February 13, 2012 (Miami Beach, Florida) — They may be hairy, and sometimes smelly and droolly, but dogs may lower pain and stress levels for patients with chronic pain, a new study suggests.

Study results show that chronic pain patients reported less depression and fatigue and had lower mean pain scores when they waited for their outpatient appointment with a dog companion and its handler compared with those who opted to wait without company.

"There's actually good science to suggest that dog therapy should be a useful thing," Dawn Marcus, MD, from the University of Pittsburgh Medical Center in Pennsylvania, told Medscape Medical News.

"By interacting with a dog and petting a dog, there is actually a decrease in a whole host of biochemical markers," she said. "There are drops in a lot of the stress hormones, and there are increases in endorphin levels — and those effects are actually long-lasting and persist after the dog has left you."

Results of the study were reported at the 6th World Congress of the World Institute of Pain and published in the January 13 issue of Pain Medicine.

Chronic Pain Outpatients

The current study included patients diagnosed with back pain, fibromyalgia, or unspecified pain who were attending a tertiary care chronic pain outpatient clinic accompanied by a friend or family member.

Patients and their companions were given the option of waiting to see the doctor in a traditional waiting room or in a room with a therapy dog and its handler.

"For both rooms, we asked people when they first came into the room to rate a variety of symptoms of distress: what's your pain level, what's your stress level, how fatigued are you? And then after they had spent time either in the traditional waiting room or with the dog, they rated their feelings again," she explained.

The study was conducted over a 2-month period and included 295 therapy dog surveys (235 from patients and 34 from accompanying family/friends) and 96 traditional waiting room surveys (83 from patients and 6 from family/friends). Staff members in both rooms were also surveyed.

"What we found was that [for patients], spending time with the dog caused about a 40% drop in depression and anxiety. There was about a 20% drop in fatigue," said Dr. Marcus.

"The thing that I found the most amazing was when we looked at how many patients had a clinically meaningful reduction in pain, which we usually think of as a 2.0 drop on a 0 to 10 scale, we found it was about 25% — after doing nothing other than spending time in the dog room — whereas in the traditional waiting room, there was really no benefit and a little worsening of some of the variables," he noted.

Specifically, patients who waited with the therapy dog had significant improvement in mean pain scores from 6.7 at baseline to 5.7 after the appointment (P < .0001), whereas waiting room control participants showed no change (6.3 - 6.4 before and after appointment).

In addition, clinically meaningful pain relief (a decrease ≥2 points) was reported by 23% of the therapy dog group and 4% of waiting room control participants.
Similarly, stress scores dropped from 4.59 to 2.55 ($P < .0001$) in the dog therapy group but remained unchanged in the control participants, and the percentage of patients reporting calm, pleasant, and cheerful feelings rose from 27.7% to 60.4%, 35.3% to 68.5%, and 31.5% to 65.1%, respectively ($P < .0001$) in the dog therapy group but remained unchanged in the control participants.

Family members and friends who accompanied patients to dog therapy also reported similar improvements, as did staff members in the dog therapy room.

"We had some people spend a few minutes and others who spent 45 minutes in the room — but interestingly, it didn't seem to make a difference. The results were pretty much the same. Even those very brief interactions do cause important biochemical changes."

"What we propose is not that the dog should be the entire therapy for chronic pain patients, but it could be an important complementary intervention," said Dr. Marcus.

**Animal-Assisted Therapy**

"This is a welcome and worthy research endeavor," commented Lori Palley, DVM, who is manager of the Human-Animal Relationships Program at the Center for Comparative Medicine, Massachusetts General Hospital, Charlestown.

In a recent article on animal-assisted therapy (AAT) published in the *ILAR Journal*, Dr. Palley and colleagues criticize weak research in the field, which they indicate may contribute to an image of AAT "as a 'push' by enthusiastic advocates rather than a 'pull' by prescribing physicians."

"Although AAT is becoming more common in healthcare settings and some results indicate positive contributions to health, more and better evidence-based research is required before AAT will be accepted as a valid treatment modality and mainstreamed into human medicine," they write.

In that context, the current study "is a large-scale study with clear outcome measures," Dr. Palley told *Medscape Medical News*. It incorporates "a thoughtful study design that takes into account several complicated elements such as participant assignment to study groups and the nature of an outpatient clinical setting."

With rising healthcare costs, "a potentially simple and inexpensive modality like AAT could have a significant impact," according to Dr. Palley's article. "For example, if AAT improves patients' attitudes and sense of well-being, it may also improve fidelity to prescribed treatments."

Dr. Marcus shares the same idea. "Our hope is that if you're going to the doctor's office, you are probably already annoyed, upset, frustrated, and agitated, and if you can spend that time with a dog, and get yourself into a better place where you're feeling more positive, then when you have that encounter with the doctor, hopefully that whole experience becomes more positive and you've been given a little boost to successful pain management at the start."

*Dr. Marcus and Dr. Palley have disclosed no relevant financial relationships.*


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*ILAR J.* 2010;51:199-207. *Abstract*