluate how a dog's behavior and wellbeing are affected by their participation in animal-assisted therapy, Udell noted. From an animal welfare standpoint, it is promising that the dog's behavior and performance on cognitive and physical tasks improved alongside the child's.

Though the case study features only one child, the research team recruited several families with children with disabilities and their dogs to participate in the larger project, which was designed in part to test the design and methodology of the experiment and determine if it could be



implemented on a larger scale.

Based on the initial results, researchers hope to pursue additional studies involving children with disabilities and their family [dogs](#), if funding can be secured. They would like to examine other benefits such a pairing might have, including the sense of responsibility the child appears to gain during the course of the intervention.

"We're also learning a lot from our child participants," MacDonald said. "They're teaching us stuff about friendship with the animal and the responsibility of taking care of a pet, which allows us to ask more research questions about the influence of a pet on the child and their family."

**More information:** Amanda Tepfer et al, Family Dog-Assisted Adapted Physical Activity: A Case Study, *Animals* (2017). [DOI: 10.3390/ani7050035](#)

Provided by Oregon State University

Citation: Study: The family dog could help boost physical activity for kids with disabilities (2017, May 10) retrieved 19 April 2024 from <https://medicalxpress.com/news/2017-05-family-dog-boost-physical-kids.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--