

PEP NEWS

Newsletter of the Parkinson Education Program of Greater Cleveland

MARCH 2017

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MARCH MEETING

Wednesday, March 1, 2017 – 2 p.m. till 4 p.m.

We welcome Kathy Stull and Faith Gilbert of the Amalia Foundation whose mission is to bring the Delay the Disease Exercise program to those with Parkinson's to Northeast Ohio. They partner with Delay the Disease founded by David Zid and now have a number of classes including at the Cleveland Hts. Senior center of which a number of our members attend.

**Cleveland Heights Recreation Center
One Monticello Boulevard, Cleveland Heights, OH**

(Last names A through M, please bring light refreshments)

From David Brandt

A true friend of PEP passed away last month. Judy Weidenthal was an active member, avid supporter, and former board member, and will be truly missed. Our sympathy goes out to Dr. Daniel Weidenthal and his family.

Don't forget the 19th Annual Parkinson Symposium put on by the Ohio Parkinson Foundation Symposium coming up on April 22. PEP will have a table at the event, and I will need a volunteer or two to help me man it. Let me know if you are interested.

The symposium will be at the Hilton Garden Inn in Twinsburg and runs from 10 a.m. to 2:30 p.m. Program highlights include Heather Zwickey, PhD from the National University of Natural Medicine speaking on "Food as Medicine" as well as Dr. Benjamin Walter, Medical Director at the UH Cleveland Medical Center talking on "Developments in PD Management".

There is no charge for the event and there will be door prizes and a free lunch provided.

As I write this column, it is 60 degrees and sunny. Spring is coming! Get out and enjoy the fresh air and take a walk with a loved one!

TRIBUTES

Theresa and Paul Ruess

Rita Saslaw

In Memory of Judith Weidenthal

No singular diet can treat Parkinson's disease or its **symptoms**, but a healthy and balanced diet can improve general well-being. Eating fruits and vegetables may help keep you energized and hydrated. Fiber-rich foods and fluids may ease **symptoms of constipation** or lower **blood pressure**.

PEP April Meeting – April 5, 2017

We welcome Shalom Plotkin from Right at Home which specializes in providing in-home care and assistance, and will speak on How to Prevent Falls. As we reach older age, falls can be devastating – this talk will help explain how to avoid falling in the home or how to assist your loved ones to stay safe in their homes.

DISCLAIMER: The material contained in this newsletter is intended to inform. PEP makes no recommendations or endorsements in the care and treatment of Parkinson's disease. Always consult your own physician before making any changes.

Steroid in shark livers could hold key to Parkinson's treatment

(Excerpt from www.parkinsonslife.eu)

New research suggests that a naturally occurring substance called squalamine, found in the livers of dogfish sharks, could help treat Parkinson's disease

A steroid found in the livers of dogfish sharks could help treat Parkinson's disease, scientists at the University of Cambridge, UK, believe.

The natural compound, called squalamine, is often studied for its anti-cancer and anti-infective properties but researchers now think that it could also lead to future treatments for Parkinson's disease.

Dr. Michael Zasloff, professor of surgery and pediatrics at Georgetown University School of Medicine, co-authored a [recent research paper](#) published in 'Proceedings of the National Academy of Sciences' that suggests squalamine dramatically inhibits the early formation of toxic aggregates of the protein alpha-synuclein, which is thought to start a chain reaction of molecular events eventually leading to the development of Parkinson's.

The research team also found that squalamine could suppress the toxicity of these poisonous particles in worms. Dr. Zasloff said: "We could literally see that the oral treatment of squalamine did not allow alpha-synuclein to cluster, and prevented muscular paralysis inside the worms."

Dr. Christopher Dobson, chemistry professor at the University of Cambridge and one of the paper's co-authors, said: "To our surprise, we found evidence that squalamine not only slows down the formation of the toxins associated with Parkinson's disease, but also makes them less toxic altogether."

Scientists from the Italy, the Netherlands, Spain, the UK and the US all worked together to make this discovery. The team assert that it is scientifically possible for squalamine to prevent the progression of the condition; but advise that individuals with late-stage Parkinson's – after many of the areas of the

brain have been destroyed – will not benefit from the treatment's in the same way as those whereby treatment would begin sooner.

The team would like to conduct further research to determine what the precise benefits of squalamine would be – and what form any resulting drug might take.

About squalamine

The anti-microbial compound was discovered in 1993 by Dr. Michael Zasloff in the liver tissue of dogfish sharks. He was looking for an explanation as to why the fish were so good at fighting off infection. Scientists can now create a synthetic form of the compound in the laboratory. Dr. Michael Zasloff is a professor, medical researcher, immunologist and geneticist and is currently professor of surgery and pediatrics at Georgetown University School of Medicine, US. In 1993 he discovered squalamine in the liver tissue of dogfish sharks. Between 2002 and 2004 he served as Dean of Research and Translational Science for Georgetown University School of Medicine.

Parkinson's Disease Question Corner

Email barbaramarquardt@outlook.com with questions!

Question: How could I lessen depression without taking more medication?

Answer: One of the most basic and helpful tips is to eat protein every two hours throughout the day, and away from the time you take your Parkinson's related medications.

There are numerous benefits to consuming protein. When people consume protein many feel more energy, sleep better, have less hunger throughout the day, and gain more muscle mass.

Of course, protein is found in meat, chicken, fish, and eggs, but it is also found in many vegetarian options such as nuts (almonds and walnuts are best, no peanuts), whole beans, tofu, quinoa, oats, millet, brown rice, seeds, cottage cheese and whole fat yogurt. If you are able to purchase these items organic and/or gluten free it will further benefit your health!

As always, thank you for your question!

Vitamin B3 Benefits Parkinson's Disease

(excerpt from www.nutraingredients.com)

Individuals with a specific type of Parkinson's disease (PD) could gain from increasing vitamin B3 (niacin) content in their diet, say British investigators.

B3 is one of eight B vitamins. It is also known as niacin (nicotinic acid) and has 2 other forms, niacin amide (nicotinamide) and inositol hex nicotinate, which have different effects from niacin.

Nicotinamide riboside has been linked to a number of surprising and powerful benefits. Foods high in Nicotinamide include Brewer's Yeast, Sunflower Seeds, Raw Peanuts and Beets. Interestingly Beet Juice & Yeast have been shown to have remarkable cancer killing attributes. Possibly due to the sugars in the beets causing a beneficial form of fermentation to occur with the B vitamins in the Brewer's Yeast.

The findings point to niacin's ability to increase levels of a compound responsible for energy generation and DNA repair.

These factors — if left unattended — result in faulty mitochondria function that contributes to the progression of the neuro-degenerative disorder.

"This study strengthens the therapeutic potential for Vitamin B3/niacin-based dietary interventions in the treatment of Parkinson's disease," said Dr. Miguel Martins, lead study author and programme leader of the MRC Toxicology Unit at the University of Leicester.

It can also be made from tryptophan, an essential amino acid found in most forms of protein.

Taking out the Trash

The team began by looking at studying fruit flies, specifically bred with a mutation that mimics PD.

These flies specifically had a mutated form of the PINK1 gene that normally protects cells from stress-induced mitochondrial malfunction.

Flies were then fed food supplemented with niacin, which is made into the compound NAD inside the body.

Niacin or Vitamin B3 is found in a number of foods, including liver, chicken, beef, fish and cereal.

With this additional source of NAD, the researchers found flies had a lower number of faulty mitochondria than their mutant cohorts fed a regular diet.

In addition, niacin also prevented the flies from losing existing neurons.

"Mutations in PINK1 prevent cells from clearing out the defective powerhouses. When they accumulate, neurons can't get enough energy and die. The faulty mitochondria also release toxic molecules that damage their genes encoded by DNA," said Dr. Martins.

"With all the mitochondrial damage going on, we wondered if in cases of Parkinson's the NAD compound ends up in short supply."

The team also found that stopping DNA repair from depleting NAD kept mitochondria healthy and neurons alive, as well as enhance the flies' strength, mobility and lifespan.

"The results suggest that in familial Parkinson's, available NAD is critical for keeping mitochondria in shape and the disease at bay," said Dr. Martins.

While drug treatments exist that block NAD-consumption during the DNA repair process, Dr. Martins thought increasing dietary niacin could provide certain benefits.

"While neither of these would be cures, they would expand treatment options for Parkinson's patients with faulty mitochondria," he added.

PINK1 profile

PINK1 activity causes the parkin protein to bind to faulty mitochondria inducing a self-destruct mechanism that disassembles unnecessary or dysfunctional components.

PINK1 is processed by healthy mitochondria and released to trigger neuron differentiation. *(cont'd on last page)*

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PEP NEWS

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FIRST CLASS MAIL

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.

Parkinson's disease occurs when dopaminergic neurons in a specific part of the brain are lost.

EFSA guidance

The European Food Safety Authority (EFSA) currently recommends a population reference intake (PRI) of between 13.2 and 16.5 milligrams (mg) of niacin equivalent (NE) for Europeans.

These values take into account the production of niacin from the amino acid, tryptophan and consideration of calorie intake for adults, infants and children, pregnant and lactating women.

Previous studies have pointed towards the relationship between a high level of dietary niacin and a reduced risk of developing PD.

Altogether, these studies have demonstrated the therapeutic potential of a vitamin-enriched diet in an animal model of PD associated with mitochondrial dysfunction.

Based on this available evidence, the researchers thought that vitamin interventions might delay or prevent neurodegeneration in diseases associated with mitochondrial defects, such as PD.

However, they could not be considered potential 'cures' as they could not reverse the loss of specific populations of neurons that were absent at the time of diagnosis.

TRIBUTES

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 17930 Birch Hill Drive; Chagrin Falls, OH 44023