THE University of Vermont MEDICAL CENTER

Binter Center Newsletter Summer 2017

IN THIS ISSUE

TOP STORY

Medical Marijuana and Parkinson's Disease

Charlotte Gowen, MS and James Boyd, MD

With the legalization of medical marijuana in 28 states and Washington D.C., it is clear there is strong public interest in the therapeutic use of cannabis. Researchers are testing marijuana as a treatment for numerous medical ailments, including neurological conditions, and Parkinson's disease (PD) is no exception.

(continued on page 2)

Welcome Elizabeth Haberfeld, MD!

The Binter Center is excited to welcome Dr. Elizabeth Haberfeld to our team beginning in September 2017. Dr. Haberfeld completed medical school at the Washington University School of Medicine in St. Louis, MO and her residency and fellowship training at Columbia Presbyterian Medical Center in New York, NY. Since 2013, she has served as Director of Movement Disorders at the Temple University School of Medicine in Philadelphia, PA. Her research interests include neuroethics and neuroepidemiology.

She is thrilled to be making the move to Vermont with her husband, Guillermo Linares, MD, who will be assuming the role of Medical Director for Stroke and Neurocritical Care at UVM Medical Center, and their son.

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PD & Medical Marijuana cont.

But despite several clinical studies, it has not been demonstrated that cannabis can directly benefit people with PD. What is the science and pharmacology behind marijuana, and can it be used to treat the symptoms of PD?

The History of Medical Marijuana

Attempts at analysis of cannabinoid compounds began in 1897, but medical marijuana use can be traced back to 2800 B.C. in China (Iverson, 2008). It has been in use in modern medicine since the 1830's as an analgesic (pain reliever), anticonvulsant (O'Shaughnessy, 1842), and for the treatment of insomnia, neurological pain, and menstrual pain (Reynolds, 1890). In 1915, William Osler, one of the four founding professors of Johns Hopkins Hospital, wrote, "Cannabis indica is probably the most satisfactory remedy [for migraine]." Despite opposition by the American Medical Association, the Marijuana Tax Act of 1937 removed 28 cannabis-containing medicines from U.S. usage, and it was removed from the U.S. Pharmacopoeia in 1942 (Musto, 1972). Finally, in 1970, the Controlled Substances Act listed marijuana as a Schedule I drug, "classified as having a high potential for abuse, no currently accepted medical use in treatment in the United States, and a lack of accepted safety for use of the drug or other substance under medical supervision" (U.S. Drug Enforcement Agency).

In 1996, medical marijuana restriction began to lift with the passage of California's Compassionate Use Act of 1996 (also called Proposition 215) which permitted patients and their primary caregivers, with a physician's recommendation, to possess and cultivate marijuana for the treatment of AIDS, cancer, muscular spasticity, migraines, and several other disorders; it also protected physicians from punishment if they recommended marijuana to their patients. Since then, 27 other states and the District of Columbia have legalized medical marijuana, but despite numerous attempts, the DEA has continuously declined to remove cannabis from the Schedule I list.

The Pharmacology of Marijuana

Marijuana is derived from the plants *Cannabis sativa* and *Cannabis indica*, which contain more than 100 different compounds referred to as cannabinoids. One of these is the major "psychoactive" component - Delta-9-tetrahydrocannabinol (THC) - which causes alterations in perception, mood and behavior. Cannabidiol (CBD) is the other primary component.

The ratio of THC to the other cannabinoid compounds, which do not have these psychoactive effects, varies from plant to plant and among the various formulations of medical marijuana. THC varies in its onset period and cannot be easily measured for a therapeutic or medicinal dose. Medical marijuana studies primarily provide participants with THC in the form of a capsule, nasal spray or liquid.

Humans naturally make cannabinoids that bind to receptors found throughout the body and brain; this is called the "endocannabinoid system." There are two types of cannabinoid receptors, type 1 (CB1) located in the brain and type 2 (CB2) located in the brain and peripheral immune system. Cannabinoids have powerful, indirect effects on these receptors, but researchers are unsure how. People with PD have fewer CB1 receptors than people who do not have PD. It has been hypothesized that a boost to the CB1 receptor through a CB1 receptor agonist (a drug that attaches and activates the receptor), could possibly improve tremors and alleviate dyskinesia. An antagonist is different as it attaches to the receptor, but blocks the action of the natural chemical or directly induces a reverse effect. Medical marijuana can contain both cannabinoid agonists *and* antagonists.

Similarly, the other receptor, CB2, is also being studied to determine if it can modify the disease or provide neuroprotective benefits. However, a unified hypothesis does not currently exist for either receptor because there is too much conflicting data on the effectiveness of cannabinoids and these receptors. (continued on page 3)

PD & Medical Marijuana cont.

The varying amounts of cannabinoid agonists and antagonists in different marijuana plants make cannabis studies difficult to conduct. When researchers study the effects of a medication, dosages are carefully controlled and often set to a specific number of milligrams. When testing medical marijuana, the dosage administered can vary dramatically depending on the plant and method of administration.

Researchers issue caution for people with PD who use cannabis because of its effect on thinking. Parkinson's can impair the executive function — the ability to make plans and limit risky behavior. People with a medical condition that impairs executive function should be cautious about using any medication that can compound this effect. Apathy – a lack of motivation and initiative – is also associated with PD and also could potentially be worsened with cannabis use.

PD-Related Medicinal Cannabis Trials

It has been suggested that medicinal marijuana can help with the management of both neurological and non-neurological conditions, but scientific studies have not clearly supported the use of marijuana for Parkinson's disease. While some clinical studies have reported positive results including improved dyskinesia and non-motor symptoms including pain, sleep dysfunction, rapid eye movement sleep behavior disorder and psychosis, these results should be read cautiously for several reasons:

- All rigorously controlled studies have had a very small number of patients enrolled;
- Many of the studies were observational in nature, meaning the participants self-reported results through questionnaires, or they were uncontrolled and open-label, meaning that all participants took the study drug *and* were aware of it; and
- Different formulations, methods of administration (i.e. smoked cannabis, oral cannabinoids, etc.), and doses of marijuana were utilized (Dolhun, 2016).

Clinical trials with negative results should also be interpreted carefully for these same reasons; however, frequently these studies were placebo-controlled and therefore provide stronger evidence in support of the current prevailing clinical viewpoint, which is that cannabinoids are probably ineffective for the motor symptoms of PD.

Clinical studies exploring the medicinal uses of cannabis have been likely small in number for several reasons. While individual states are legalizing marijuana both for recreational and medicinal use, it is still a Schedule I Controlled Substance according to the U.S. Food and Drug Administration making use and possession a federal offense. Additionally, marijuana has a high potential for abuse, there is a lack of accepted safety even under medical supervision, and there is currently no accepted medical use in treatment for PD.

It is safe to say that the effects of medical marijuana in relation to PD are not completely understood, which is why more studies, especially those adhering to rigorous scientific standard, are needed.

Image from evidencebasedliving.cornell.edu

Risks and Benefits for People with Parkinson's Disease

As with any medical treatment, there are risks and benefits associated with the use of cannabis for people with PD. Used in moderation, cannabinoids appear to be relatively well tolerated. The evidence is strongest for use of marijuana for pain management, muscle spasticity, appetite enhancement and nausea control. Potential adverse effects include: impaired cognition (memory/thinking abilities), dizziness, blurring of vision, mood and behavioral changes, loss of balance and hallucinations.

(continued on page 6)

Huntington's Disease Society of America

TEAM HOPE

The Team Hope Walk program is HDSA's signature grassroots fundraising campaign designed to provide hope and support for those affected by Huntington's disease.

Thank you to our sponsors!

TEVA Neuroscience

Asclephius Healthcare Resource

Music, Snacks, Dunk Tank, Face Painting, Silent Auction, 1 mile wheelchair accessible route

Supported by 97.5 Eagle Country

JOIN US!

WHEN: **Saturday, September 30, 2017**

9:00	Registration & Walk Kick Off
9:30	Food & Fun Begins
10:30	Walk!

WHERE: University of Vermont
University Heights Oval
Burlington, VT

COST: Those who register prior to Aug. 30th are **guaranteed** an event shirt. Register/raise funds *online* at link below. To register/raise funds *offline* contact vgoolkasian@hdsa.org for a pledge form.

RESERVE YOUR SPOT TODAY!

TO REGISTER VISIT
www.hdsa.org/thwvermont

What is Huntington's Disease?

Huntington's disease is a fatal genetic disorder that causes the progressive breakdown of nerve cells in the brain. It deteriorates a person's physical and mental abilities during their prime working years and has no cure. HD is known as the quintessential family disease because every child of a parent with HD has a 50/50 chance of carrying the faulty gene. Today, there are 30,000 symptomatic Americans and more than 200,000 at-risk of inheriting the disease. Many describe the symptoms of HD as having ALS, Parkinson's and Alzheimer's – **simultaneously.**

Parkinson's Disease Journal Club

We at the Binter Center are pleased to offer this educational opportunity for patients and families to discuss current PD research activities. We will discuss ongoing studies at the University of Vermont, as well as cutting edge research being done at other institutions. We will provide reading materials; you bring your questions and comments.

When: 2nd Friday of every month, 9:00-10:00 A.M.

Where: UVM Medical Center, 1 S. Prospect St. campus, Room: Arnold 4411

Contact: RSVP to Emily Houston, Research Coordinator, at (802) 656-8974 or Emily.Houston@med.uvm.edu

Huntington's Disease Support Groups

The HD support groups offer vital emotional support along the continuum of HD, valuable advice about community-based resources as well as guidance from other support group members about many of HD's most challenging situations. **Caregivers, family members, loved ones, and people with HD are all welcome.**

Vermont

When: 4th Tuesday of every month, 5:30-7:00 P.M.

Where: UVM Medical Center - Fanny Allen Campus, Dunbar Room, 790 College Parkway, Colchester, VT

Parking is free.

Contact: Linda Martinez, (802) 922-5292 or Lmarti4068@aol.com

New Hampshire

When: 1st Wednesday of every month, 6:00-7:30 P.M.

Where: Dartmouth-Hitchcock Medical Center, Fuller Board Room, 1 Medical Center Drive, Lebanon, NH

Follow signs to DHMC's Main Entrance parking lot. (Parking is free.) Confirm location at info desk in Rotunda.

Contact: Diane L. Sherman, (603) 653-6672 or Diane.L.Sherman@hitchcock.org

HUNTINGTON'S DISEASE SOCIETY OF AMERICA ANNUAL CONVENTION

Couldn't Attend? Watch Online!

Convention content will be archived on the HDSA website:

http://hdsa.org/about-hdsa/annual-convention/

Save the Date for 2018!

June 7-9 in Los Angeles, California

PD & Medical Marijuana cont.

Chronic use of marijuana can increase risk of depression/mood disorders and lung cancer. Furthermore, the risk of prescription drug interactions with medical marijuana is not known. No definite interactions have been found, but people with PD can be on complex medication regimens and caution always should be exercised when adding to them.

Medical Marijuana Legislation in Vermont

Medical marijuana was legalized in Vermont in 2004. In order to qualify, patients must be diagnosed with a specific disease or medical condition and reasonable medical efforts need to have been made to relieve the symptoms of that disease. On July 1, 2017, the list of conditions that can be legally treated with medical marijuana was expanded to include Parkinson's disease.

Vermont's medical marijuana registry process is as follows:

1. The patient, who must be a Vermont resident, visits the state marijuana registry website, downloads, completes and has notarized the Registered Patient Application Form.
2. The patient must have an established relationship with a Health Care Professional. The patient gives them a Verification Form to complete.
3. The patient returns both forms with a non-refundable $50 fee and a digital ID photograph to the state.
4. Upon approval, the patient receives a registration card within 30 days that is valid for one year.

This process must be completed each year in order to remain on the Vermont marijuana registry. Caregivers can also register to purchase or cultivate medical marijuana on the patient's behalf. Registered caregivers must be 21 years old, can only assist one patient, are subject to a criminal background check, and cannot also be a current registered patient.

Conclusion

In summary, while medical marijuana use in Parkinson's disease is a frequent and newsworthy topic, there is a lot of research that still needs to be done. There is insufficient evidence for its effectiveness on motor symptoms and dyskinesias, and there is also a lack of evidence for positive or negative effects when used repeatedly over the long-term in Parkinson's disease. It is important to remember that legislation is not always supported by science and does not equate effectiveness.

REFERENCES

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VERMONT ADAPTIVE Ski & Sports

Be Active with Vermont Adaptive!

Vermont Adaptive Ski and Sports is a nationally recognized organization that empowers people of all abilities through inclusive sports and recreational programming regardless of ability to pay. In addition to sports, year round programming options integrate environmental, holistic wellness, and competitive training philosophies for people of all ages with cognitive, developmental, physical and emotional disabilities. The organization also has an active veterans program, serving all veterans with disabilities.

In the summer, the organization provides lessons and outings statewide including in Chittenden County and the Burlington Waterfront as well as throughout the Waterbury/Montpelier area and in central and southern Vermont. Sports and activities include tandem biking, hand-cycling, mountain biking, hiking, canoeing, kayaking, stand-up paddle boarding, sailing, horseback riding, rock climbing, Beeper baseball, wellness programs, environmental programs and more. In the winter, alpine and Nordic skiing, snowshoeing, indoor rock climbing and holistic programs are offered at Pico Mountain, Killington; Sugarbush Resort, Waitsfield; and Bolton Valley Ski Area, Bolton. Other locations are available upon request.

For more information visit www.vermontadaptive.org. For specific program information, contact program coordinator Kelly Walsh at 802-786-4991 ext. 27 or truenorth@vermontadaptive.org.

DYSTONIA MEDICAL RESEARCH FOUNDATION

DYSTONIA MEDICAL RESEARCH FOUNDATION

The DMRF is non-profit organization dedicated to serving all people with dystonia and their families. Founded in 1976, The mission of the DMRF is to advance research for more treatments and ultimately a cure, to promote awareness and education, and to support the needs and well being of affected individuals and families. The membership of the DMRF is comprised of individuals living with all forms dystonia, their friends and families, donors, healthcare professionals, and researchers, uniting people of all backgrounds and abilities to better serve those living with dystonia.

Visit www.dystonia-foundation.org or call 312-755-0198 for more information.

Parkinson's Disease Clinical Trials

TOZ-PD

The TOZ-PD Study is for people with Parkinson's Disease who are currently taking Levodopa (L-dopa) and at least one other medication, but still experiencing recurring symptoms.

If you're one of those people, you might be eligible to participate in this study if

- You are 30 to 80 years old
- You have had a confirmed Parkinson's diagnosis for at least 3 years
- You take at least 4 doses of levodopa-containing medication per day, as well as at least one other anti-PD medication
- You are currently experiencing periods when medication no longer has effects and no longer improves your slowness, mobility, and stiffness

This study is currently active.

SURE-PD3

A randomized, double-blind, placebo-controlled trial of urate elevating Inosine treatment to slow the clinical decline in early Parkinson's disease.

Previous studies have shown increased urate levels to be associated with slower rates of PD progression. Urate is now being considered as a neuroprotective agent for PD, and the study drug, inosine, will be used to bring urate levels up to a moderate level.

The main objective of this study is to determine if oral inosine will slow the clinical decline in early PD, with a 2 year treatment dose that moderately elevates serum urate.

You may be eligible to participate if you:

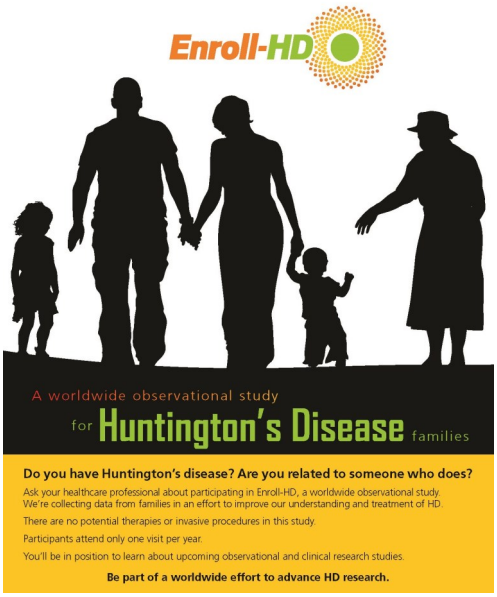
- Have a clinical diagnosis of PD made within 3 years to the first visit (screening visit)
- Are at least 30 years of age
- Are not requiring dopaminergic therapy
- Have a non-fasting serum urate level of ≤ 5.7 mg/dL at the first visit (screening visit)

This study is currently recruiting.

NIH National Institute of Neurological Disorders and Stroke

PSG PARKINSON STUDY GROUP

Huntington's Disease Clinical Trials



Enroll-HD

Enroll-HD is an open-ended, prospective study, where participants will be asked to complete annual study visits. This will allow researchers to improve our understanding of the disease spectrum, to promote the development of evidence-based guidelines, and to improve health care outcomes and to develop beneficial treatments.

This study is currently enrolling individuals who have Huntington's disease, as well as individuals who are unsure if they are carriers of the HD gene expansion mutation, those who are related to someone with HD, and community controls (no relation to someone with HD, nor a family history of HD)

SIGNAL

A Phase 2, multi-center, randomized, double-blind, placebo controlled study in subjects with late prodromal and early manifest Huntington disease (HD) to assess the safety, tolerability, pharmacokinetics, and efficacy of VX15/2503

In this study, researchers are looking at a monoclonal antibody, VX15/2503, as a potential treatment for HD. This monoclonal antibody is a class of drug that binds to a molecule, and may block it from causing inflammation in the brain of those with HD. It may specifically protect against the inflammation that has been shown to affect thinking, movement and behaviors in those with HD.

Call for enrollment information.

SIGNAL
A New Investigational Approach to Early Treatment of Huntington Disease

HUNTINGTON STUDY GROUP
seeking treatments that make a difference

Essential Tremor Clinical Trials

Are you currently taking Primidone for Essential Tremor? Would you like to help us better understand how Primidone effects tremor reduction or severity?

In this study, participants that are currently taking primidone will be asked to bring their daily dose to the clinic to be administered in a controlled clinic setting. Dr. Boyd and his study staff will monitor changes in tremor and blood levels of the medication. This study will require two visits to the Movement Disorders Clinic at the University of Vermont Medical Center, 1 South Prospect Street.

This study is currently recruiting.

For information or questions about participation in any of our clinical trials, please contact Emily Houston, Research Coordinator at (802) 656-8974 or Emily.Houston@med.uvm.edu

Movement for Parkinson's Classes

Offered for people with Parkinson's disease and their care partners, this dance class is designed to engage participants' minds and bodies through many styles of dance, while exploring stretching, muscle strengthening, postural stability, and rhythm through instruction and energizing music. The class is offered in a relaxed social environment that emphasizes enjoyment, fun, and creativity, with an eye towards connecting with the community.

No dance experience required.

Burlington
Flynn Arts, 153 Main Street
Every Wednesday ~ 10:00-11:30am
September 6 - December 13
Register at www.flynncenter.org or (802) 652-4537
FREE

Burlington
Cathedral Square, 3 Cathedral Square
Every other Monday ~ 10:00-11:15am
Begins September 11
Non-residents are welcome
FREE

Montpelier
Montpelier Senior Activity Center, 58 Barre Street
Every Thursday ~ 10:00-11:30am
Cost: $25 member, $35 public
Call (802) 223-2518 to register

Middlebury
Location to be announced
Every 2nd Friday ~ Time TBD
Begins September 8

Saint Albans
Homestead at Pillsbury Manor, 3 Harborview Drive
Every 3rd Friday ~ 10:00-11:15am
Begins September 15
No charge – donations appreciated.

For information about any of these classes, please contact Sara McMahon at (802) 881-9673 or saramcm28@gmail.com

The University of Vermont Medical Center Plays Key Role in FDA Approved Drug for Huntington Disease

The U.S. Food and Drug Administration (FDA) approved SD-809 (deutetrabenazine) on April 3, 2017, the second drug approved for use in the United States for the treatment of chorea associated with Huntington disease (HD).

The approval was based on positive results from the First-HD study, a Phase 3 clinical trial which was conducted through the Huntington Study Group (HSG) and the University of Rochester's Clinical Trial Coordination Center on behalf of Teva Pharmaceuticals. The University of Vermont was among 34 sites across the United States, Canada and Australia that took part in the double-blind, placebo controlled trial. Deutetrabenazine significantly decreased chorea, the involuntary movements that many individuals with HD experience. The results were published in *Journal of the American Medical Association*, July 2016.

Most individuals with HD experience chorea during the course of the disease. Huntington disease is an autosomal-dominant, inherited disease that usually manifests in people in their 30s and 40s, though some people are affected as early as childhood and others experience disease symptoms much later in life. The disease brings with it an array of symptoms besides chorea, including dystonia, cognitive problems, changes in personality, and psychiatric problems like depression. Because HD is autosomal dominant, each child of a person with HD has a 50% chance of inheriting the genetic change that causes the disease from their affected parent, whether that parent is their mother or father. For more information about HD, visit www.huntingtonstudygroup.org.

Deutetrabenazine is structurally related to tetrabenazine with deuterium atoms placed at key positions in the molecule, prolonging plasma half-life and reducing metabolic variability, without changing target pharmacology. Deutetrabenazine is the first FDA approved compound with deuterium substitution. Much of the clinical work that led to the approval of deutetrabenazine was carried out by the Huntington Study Group, a non-profit network of 400 Huntington disease experts from more than 100 medical centers throughout North America, Europe, and Australia who are dedicated to seeking treatments that make a difference for people and families affected by the disease. For more information, visit www.huntingtonstudygroup.org.

First-HD was conducted at 34 HSG sites across the United States and Canada, enrolling 90 participants over 14 months, in the 13-week double-blind, placebo-controlled trial. Scientific, technical, logistical, and analytical support for the study was provided by the University of Rochester Clinical Trials Coordination Center (CTCC) led by Elise Kayson MS, ANP and David Oakes, PhD, Department of Biostatistics and Computational Biology. The CTCC is part of the Center for Human Experimental Therapeutics (CHET) and is a unique academic-based organization with decades of experience working with industry, foundations, and governmental researchers in bringing new therapies to market for neurological disorders. For more information about the Clinical Trials Coordination Center, visit www.ctcc.rochester.edu.

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FDA Approved Drug for HD cont.

"We are so grateful to the patients and families from the Vermont area who made this development possible by participating in this ground-breaking trial. Trial participants are the key to bringing new treatments to the entire HD community," said Samuel Frank, MD, neurologist at Beth Israel Deaconess Medical Center/Harvard Medical School and Claudia Testa, MD, PhD, neurologist at Virginia Commonwealth University who led the study.

Teva Pharmaceuticals owns the rights to develop and sell deutetrabenazine in the United States, following its purchase of Auspex Pharmaceuticals in 2015. Deutetrabenazine is an investigational, oral, small-molecule inhibitor of vesicular monoamine 2 transporter, or VMAT2, that was granted Orphan Drug Designation for the treatment of HD by the FDA.

A second deutetrabenazine trial, ARC-HD, which has completed enrollment, is investigating the safety, efficacy, and tolerability of the drug when individuals with HD switch from tetrabenazine to deutetrabenzine and the safety of longer term exposure. This open-label trial is also being led by the HSG and the Clinical Trials Coordination Center for Teva Pharmaceuticals. Teva is also investigating the potential of deutetrabenazine to treat tardive dyskinesia, a disorder that causes involuntary and repetitive movements, and for tics associated with Tourette syndrome.

PD PushBack Program Grows!

PD PushBack is a high intensity circuit training program for people with Parkinson's disease (PD) developed by Physical Therapists Maggie Holt and Parm Padgett with support from the Binter Center and UVM Medical Center. To date, PD PushBack has been successful in helping a group of approximately 20 people with PD in Chittenden County come together and exercise with coaching for intensity. Intense exercise like this has been proven to be of significant benefit for people with PD. The hour-long class targets posture, flexibility, leg strength, balance, and agility. People leave feeling better when they leave than when they came in.

In an effort to start to expand this program, Maggie and Parm have partnered with local gyms to teach them about PD and about PD PushBack. In the future, they will continue to develop this program in the UVM Medical Center catchment area (Northern Vermont and New York).

If you have PD and want to be able to exercise with intensity in your local community, or if you are an exercise practitioner who is interested in hosting a class at your facility, please email charlotte.gowen@uvmhealth.org with "Interested in PD PushBack" as the subject line. As PD PushBack evolves, Maggie and Parm will look for the regions with the greatest numbers of people who are ready to Push Back against Parkinson's!

The Robert W. Hamill, MD Respite Care Program

About the Program

The Robert W. Hamill, MD Respite Care Program was initiated by the Vermont Chapter of the American Parkinson Disease Association (APDA) in 2009 to help ease the burden on those who care for people with Parkinson's disease. The program continues to be supported by ongoing fundraising efforts and donations to the Vermont Chapter.

What is the Program For?

The APDA is very aware of the enormous contribution family care partners offer every day to people with Parkinson's disease. We also know caregivers cannot give unendingly without some time and space to recharge themselves. Sometimes, a care partner is not comfortable leaving a family member alone. This program is designed to help pay for short term home care to supplement the care usually provided by family members. This allows the family caregivers to know their loved one is safe in the home while they are gone.

Eligibility Guidelines

- The person with PD and the caregiver must live together in Vermont.
- The APDA Vermont Chapter must receive a note from the physician confirming the diagnosis of PD.
- There are no income guidelines.

How Does it Work?

The APDA Vermont Chapter has contracted with home care agencies and adult day programs throughout the state. To arrange for respite care, simply follow the steps below:

- Contact the APDA Vermont Chapter at (802) 847-3366 or apdavermont@apdaparkinson.org.
- Have the physician who cares for the person with PD send a note confirming the diagnosis of PD and the need for respite care.
- Contact a local home care agency or adult day program to arrange care. We are happy to provide a list but we cannot make recommendations.
- Two vouchers are issued, each for 4 hours of respite care. Care does NOT need to be provided in 4 hour increments. We will send the vouchers directly to your provider of choice.
- The agency will then submit an invoice to us for payment along with the signed vouchers.
- The maximum number of hours allowed for payment is 8 per month.

apda AMERICAN PARKINSON DISEASE ASSOCIATION
VERMONT CHAPTER
Strength in optimism. Hope in progress.

Parkinson's Disease Support and Outreach Groups

Addison County, Last Thursday, 10:00-11:30
Residence at Otter Creek, 350 Lodge Road, Middlebury
Contact: APDA, 802-847-3366, apdavermont@apdaparkinson.org

Brattleboro, 2nd Tuesday, 6:00
Brattleboro Memorial Hospital
Contact: Tiea Zenbauer, 603-209-2623, tieaz@zehnnaturals.com

Burlington, 2nd Wednesday, 1:00-2:30
Residence at Shelburne Bay, 185 Pine Haven Shores Road, Shelburne – East Bldg
Contact: APDA, 802-847-3366, apdavermont@apdaparkinson.org

Central Vermont, 3rd Thursday, 10:30-12:00
Woodridge Rehabilitation and Nursing, 142 Woodridge Drive, Berlin
Contact: Nancy McGinley, 802-479-9296, paulandnancyvt@myfairpoint.net

Central Vermont YOUNG ONSET, Saturdays, 1:00-3:00, *Dates Variable*
Westview Meadows at Montpelier, 171 Westview Meadows Road, Montpelier
Contact: Andrea Gould & Charlie Barasch, 802-454-7806, chandran@gmavt.net

St. Albans, 2nd Tuesday, 10:00-11:30
Pillsbury Homestead Conference Room, 3 Harbor View Drive, St. Albans
Contact: Pat Rugg, 802-524-5520, patrica_rugg18@comcast.net

St. Johnsbury, 3rd Friday, 10:30-12:00
Northeastern Vermont Regional Hospital
Contact: Brendan Hadash, 802-748-8074, bhadash@sover.net or Shelia Gallagher, 802-626-5092, sjgal@charter.net

Don't see a support group in your area? Start one!

Contact Charlotte Gowen, Program Coordinator, for more information at **(802) 847-4334** or **Charlotte.Gowen@uvmhealth.org**

August

Movement Classes
Support Groups
Educational Opportunities
Other Events

THE University of Vermont MEDICAL CENTER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2 NH HD Support Group, 6:00-7:30	3	4	5 Movement for PD, Flynn Arts, 10:00-11:30
6	7	8 Brattleboro PD Support Group, 6:00 St. Albans PD Support Group, 10:00-11:30	9 Burlington PD Support Group, CANCELLED FOR AUGUST	10	11 PD Journal Club, 9:00-10:00	12
13	14	15	16	17 Central VT PD Support Group, 10:00-11:30	18 St. Johnsbury PD Support Group, 10:30-12:00	19 Young Onset PD Support Group, 1:00-3:00
20	21	22 VT HD Support Group, 5:30-7:00	23	24	25	26
27	28	29	30	31 Addison Co. PD Support Group, 10-11:30		**Calendar items are subject to change at any time. Contact the group leader before attending any event.

September

Movement Classes
Support Groups
Educational Opportunities
Other Events

THE University of Vermont MEDICAL CENTER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
**Calendar items are subject to change at any time. Contact the group leader before attending any event.					1	2
3	4	5	6 Movement for PD, Flynn Arts, 10:00-11:30 NH HD Support Group, 6:00-7:30	7 Movement for PD, Montpelier Senior Ctr, 10:00-11:30	8 PD Journal Club, 9:00-10:00 Movement for PD, Middlebury, Time TBD	9
10	11 Movement for PD, Cathedral Square, 10:00-11:15	12 Brattleboro PD Support Group, 6:00 St. Albans PD Support Group, 10:00-11:30	13 Movement for PD, Flynn Arts, 10:00-11:30 Burlington PD Support Group, 1:00-2:30	14 Movement for PD, Montpelier Senior Ctr, 10:00-11:30	15 Movement for PD, Saint Albans, 10:00-11:15 St. Johnsbury PD Support Group, 10:30-12:00	16 Young Onset PD Support Group, 1:00-3:00
17	18	19	20 Movement for PD, Flynn Arts, 10:00-11:30	21 Movement for PD, Montpelier Senior Ctr, 10:00-11:30 Central VT PD Support Group, 10:00-11:30	22	23
24/31	25 Movement for PD, Cathedral Square, 10:00-11:15	26 VT HD Support Group, 5:30-7:00	27 Movement for PD, Flynn Arts, 10:00-11:30	28 Movement for PD, Montpelier Senior Ctr, 10:00-11:30 Addison Co. PD Support Group, 10:00-11:30	29	30 VT Hope Walk, UVM, 9:00

October

Movement Classes
Support Groups
Educational Opportunities
Other Events

THE University of Vermont MEDICAL CENTER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4 Movement for PD, Flynn Arts, 10:00-11:30 NH HD Support Group, 6:00-7:30	5 Movement for PD, Montpelier Senior Ctr, 10:00-11:30	6	7
8	9 Movement for PD, Cathedral Square, 10:00-11:15	10 Brattleboro PD Support Group, 6:00 St. Albans PD Support Group, 10:00-11:30	11 Movement for PD, Flynn Arts, 10:00-11:30 Burlington PD Support Group, 1:00-2:30	12 Movement for PD, Montpelier Senior Ctr, 10:00-11:30	13 PD Journal Club, 9:00-10:00 Movement for PD, Middlebury, Time TBD	14
15	16	17	18 Movement for PD, Flynn Arts, 10:00-11:30	19 Movement for PD, Montpelier Senior Ctr, 10:00-11:30 Central VT PD Support Group, 10:00-11:30	20 Movement for PD, Saint Albans, 10:00-11:15 St. Johnsbury PD Support Group, 10:30-12:00	21 Young Onset PD Support Group, 1:00-3:00
22	23 Movement for PD, Cathedral Square, 10:00-11:15	24 VT HD Support Group, 5:30-7:00	25 Movement for PD, Flynn Arts, 10:00-11:30	26 Movement for PD, Montpelier Senior Ctr, 10:00-11:30 Addison Co. PD Support Group, 10:00-11:30	27	28
29	30	31				**Calendar items are subject to change at any time. Contact the group leader before attending any event.

November

Movement Classes
Support Groups
Educational Opportunities
Other Events

THE University of Vermont MEDICAL CENTER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 Movement for PD, Flynn Arts, 10:00-11:30 NH HD Support Group, 6:00-7:30	2 Movement for PD, Montpelier Senior Ctr, 10:00-11:30	3	4
5	6 Movement for PD, Cathedral Square, 10:00-11:15	7	8 Movement for PD, Flynn Arts, 10:00-11:30 Burlington PD Support Group, 1:00-2:30	9 Movement for PD, Montpelier Senior Ctr, 10:00-11:30	10 PD Journal Club, 9:00-10:00 Movement for PD, Middlebury, Time TBD	11
12	13	14 Brattleboro PD Support Group, 6:00 St. Albans PD Support Group, 10:00-11:30	15 Movement for PD, Flynn Arts, 10:00-11:30	16 Movement for PD, Montpelier Senior Ctr, 10:00-11:30 Central VT PD Support Group, 10:00-11:30	17 Movement for PD, Saint Albans, 10:00-11:15 St. Johnsbury PD Support Group, 10:30-12:00	18
19	20 Movement for PD, Cathedral Square, 10:00-11:15	21	22 Movement for PD, Flynn Arts, 10:00-11:30	23 THANKSGIVING	24	25
26	27	28 VT HD Support Group, 5:30-7:00	29 Movement for PD, Flynn Arts, 10:00-11:30	30 Movement for PD, Montpelier Senior Ctr, 10:00-11:30 Addison Co. PD Support Group, 10:00-11:30		**Calendar items are subject to change at any time. Contact the group leader before attending any event.

December

Movement Classes
Support Groups
Educational Opportunities
Other Events

THE University of Vermont MEDICAL CENTER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
**Calendar items are subject to change at any time. Contact the group leader before attending any event.					1	2
3	4 Movement for PD, Cathedral Square, 10:00-11:15	5	6 Movement for PD, Flynn Arts, 10:00-11:30 NH HD Support Group, 6:00-7:30	7 Movement for PD, Montpelier Senior Ctr, 10:00-11:30	8 PD Journal Club, 9:00-10:00 Movement for PD, Middlebury, Time TBD	9
10	11	12 Brattleboro PD Support Group, 6:00 St. Albans PD Support Group, 10:00-11:30	13 Movement for PD, Flynn Arts, 10:00-11:30 Burlington PD Support Group, 1:00-2:30	14 Movement for PD, Montpelier Senior Ctr, 10:00-11:30	15 Movement for PD, Saint Albans, 10:00-11:15 St. Johnsbury PD Support Group, 10:30-12:00	16
17	18 Movement for PD, Cathedral Square, 10:00-11:15	19	20	21 Movement for PD, Montpelier Senior Ctr, 10:00-11:30 Central VT PD Support Group, 10:00-11:30	22	23
24/31	25 CHRISTMAS	26 VT HD Support Group, 5:30-7:00	27	28 Movement for PD, Montpelier Senior Ctr, 10:00-11:30 Addison Co. PD Support Group, 10:00-11:30	29	30

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Burlington, VT 05401

THE University of Vermont MEDICAL CENTER

BINTER CENTER NEWSLETTER | ISSUE #1 — SUMMER 2017

BINTER CENTER NEWSLETTER

The Binter Center Newsletter is produced by The Frederick C. Binter Center for Parkinson's Disease & Movement Disorders.

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With your support, we at the Binter Center can continue to develop and expand *local* programs and services, participate in the latest clinical research, and provide education to fellow clinicians, students, and the community. Thank you for considering making a contribution!

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