P E P NEWS

J U N E 2 0 2 1 **Barbara Marquardt, Editor, M.Ed., MCHES, WCP, RYT**

***PEP* Meeting—Zoom Video Conference Meeting – Wednesday, June 2, 2021 at 2-4 p.m.**

We welcome Clinical Dietitian Specialist **Jennafer Rabuzzi, MS, RDN, LD from University Hospitals**. She will speak on **Nutrition and Parkinson's Disease**. Jennafer has worked at both University Hospitals as well as Menorah Park. Please join us for this very informative topic!

If you receive this newsletter via email/PDF copy, just click on this link to join the Zoom Meeting in June: https://us02web.zoom.us/J/88216729791, Meeting ID: **882 1672 9791**

If you receive this newsletter via regular USPS mail, and if you have a computer or smart phone, you can join the meeting by entering exactly the following in your browser:
https://us02web.zoom.us/J/88216729791, add this Meeting ID: **882 1672 9791** if requested.
Calling from your cell phone? No problem—here's a one-tap link +13017158592,,88216729791#

Lastly, calling from your Land Line Phone without all the fuss? Just dial in and listen at: 1-301-715-8592

From David Brandt

As we approach summer, more and more of us are vaccinated and there is some easing of the restrictions across the country. We are starting to return to some sense of normalcy. I have checked with the Cleveland Heights Senior Center (which is where we hold our meetings), and they are targeting a soft opening in the latter part of June although it is probably in the fall before we can expect to have *PEP* meetings in-person inside of the senior center.

I checked with InMotion, and they recently opened up their hybrid healing arts classes last week (Zoom and 12 people onsite at the same time) along with yoga, Tai chi, and Dance support groups. By mid-May they were adding Pole Walking back at Orange Park and expecting to start their hybrid classes for Better Every Day classes – and by the end of the month, were hoping to go hybrid for Boxing and start their onsite spinning classes.

One thing that I will talk with our Board on soon is a potential outdoor picnic instead of our annual ice cream social. Of course, it would happen only if everyone attending would feel comfortable. But, just the fact that I am bringing this up is a positive sign that things are moving forward!

Upcoming Events

Friday, June 4, 2021 – New Frontiers in Research and Care put on by Parkinson's Foundation. 1-3 p.m. Participants will learn about how research has shaped current treatments and identify new care strategies to help with managing Parkinson's symptoms. Register at https://www.parkinson.org/events/2021/NewFrontiers-GreatLakes

Sunday, June 27, 2021 – 11 a.m. – 1 p.m. Moving Day Cleveland – Put on by Parkinson's Foundation. This event will be a drive-thru event held at the Cleveland Zoo. The Moving Day event will be held in the Bear parking lot. Please register in advance at and see the directions at this website https://movingdaywalk.org/event/moving-day-cleveland/ although there will be some same-day reservations. You will be given a voucher that allows all of the participants in your car to enter the Zoo for just $6, normal pricing is $15.

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Parkinson's Disease Question Corner

Email: barbaramarquardt@outlook.com with questions!
Question: How is ApoEe4 and mercury associated with Parkinson's?

***Answer*:** The ApoE gene provides instructions for making a protein called apolipoprotein E. This protein combines with fats (lipids) in the body to form molecules called lipoproteins. Lipoproteins are responsible for packaging cholesterol and other fats and carrying them through the bloodstream. Maintaining normal levels of cholesterol is essential for the prevention of disorders that affect the heart and blood vessels (cardiovascular diseases), including heart attack and stroke.

There are at least three slightly different versions (alleles) of the ApoE gene. The major alleles are called e2, e3, and e4. The most common allele is e3, which is found in more than half of the general population. SOURCE

ApoE is the only apolipoprotein that has been associated to the deleterious consequences of mercury exposure. No other apolipoprotein gene has been associated to the susceptibility to mercury intoxication. SOURCE

It was shown that both organic and inorganic mercury cause those biochemical changes in tubuli structures which can be found in brains of patients with Alzheimer's disease (AD). In healthy human brain tissue cultures, only mercury, even in lower concentrations, but not aluminum, lead, zinc or iron were able to inhibit binding to guanosine-triphosphate (GTP), which is necessary for tubulin synthesis and thus for neuron function.

The ApoEe4 allele is associated with an increased risk of developing either AD and Parkinson's (PD). An earlier onset of PD and an earlier onset of psychosis in PD have also been associated with an elevated expression of the APOEe4 allele. The APOEe4 also appears to increase susceptibility to the neurotoxic effects of lead and mercury. These associations may be explained by the fact that ApoEe4 allele has reduced detoxifying capabilities compared to the other two subtypes (APOEe2, ApoEe3). Unlike these two subtypes, the APOEe4 allele does not contain any sulfhydryl- groups, which may have the ability to bind to and detoxify metals such as lead and mercury. SOURCE

Parkinson's disease (PD) is the most common muscular functioning disorder, and it is the second most common neurodegenerative disorder after Alzheimer's disease (AD). The prevalence of PD has increased in industrialized nations and will continue to increase alongside the longevity of the population. A large number of metals such as mercury, copper, and others can be released from metal body implants such as dental restorations, phagocyted by blood macrophages, and transported into the brain.

Additionally, mercury as vapor needs no transportations through macrophages, because it can easily penetrate through the blood-brain barrier (BBB). Mercury exhibits synergistic effects when combined with other metals such as lead, aluminum, manganese, cadmium, and zinc, exacerbating mercury toxicity even at low and nontoxic doses. SOURCE

Ref: https://hugginsappliedhealing.com/apoe-testing/

From David Brandt

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Saturday, August 14, 2021 – Empower U Presented by the Cleveland Clinic. This year's event will also be virtual. More details to follow.

Finally, the PEP family expresses our condolences to Annabelle Hughes on the passing of Jerry Hughes. Jerry and Annabelle were regular attendees for many years at our monthly meetings, and he will be sorely missed.

We need your donations to continue bringing you the *PEP* News and for other expenses. A special thanks to those who contribute at the monthly meetings. To send a donation, please make your checks payable to Parkinson Education Program and mail to 2785 Edgehill Rd., Cleveland Heights, OH 44106

TRIBUTES

Michael and Sylvia Brown

In Memory of Jerry Hughes
Annabelle Hughes

July 7, 2021 — PEP Speaker
We welcome **Dr. Jay Alberts, Ph.D.** at the **Cleveland Clinic Lerner Research Institute** who will talk on a number of different studies that his group has ongoing in the area of Parkinson's research**.**

Pedaling for Parkinson's: Making a Difference in Living Well With Parkinson's

(Excerpt from PMD Alliance)

In a typical hot and humid mid-America summer, Dr. Jay Alberts guided his tandem bike across Iowa along with thousands of others that turned out for the 2003 Register's Annual Great Bike Ride Across Iowa (RAGBRAI, pronounced: rag br-i). On the back seat, a long-time friend accompanied Alberts, and as the days wore on, they noticed something peculiar. Her normally cryptic and illegible handwriting had improved dramatically and she reported feeling good — like she didn't have Parkinson's!

Alberts mentioned the incident to a colleague living with Parkinson's. Intrigued, his colleague joined him, riding on the back seat at the next RAGBRAI. But he would ride with his Deep Brain Stimulation (DBS) system OFF. Just as in the previous year, his motor symptoms subsided substantially, not having to turn his DBS back on for several days.

The phenomena spurred a series of studies on the benefits exercise provides for people with Parkinson's. As the theory was proven successful with laboratory mice, Alberts went to the next step, inviting participants to ride three days a week, for eight weeks. The results again proved successful, showing as much as 35% improvement in their Parkinson's-related symptoms. So compelling, it effectively reversed the long held idea that rest was best. Lab-based studies continued showing that high-intensity cycling was reducing motor symptoms and appeared to slow disease progression. Alberts recognized the need to test the theory in a community setting to understand how a structured program could be applied in a cycling studio. Though indoor cycling classes were starting to appear in YMCAs beginning in 2014, the theory was still based on 8-week sessions and had not considered a long-term, consistent exercise schedule.

TO REACH US AT *PEP* 440-742-0153
dbrandtpep@gmail.com—Facebook – Parkinson Education Program of Greater Cleveland

In April 2019, Anson Rosenfelt, DPT, Cleveland Clinic, commissioned a study that would follow five existing Pedaling for Parkinson's groups in Washington and Colorado, examining the effect of a program in a "real life" classroom environment. The study also considered how typical daily challenges and obstacles, such as periodic attendance and short term absence, might impact the results. The study concluded in March 2020, just before the COVID-19 pandemic exploded and recreation facilities were shut down. Preliminary data appear to be consistent with previous clinical results.

In June 2019, Alberts was also awarded a $3 million grant from the National Institutes of Health (NIH) to further study the long-term impact of high-intensity aerobic exercise on Parkinson's disease progression. The study will recruit 250 Parkinson's patients who will be randomized with some engaging in high-intensity home exercise on stationery indoor bikes, while UCC participants will go about their daily lives. The exercise group is required to exercise three times weekly for a year. The clinic will evaluate each participants motor and non-motor function upon enrollment, and at 6 and 12 months.

Participant activity levels will be monitored and their exercise performance data will be used to determine whether a certain level of exercise can actually be shown to slow Parkinson's progression. A positive determination would enable clinicians to make specific exercise recommendations to patients and empower patients to play a more active role in disease treatment and management.

If the trial shows that Pedaling for Parkinson's can indeed slow the progression of Parkinson's, the more than 150 existing community cycling classes could be upgraded and implemented in new communities across the country and around the world.

The Pedaling for Parkinson's program is a form of "Forced Exercise" on indoor stationary bicycles. Participants ride for 1 hour that includes a 10 minute warm up at 60 RPMs, followed by 40 minutes at speeds between 80 and 90 RPMs. Protocol includes a 10-minute cool down.

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We try to keep our roster current. If you no longer wish to receive this bulletin or would like to receive it via email instead, notify Katherine.A.Kaminski@gmail.com or call 216-513-8990.

The Gut Brain & Head Brain Connection in Neurological Degenerative Disease

(Excerpt from www.drrobertyoung.com)

New Study Links Gut Bacteria and Neurodegenerative Conditions and reported on an association between specific gut brain bacteria species and the manifestation of neurodegenerative disorders in the head brain, including Alzheimer's, Parkinson's and ALS which effects millions of people worldwide.

Lead scientific investigator, Czyz at the University of Florida is testing hundreds of strains of bacteria found in the human gut to see how they affect protein aggregation in the C. elegans worm. The group is also investigating how bacteria associated with neurological-degeneration cause protein mis-folding at the molecular level.

All neurodegenerative diseases can be traced to problems with the way proteins are handled in the body. If proteins are mis-folded, they build up and accumulate in tissues. These protein aggregates, as scientists call them, interfere with cell functioning and lead to neurodegenerative disorders.

Looking at the microbiome is a relatively new approach to investigating what causes neurodegenerative diseases. In their study, they were able to show that specific species of bacteria play a role in the development of neurological-degenerative conditions.

Partial grant support provided by OPFNE

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ohparkinson.com

Pedaling for Parkinson's– *(cont'd from page 3)*

To learn more about how Pedaling for Parkinson's can help you, sign up for an online class, or join a local group at a facility near you www.pedalingforparkinsons.org