

The PADs Scentinel

News from the program that trains Parkinson's Alert Dogs for the detection of Parkinson's Disease.

Volume 2. Number one. Spring 2019

How Dogs of San Juan Island are Helping to Fight Parkinson's Disease.

In 2015, it was proven by the University of Edinburgh that a woman in Scotland could smell Parkinson's Disease. This amazing woman is none other than a former nurse, who over time, began to recognize a certain odor associated with the disease in her patients. In a blind test, she was able to correctly identify shirts worn by Parkinson's Disease patients from those worn by healthy individuals.



Joy Milne, the woman who can smell Parkinson's Disease.

But dogs. Really?

Since it was determined that a human could smell Parkinson's, it makes sense that a dog could not only do the same but do so with greater sensitivity. In January of 2016, a research project was initiated on San Juan Island utilizing San Juan Island dogs as canine detectives. By July of 2016, it had been determined that dogs, with their superior sense of smell, could differentiate shirts worn by Parkinson's patients from shirts worn by control subjects. In a final test, the dogs were given four unique shirts worn by Parkinson's patients and an equal number, or greater, of unique controls. The dogs accurately selected three of the four shirts. A fourth shirt was ignored by the dogs. Later that



Russell: 132 days training
396 rounds • 720 exposures
60 unique PD samples

year, the individual who wore this shirt was rediagnosed with Essential Tremor, not Parkinson's Disease. Based on this news, the decision was made to continue the work with dogs.

Dogs can detect odors in parts per million, and are 10,000 to 100,000 times more sensitive to odors than their human counterparts.

It's likely that more than 100 residents of the San Juan Islands have undiagnosed Parkinson's Disease. You may not recognize the symptoms. But then you don't possess the nose of a dog.

Early warning symptoms of PD, years prior to diagnosis.

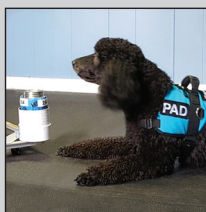
- Smaller handwriting than usual
- Loss of smell
- Difficulty sleeping
- Stiffness in body, arms and legs
- Constipation
- Soft or low voice
- Dizziness or fainting
- Stooping or hunching over
- Masked Face
- Depression
- Slight resting tremor in finger, thumb, hand or chin

If Parkinson's Disease can be identified five to 10 years prior to tremors, at the very early stage of the disease, then it is quite probable that progression can be significantly slowed. Adding years, even decades, of active life to an individual's overall lifespan.

PADs dogs working to make a difference.

Sasha

121 days training
355 rounds
714 exposures
59 unique PD samples

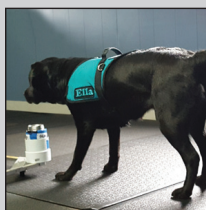


Ajax

122 days training
349 rounds
794 exposures
57 unique PD samples

Rudi

157 days training
454 rounds
806 exposures
63 unique PD samples

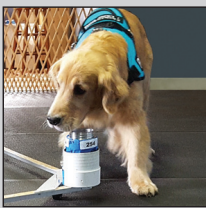


Ella

202 days training
613 rounds
1042 exposures
100 unique PD samples

Desi

104 days training
299 rounds
634 exposures
52 unique PD samples

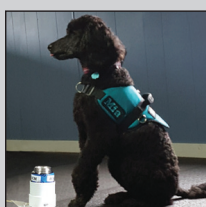


Hudson

234 days training
673 rounds
1120 exposures
104 unique PD samples

Levi

99 days training
285 rounds
629 exposures
55 unique PD samples



Mia

274 days training
867 rounds
2135 exposures
117 unique PD samples

Shugga

104 days training
300 rounds
654 exposures
59 unique PD samples

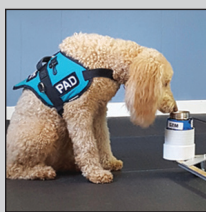


Quil

232 days training
695 rounds
1205 exposures
104 unique PD samples

Topper

201 days training
605 rounds
1006 exposures
96 unique PD samples



Rowan

265 days training
903 rounds
2016 exposures
115 unique PD samples

Parkinson's Alert Dogs, or PADs, are trained to give an alert when they sniff out an odor associated with Parkinson's Disease in a controlled environment. This usually takes about 400 exposures, 150 rounds of training and a minimum of 40 unique Parkinson's sample donors and an equal or greater number of control sample donors. The dogs of PADs, as a group, are currently 92% sensitive and 85% specific, in their ability to accurately detect Parkinson's Disease.

PADs expresses its heartfelt thanks to:

*The ANDAH Foundation ~ The San Juan Island Community Foundation
The SJICF Women's Fund ~ The Henry W. Bull Foundation ~ Paddle for Parkinson's ~ PADs Monthly Partners and many individual contributors*

*You are helping us to keep PADding forward,
and we thank you for your support!*

Parkinson's Disease stinks. Plain and simple.

- About one million Americans live with Parkinson's Disease (PD), which is more than the combined number of people living with multiple sclerosis, muscular dystrophy and Lou Gehrig's disease.
- Approximately 10 in every thousand individuals over the age of 50 have early stage Parkinson's Disease.
- More than 10 million people worldwide are living with PD.
- Incidence of PD increases with age, but an estimated 4% of PD patients are diagnosed prior to age 50.
- Men over the age of 70 have a 35 percent higher risk of developing PD for every 10 years of continuing lifespan.
- By 2040, the rate of people diagnosed with PD is expected to outpace that of Alzheimer's Disease.
- The combined cost of Parkinson's is estimated to be nearly \$25 billion per year.
- **There is no current definitive, absolute test to diagnose PD other than a post-mortem exam.**
- An estimated 10-20% of PD cases are misdiagnosed.

How the dogs of San Juan Island are helping to solve the mystery of Parkinson's Disease.

Dogs, once trained on an odor, are highly selective and able to sort, pinpoint and identify minute traces of odor, even when millions of other odor molecules are present. At PADs, the dogs are working in tandem with a biochemical research scientist who uses mass spectrometry to analyze and identify odorant compounds in Parkinson's. This partnership of science and dogs is helping to fast track the search for the cause of PD. Understanding the cause may open the door to finding the cure.



Buster: 75 days training
215 rounds • 521 exposures
44 unique PD samples

PADs for Parkinson's is a 501(c)(3) nonprofit organization.

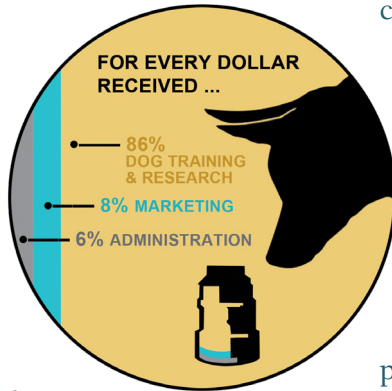
It is the mission of PADs to: 1) Train dogs to detect Parkinson's Disease; 2) Supply reproducible training protocol; 3) Assist with research efforts in search of a cure.

PADs does not diagnose Parkinson's Disease or any other human health condition. PADs research is solely used to evaluate whether a dog's ability to detect certain odors may be helpful to the scientific research community.

What is Parkinson's Disease? Neurotransmitters create the pathways for how the cells in your body communicate. Your brain uses neurotransmitters to tell your body how to move. In Parkinson's Disease, neurons that produce the neurotransmitter dopamine die off in the basal ganglia, an area of the brain that controls body movement. As more and more of these dopaminergic neurons are destroyed, the brain can no longer control the body because the brain can no longer communicate with the body. This results in people shaking and jerking in spasms. As the disease progresses, people have less and less control over their bodily functions until they can no longer breathe or swallow.

How the dogs of San Juan Island may be used to help people facing Parkinson's.

Currently, PADs is on track to reveal results from canine sniffing to sample donors beginning in 2019. This information cannot be considered a medical diagnosis, but it is information that can be used to help people further evaluate their options, and seek additional medical advice. PADs is excited to be able to have this important goal coming within a paw's reach. This goal could not be met without the support of the community, handlers who supply their dogs, board of directors and volunteers who supply their expertise and time, sample donors who supply training aids, and the individuals, foundations and organizations that have supplied the necessary funding to reach this goal.



When you donate to PADs, you are investing in a measure of hope for the millions of people facing Parkinson's Disease. And the many thousands of people yet undiagnosed. We know there is an odor to the disease. If that odor can be quickly and

easily identified, it can help lead to a cause of this disease. Understanding the cause can lead to the cure.

At PADs, we believe that the dogs of San Juan Island can help provide a valuable missing piece of the Parkinson's puzzle. Today, billions are being spent on laboratory research into solving this puzzle. Yet, the dogs will work for a piece of turkey and a word of praise. Help us keep these noses sniffing. Every dollar counts. Be a good human and give.

Thank you!

See the noses of PADs working in real time.

The dogs of PADs work four days per week during most weeks except for training breaks. You are welcome to come and observe the dogs at work during any training session. Sessions last approximately 30 minutes and we ask that you arrive a few minutes prior to the beginning of the session.

The training schedule is available at www.padsforparkinsons.org/events or contact the program director of PADs at sanjuanlisa@gmail.com and ask for the upcoming training schedule.

Due to generous support from the San Juan Island Community Foundation, and its many caring contributors, the PADs facility now provides handicapped access to training sessions.



NEW!
Handicapped access to training facility!

Like and follow PADs on Facebook at www.facebook.com/padsforparkinsons

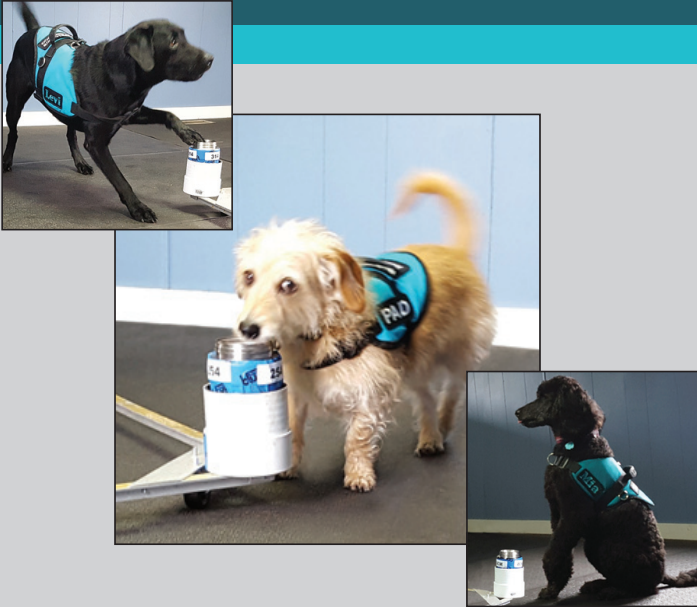
Learn more and donate online at www.padsforparkinsons.org

How Dogs of San Juan Island are Helping to Fight Parkinson's Disease.

PADs for Parkinson's

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The PADs Scentinel

The PADs Program is vitalized by student volunteers.

At PADs, we are excited to introduce a new generation of pioneers in animal behavior science to the world of medical detection training. As the science of detection training gains increasing acceptance, more opportunities continue to open. Today, dogs are being used to identify malaria carriers and different kinds of cancer, including ovarian, bowel, bladder, skin, lung and prostate cancers. All with their incredible noses! And that is just the beginning of a very long list of life-changing odors being sniffed out by canine detectors.



Thea Seitz



Keegan Baily



Ella Flynn



Luc Diaz

PADs for Parkinson's is the first program ever to train dogs to detect Parkinson's Disease. San Juan Island and the San Juan Island County Fairgrounds provide an ideal environment for a medical detection training program.

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