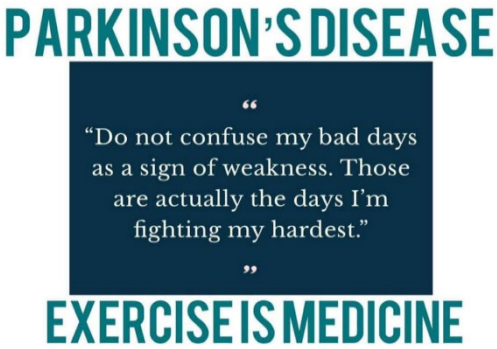
FOUNDATION for Parkinson's
Empowering people to move

March 30, 2025

Why did the turkey cross the street?
To prove he wasn't "chicken."

Park



Click the icon for a kick-butt workout with Coach Betsy:

HKC Strength Class

HKC Parkinson's Fitness Class

A Mystery Behind Parkinson's Cause Has Been Solved In 'Life-Changing' Study

Scientists have known for years that certain proteins were associated with Parkinson's disease.

But in a recent paper published in Science, researchers have had their first good gawk at the protein linked to the development of the condition (PTEN-induced putative kinase 1, or PINK1).

They have mapped out the structure of the protein and found out how it interacts with the mitochondria of affected cells.

Speaking to the Walter and Eliza Hall Institute of Medical Research, the study's author Professor David Komander said: "Our structure reveals many new ways to change PINK1, essentially switching it on, which will be life-changing for people with Parkinson's."

What did the scientists find out?
The scientists used advanced imaging technology to accurately map out the shape of the protein, which also helped them to understand how PINK1 binds to mitochondria.

Usually, PINK1 does a kind of scan and clear job in the body. It moves around looking for damaged mitochondria, and when it finds them, it creates a protein called ubiquitin that signals the body to get rid of them.

When that PINK1 protein mutates, broken mitochondria stay in the cell. This mutation, and the resulting build-up of damaged mitochondria, has now been linked to Parkinson's.

PINK1 has therefore been suggested as a potential therapy for those with Parkinson's for a long time, but this was hard to do because we didn't really understand how it did its job.

The scientists in this study, though, have identified two crucial steps the protein takes while doing its job that we didn't know about before; how it senses damage, and how it bonds to the mitochondria.

"This is the first time we've seen human PINK1 docked to the surface of damaged mitochondria and it has uncovered a remarkable array of proteins that act as the docking site," the study's author Dr Sylvie Callegari shared.

"We also saw, for the first time, how mutations present in people with Parkinson's disease affect human PINK1."

So what does that really mean for people with Parkinson's?
It means that people trying to find a cure for the condition may have a clearer view of how to help PINK1 proteins do a better job.

Dr Komander said: "This is a significant milestone for research into Parkinson's."

He added that now we know what PINK1 proteins really look like and how they act, scientists may have multiple ways of turning it back on, so damaged mitochondria in people who would otherwise have developed the build-up associated with Parkinson's can be cleaned up.

This is not a cure, but it's a very helpful step for those looking to find one.

COMMUNITY CONNECTIONS

~Monday, 11am Hamil-Kerr Strength class (zoom)
https://us02web.zoom.us/j/81028088770

~Saturday 11am Hamil-Kerr Parkinson's Fitness (zoom) Coach Betsy

https://us02web.zoom.us/j/81028088770

~Thursday, 3pm Zoom PD Spin, Ragsdale YMCA

https://us02web.zoom.us/j/81028088770

~Thursday, 12pm In Person PD Spin, Spears YMCA

~ In-person Parkinson's Spin Class at YWCA of Highpoint
Tuesday and Thursday- 12:00-1:00
~In-person Parkinson's Spin Class at Ragsdale YMCA
Tuesday and Thursday- 10:15

In-Person Tai Chi with Michele
Michele's 1pm Tai Chi class takes place on the first and third Wednesday of every month at Michele's beautiful new studio - ProActive Therapy and Wellness, - 6579 Lake Brandt Rd, Summerfield

~Rock Steady Boxing - Greensboro (in person)
~Rock Steady Boxing of Archdale (in person)

~A.C.T. By Prince Deese

~For information on in-person 1:1 training in your home, contact Alesia Pendleton pendleton.alesia@gmail.com

~Parkinson's Stretch Class at Rock Steady Boxing, Greensboro (spouses welcome)- Friday at 11:30am

~Will Powell- 336-706-0271

ONLINE RESOURCES

~Michael J Fox Foundation: www.michaeljfox.org

~Davis Phinney Foundation: Live Well with Parkinson's TODAY - Davis Phinney Foundation

~Parkinson's & Movement Disorders Alliance: www.pmdalliance.org

~Parkinson's Association of the Carolinas: www.parkinsonassociation.org

~Michael J Fox Foundation: www.michaeljfox.org

~Davis Phinney Foundation: Live Well with Parkinson's TODAY - Davis Phinney Foundation

~Parkinson's & Movement Disorders Alliance: www.pmdalliance.org

~Parkinson's Association of the Carolinas: www.parkinsonassociation.org

And of course, reach out to me anytime.
Yours, Coach B

Rock Steady Boxing Certified Coach
Certified Parkinson's Disease Fitness Specialist
ISSA Certified Personal Trainer