



UC Neuroscience Institute AT UNIVERSITY HOSPITAL GARDNER CENTER FOR PARKINSON'S DISEASE & MOVEMENT DISORDERS Cincinnati

Delay the Disease

Exercise and Parkinson's Disease

"It might be overly dramatic to say exercise saved my life, but it certainly saved my quality of life."
—K. Cooper, exercise class participant

Daily exercise can have a positive effect on the course of Parkinson's Disease

dtd DELAY THE DISEASE Exercise to Fight Parkinson's Symptoms

David Zid
Jackie Russell

Is there a double-blinded, randomized, homogeneous research study in the human population that proves our presumption?

HUMAN RESEARCH SHOWS:

- Task Specific Practice mandatory
- Gait training improves with cueing
- Strength training helps PWP improve balance
- Daily Exercise will optimize function
- Should be part of the standard of care for PD

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INSPIRATION

The ultimate tool for helping another individual to achieve their maximum potential

Exercise can put you in charge of your own morale

You cannot change the cards you are dealt in life, but you can change the way you play your hand

Randy Pausch, "The Last Lecture"

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Exercise:

The "trump card".

"One could argue the more important objective research is moving towards the development of drugs that are neuroprotective — that is, medication that may delay or reverse the disease's progression. We believe that exercise is likely such a 'drug.'"

~Michael J. Zigmond, Ph.D., professor of neurology at the Pittsburgh Institute for Neurodegenerative Diseases.

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Destiny:

An inevitable series of events that can happen to a person, leading to the discovery of the inner purpose of a life.

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May you walk gently through the world and know its beauty all the days of your life."

"The greatest part of our happiness depends on our disposition, not our circumstances."
-Benjamin Franklin

~ Apache Blessing

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"Courage is being required to death and saddling up anyway."
-John Wayne

Thomas H. Mallory, M.D.

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"The human spirit is stronger than anything that can happen to it."
-C.C. Boat

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"The Impossible can always be broken down into possibilities"

No matter how long you have been diagnosed with Parkinson's disease, it's not too late to start exercising, and it's never too early.

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Delay the Disease

Exercise and Parkinson's Disease

"The development of this exercise program has been invaluable to my patients. I emphasize that staying active and exercising daily absolutely must go hand-in-hand with medicine treatment. This program allows a guided approach that focuses on the specific exercise needs of persons with Parkinson's Disease." - Kevin Thomas, D.O., Assistant Professor of Neurology and Director of the Movement Disorder Division of The Ohio State University Medical Center

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Neuroplasticity

Neuroprotection, Neurogenesis

- Ability of the nervous system to adapt to trauma or disease
- BDNF – Brain Derived Neurotrophic Factor – in response to exercise
- Newest recommendations – exercise beyond what is self selected
- If initiated early in the disease process, symptomatic progression is markedly slowed.

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muhammad ali
PARKINSON CENTER

Pole Striding Study

Darolyn O'Donnell, Recreation Director
Muhammad Ali Parkinson Center
Phoenix, AZ

Faces of Parkinson's

The longer I live, the more I realize the impact of attitude on life. I am convinced that life is 10% what happens to me and 90% of how I react to it."
-Charles Swindoll!

Delay the Disease Certification Course

Evidenced-based Concepts for Planning and Implementing
A Community-Based Parkinson's-Specific
Exercise Class based on the
Delay the Disease Parkinson's Fitness Program

10 Continuing Ed Credits PT/OT/Trainers/RN

Could we extend enthusiasm in new communities about Delay the Disease with a weekly class?

How to Start A Community-based, PD-specific exercise class

- Trainer, location, liability, coordinator, funding, equipment
- Train the trainer – methods/techniques of exercise instruction

Functional Fitness:
What's new for Delay the Disease

- Functional Fitness Agendas – soon to be published book, DVD
- Short exercise programs directed at tasks/ADL's that people with PD may struggle with daily.
 - Getting out of the car
 - Getting up off of the floor
 - Dressing
 - Turning in bed
 - Balance
 - Getting up from a chair
 - Posture
 - Moving About in Crowds
 - Incontinence
 - Gait
 - Freezing And more

Hand Writing Challenge
Our Hypothesis
Large muscle exercises performed daily may impact fine motor skills, i.e., handwriting

- Can small, shaky handwriting be improved with exercise?
- Perform 4 exercises (10 minutes per day) each day for 12 weeks
- Handwriting example every three weeks.
- Send exercise log and handwriting examples back to us.
- Watch other PD symptoms improve too.

Go to our website:
delaythedisease.com

Download the
Handwriting
Challenge
Forms

Start Today!

Keep Moving Stay Positive

The Big Three Exercises for Parkinson's Disease



These are three of our favorite exercises; if you perform one each day, or become motivated to do two or three each day, I guarantee you will become stronger, more flexible and have better balance. These activities will help your brain cells become healthier, and perhaps delay the progression of the symptoms of Parkinson's Disease. ~David Zid, ACE, APG certified functional fitness trainer, Parkinson's advocate, author of *Delay the Disease.*, Jackie Russell, RN, BSN, CNOR, Project Editor *Delay the Disease*

General Guidelines: Perform all exercises while either standing or seated in a chair. Repeat exercise on opposite side, if applicable. Think big movements and train to tolerance, or, no pain.

- 1. Big Rope Pull - Reach up high with both hands, above your head, and grab an imaginary rope either on the right or left side. Pull it toward the floor on the opposite side of your body. Repeat 5 times per side.**
- 2. Hamstrings Stretch – Sit with one leg straight in front of you, the other knee flexed with foot flat on floor. Place both hands just above the knee on the straight leg. Move your belly button towards your toe, pulling your toes up and flexing your foot. You should feel a nice stretch up the back of your leg hold for a 10 count. Repeat stretch 3 – 5 times each leg.**
- 3. Getting Out of a Chair – Sit on the edge of a chair, with your feet flat on the floor, wide apart, and slightly behind your knees. Lean forward in the chair so that your nose is over your toes. With head erect and looking forward, stand up. Slowly lower yourself down, leading with your hips. Repeat 5 – 10 times. Increase repetitions as tolerated.**

TAKE THE HANDWRITING CHALLENGE

Delay the Disease - David Zid and Jackie Russell

David and I have a theory that large muscle exercises (with big movement), performed on a daily basis, may have a positive impact on motor dexterity, and therefore improve small, shaky handwriting. Take this challenge and help us try to prove our point.

It involves you, the person with Parkinson's, performing a group of 4 different large muscle, big movement exercises EVERY SINGLE DAY, for a period of 12 weeks. Please try to perform your exercises during your "on" time. Also attempt to perform at the approximate same time of day if possible. Complete all repetitions. Being consistent with the exercises is very important – we want our study to be reliable and valid. It should take less than 10 minutes to complete this set of exercises, so this is easy and doable for anyone.

We will ask that you log your exercises daily on paper so we can keep track of your work. Then at designated intervals (every 3 weeks) we will have you write a sentence and look at how your handwriting may change. We also need to collect a bit of information about you up front so that we can determine the kind of group we have with respect to when you were diagnosed, age, gender, etc.

If you have medication changes during this twelve week period, please document this on your log sheet. Write down the dosage/medication change and the date of that change.

Ultimately, we would like to analyze our findings and perhaps write about and publish our results. If this happens, we would certainly maintain your privacy and never release your name or other private personal information. This project is completely voluntary, and if at any time you would like to stop your participation, you are free to do so.

If your handwriting does not improve, this has NOT been time wasted. These exercises may also benefit your ability to walk, improve rigidity and perhaps reduce tremor. You have nothing to lose.

If you are interested in participating, please fill out the enrollment sheet and sign at the bottom. When you have completed 12 weeks of daily exercise (filled in daily log sheet) and the interval handwriting samples, send the 3 sheets back to us (enrollment form, log sheet, handwriting sample sheet) at this address:

Delay the Disease/Handwriting Challenge
PO Box 20370
Columbus, Ohio 43220

David and I are excited about this project and will certainly share our results. Good luck, and keep exercising!

Jackie Russell, RN, BSN

David Zid, BA, ACE, APG Certified Functional Fitness Trainer

ENROLLMENT FORM

DELAY THE DISEASE HANDWRITING CHALLENGE

NAME _____

EMAIL ADDRESS _____

HOME ADDRESS _____

PHONE _____

GENDER MALE FEMALE (*CIRCLE ONE*)

CURRENT AGE _____ AGE WHEN DIAGNOSED WITH PD _____

AGE WHEN YOU THINK YOUR FIRST SYMPTOM OCCURRED _____

MY FIRST SYMPTOM WAS _____

PRESENTLY WITH MY DISEASE I NOTICE: (CIRCLE ANSWER THAT BEST DESCRIBES YOU)

SYMPTOMS ON ONE SIDE OF MY BODY ONLY

SYMPTOMS ON BOTH SIDES OF BODY, NO TROUBLE WALKING

SYMPTOMS ON BOTH SIDES OF BODY, MINIMAL TROUBLE WALKING

SYMPTOMS ON BOTH SIDES OF BODY, MODERATE TROUBLE WALKING

SYMPTOMS ON BOTH SIDES OF BODY, UNABLE TO WALK

BEFORE THIS STUDY I EXERCISED: (CIRCLE ONE)

NEVER RARELY SOMETIMES REGULARLY

I (CIRCLE ONE) AGREE DECLINE TO PARTICIPATE.

SIGN NAME AND DATE _____

Handwriting Challenge Exercises

Delay the Disease

Perform these 4 exercises every single day – faithfully, for a period of twelve weeks. Try to perform during your “on” time-mostly the same time of day. Keep a log of the date and time that you perform the exercises every day. Make all your movements big. You may find that more than just your handwriting improves with this 10 minute workout. Good luck!

~David and Jackie

Big Rope Pulls

You may sit or stand for this exercise. Reach up high with both hands above your head, and grab an imaginary rope either on the right or left side. Pull it toward the floor on the opposite side of your body. Make the movement big, reach as high as you can, then try to touch the floor. Perform 10 repetitions on each side; then repeat again for a total of 20 reps on each side.

Big Arm Circles

Stand or sit with your arms straight out at your side and shoulder blades pinched, make a giant “T”. Hold the pinch throughout all of the following moves. Perform 5 large arm circles forward then 5 large circles backward with your palms facing down (thumbs forward). Repeat the series of 5 circles forward and backward with palms facing forward (thumbs up) and palms back (thumbs down). Make the circles as big as you can. On completion, this is a total of 30 circles.

Counting Loud Steps

Take ten big steps, use as large of a stride as you can. Make sure your heel strikes the floor first with each step. As you walk, count each step out loud – try to project voice volume. Repeat this series of 10 big steps 5 times for a total of 50 steps.

Clean and Press

Stand with feet at hip width apart. Place a full 16 oz. water bottle (or a 2 lb. weighted ball) on the floor in front of you. Squat down and pick up the bottle with 1 or 2 hands; stand up and move the bottle to an overhead position, as if placing it on a high shelf. Return the bottle to the floor with a squat, but do not drop the bottle. Repeat this movement 10 times. If going to the floor is too difficult, place the bottle on a chair in front of you and perform the move. Remember, this exercise is about big movement, not strength training.

That’s it! With a little practice, all 4 exercises should take about 10 minutes to complete. Don’t forget to log each exercise session on paper with the date and time.

DELAY THE DISEASE - HANDWRITING CHALLENGE

LOG SHEET

PLEASE WRITE DOWN THE TIME EACH DAY THE EXERCISES WERE PERFORMED

NAME _____

DATE STARTED _____

DATE COMPLETED _____

WEEK 1 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 2 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 3 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 4 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 5 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 6 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 7 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 8 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 9 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 10 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 11 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

WEEK 12 MON _____ TUES _____ WEDS _____ THURS _____ FRI _____ SAT _____ SUN _____

