



A New Therapy Brings Hope & Results
to People with Parkinson's Disease



Why Read this eBook?

My name is Peter Blumenthal. I own the Exercycle Company and we make a product called the Theracycle here in Franklin, Massachusetts.

For quite some time, I've received dozens of phone calls that go like this:

"I have Parkinson's disease and I realize there is currently no cure. However, I still want to feel as good as I can for as long as I can. The drugs I take have side effects I don't like and I'm afraid of DBS implantation surgery. I've heard about a new therapy called "Forced Exercise" that's helping other people with PD reduce their symptoms. I mentioned this to my doctor and he has not heard about this therapy. Is there something you can send me to show my doctor?"

In addition, just recently there was a [blog article](#) called "What Parkinson's Teaches Us about the Brain" written by Gretchen Reynolds that appeared in the "Well" section of the online edition of the New York Times. There are well over 100 [reader comments](#) to this article but, unfortunately, a great deal of these comments misunderstand the gist of the article.

These two separate events made me realize that there is both a great deal of confusion and a lack of awareness in the PD community concerning a real breakthrough for a newly proven therapy for the successful treatment of PD symptoms.

Therefore, I have written this ebook to clarify what this new therapy is (and is not), and to raise awareness of its existence and efficacy.

I hope it helps you to live better with PD.

All the best in good health,
Peter Blumenthal, CEO
The Exercycle Company



Hope and Results for People with PD

There is new hope for people with Parkinson's disease. And not only hope—but real results—a significant reduction in PD symptoms.

This new hope is a breakthrough PD therapy called “Forced Exercise” and it's helping people with Parkinson's disease achieve major improvements in:

- Gait and balance
- Tremors and rigidity
- Energy and stamina
- Cognitive functioning
- And more ...

In addition, patients are also feeling higher levels of self-esteem and newfound peace-of-mind since they can now fight back against their disease.

Forced Exercise therapy is not new. But thanks to research at the highly respected Cleveland Clinic, the results have now been clinically proven; and Forced Exercise is being employed by a fast-growing number of people with PD who are realizing dramatic results.

This eBook, compliments of The Exercycle Company, provides an overview of Forced Exercise, how you can explore it for yourself, and achieve similar results to thousand of PD patients.

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Forced Exercise ... Meet the Doctor

It all started with RAGBRAI—the acronym for the Register’s Annual Great Bicycle Ride Across Iowa. The Des Moines Register sponsors the ride and thus the name for the longest, largest and oldest bicycle-touring event in the world. Now in its 39th year, more than 15,000 bicyclists participate every July in this 7-day, 500-mile trek across Iowa.

Dr. Jay Alberts, a biomedical engineer who specializes in movement disorders at the Cleveland Clinic in Ohio, was one of those riders in 2003. A native of Iowa, and an avid bicyclist, it was a treat for him each year to return to his home state to pursue one of his favorite pastimes. And, in 2003, Dr. Alberts combined his passion for cycling with his professional work: he invited a person with Parkinson’s disease to ride the entire route with him on a tandem bicycle (a two-person bicycle) to prove that having a diagnosis of PD did not mean being limited to a sedentary life.

But this particular ride achieved much more than what Dr. Alberts set out to accomplish. One of the symptoms of Parkinson’s disease is micrographia, which causes handwriting to become abnormally small and cramped, and more illegible over time. For Cathy Frazier, the rider with PD, this was particularly bothersome. However, after a day of riding, while she and Dr. Alberts were signing a birthday card together, they both noticed that her note and signature were beautifully written. By the end of the week-long ride, she marveled that she did not feel like she even had Parkinson’s disease, and that almost all of her PD symptoms had improved dramatically.

After a week long bike trip,
she felt as if she no longer had
Parkinson’s disease.

Forced Exercise ... Meet the Doctor

Dr. Alberts felt that something special might be happening.

Being a researcher, Dr. Alberts felt that something special might be happening but, since it was only one person, he did not make too much of it. However, a few years later, Dr. Alberts went on a 50-mile tandem bicycle ride with a friend, Dr. David Heydrick, a neurologist who had PD. Before their ride, they were having a cup of coffee and both noticed that, due to Dr. Heydrick's hand tremors, he could not hold his cup without spilling. But by the end the bike ride, Dr. Heydrick could hold a coffee cup with absolutely no problem.

Dr. Alberts had now observed two occurrences of significantly reduced PD symptoms resulting from riding a bike at a high pedal rate for a prolonged period of time. What intrigued Dr. Alberts was that both of the riders with PD were moving only their legs but they were realizing significant PD symptom improvement in their hands. He knew that previous research had proven that there was no correlation between aerobic exercise and improvement in PD symptoms. So what was happening? He hypothesized that the leg movements associated with pedaling at a rapid speed, was having some type of impact on brain function.

So Dr. Alberts embarked on proving his hypothesis.

Documenting the Proof

Dr. Alberts conducted a pilot study at the Cleveland Clinic, using ten people with Parkinson's disease. The subjects were placed into one of two groups: a Voluntary Exercise group that used a stationary exercise bicycle at their preferred pedal rate; and a Forced Exercise group that used a tandem bicycle with a well trained co-rider at a much faster pedal speed. The co-rider and tandem bicycle were required because the subjects with PD did not have the strength and endurance to ride at the faster cadence for the entire duration. Thus, they would be assisted or "forced" to ride at the requisite pedal speed and duration—just like the riders with PD did previously on the tandem bicycle with Dr. Alberts.

Both groups rode for one hour, three times per week, for eight weeks.

At the end of the 8-week period, the results were tabulated. The Voluntary Exercise group, who did not pedal at a rapid rate, had virtually no improvement in their PD symptoms. The subjects in the Fixed Exercise group had a 35% improvement in their PD symptoms as indicated by a UPDRS examination. The United Parkinson's Disease Rating Scale is a universally accepted rating tool for measuring PD symptoms.

Dr. Alberts was tremendously enthused and knew he was on to something. This 35% improvement was equal to or better than what PD patients realized with medication or DBS implantation surgery—both of which were very expensive and had adverse side effects.

Incredibly, even eight weeks after the study, patients in the forced exercise maintained an average of a 30% improvement in their symptoms.

Based on these very promising results, Dr. Alberts received grants from both the Veteran's Administration (VA) and the National Institutes of Health (NIH) for further clinical trials with a larger numbers of subjects. The goal is to determine the optimal pedal rate, duration, and intensity of Forced Exercise for PD patients.

The subjects in the Forced Exercise group had a 35% improvement in their PD symptoms.

The Real Meaning of “Forced Exercise”

The term “Forced Exercise” can be misleading. Some people interpret it to mean exercise that a person does not want to or cannot do. Therefore, they balk at even the thought of Forced Exercise. Some people assume it to mean any type of rigorous exercise.

Neither of these is accurate.

The Cleveland Clinic research found that rapid leg movements are the key to the reduction of PD symptoms. Other types of vigorous exercise, such as aerobic exercise, have not been found to deliver improvements. It’s all about the legs—and “forcing” or assisting patients to move them faster than they would on their own.

The research indicated that subjects with PD who followed an exercise regimen of intense and rapid leg movement for an extended duration on a stationary exercise bicycle showed a 35% improvement in their PD symptoms. It is this combination that delivers results.

Since the majority of people with PD do not have the strength or endurance to follow this exercise regimen on their own, a stationary tandem exercise bicycle with a strong co-rider was used by Dr. Alberts in his pilot study to help the rider maintain the required pedaling speed, intensity, and duration of the exercise regimen. This is why the exercise regimen is called “forced” by Dr. Alberts—the tandem bicycle co-rider assists or “forces” riders with PD to pedal faster, harder and longer than what he/she could do on their own.

Dr. Alberts feels it is this rapid leg movement that generates more nervous-system messages to the brain, which causes biochemical reactions, which in turn, lead to improvements in PD symptoms.

Another term to describe this therapy is “Rapid Leg Movement Therapy.”



Forced Exercise made easy with
the Theracycle

New Studies are Using a Motorized Exercise Bicycle

For his follow on clinical trials, Dr. Alberts realized that it would not be practical to continue to use a stationary tandem bicycle due to the many more subjects involved. It would be too difficult to recruit enough co-riders. In addition, he knew that for both home and clinical use, he would have to find another method to deliver the Forced Exercise regimen.

For his expanded study, Dr. Alberts conducted a search for a motorized exercise bicycle and found the Exercycle Company in Franklin, MA. They had been making motorized exercise bicycles since 1932 and already had a model, called the Theracycle, developed exclusively for people with movement disorders and neurological conditions. The Theracycle was already in use by numerous people with Parkinson's disease who were claiming improvements in their symptoms.

He contacted the CEO of the company, Peter Blumenthal, who was immediately intrigued by the idea of being involved in a clinical trial to prove the improvements that Forced Exercise on an exercise bicycle has on PD symptoms.

Based on the anecdotal evidence Mr. Blumenthal had from Theracycle users who achieved great improvement in their PD symptoms, he knew that Dr. Alberts was on to something. So, the Exercycle Company supplied modified Theracycles to the Cleveland Clinic to replace the need for the tandem bicycle and co-rider.

In the spring of 2011 the Exercycle Company applied for and was awarded an SBIR (Small Business Innovation Research) grant from the National Institutes of Health (NIH) to accelerate continued development of the Theracycle. This prestigious grant will be used to further modify the existing Theracycle specifically for use for people with Parkinson's disease and to allow more measurement by medical professionals.

For his expanded study,
Dr. Alberts chose the Theracycle.

More Encouraging News

One of the most concerning aspects of Parkinson's disease is the impact it has on cognitive functioning. Cognitive impairments include sleep difficulties, mood disorders, reasoning ability, and memory loss.

Dr. Angela Ridgel collaborated with Dr. Alberts on the initial research on PD and "Forced Exercise" while she was at the Cleveland Clinic. Since that time, Dr. Ridgel is continuing her research on PD and bicycling exercise at the Department of Exercise Physiology at Kent State University in Ohio.

A recent article titled, "Changes in Executive Function After Acute Bouts of Passive Cycling in Parkinson's Disease," was published in the April 2011 issue of the Journal of Aging and Physical Activity.

The article states that PD medication does not appear to be effective for cognitive complications. Aerobic exercise does appear to improve the cognitive function in healthy adults but people with PD are not always able to exercise at an intense level. Dr. Ridgel's goal in her research was to see if passive exercise on a motorized bicycle would also provide cognitive improvement for people with PD.

There were 19 subjects with PD in her clinical trial. They were asked to pedal passively (let the motor do all the work) on a motorized exercise bicycle for three 30-minute sessions over three weeks. Despite the little effort expended, the short amount of time for each individual session, and the few amount of sessions, significant improvement in cognitive testing were recorded.

Based upon these findings, further studies will be undertaken to determine if more intensive involvement by the PD subject, that is, more active instead of passive cycling, would yield even better results.

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An Offer You Can't Refuse

You've read in the previous chapters how people with Parkinson's disease just like you are improving their quality of life by using the Theracycle.

We invite you to join the thousands of Theracycle users who are fighting back against their disease and realizing improvement in their PD symptoms. But you cannot see these Theracycle benefits for yourself unless you are willing to try one.

Here is our offer. Purchase a Theracycle and if, within 30 days, you are not totally satisfied, return the Theracycle to us and get 100% of your money back. We will even pay the shipping charges—both ways.

Why are we willing to make this offer? Simply because we know that exercising on the Theracycle works. We have made this offer before and hardly any Theracycles are returned to us.

Think of it this way . . . for about a dollar a day, you will be fighting back against your disease, improving your symptoms, and improving your health for the rest of your life.

What do you have to lose?

To learn more, contact Theracycle today at: **1.800.367.6712**.

A Theracycle Advisor will answer all your questions.

Contact Theracycle to learn more:
1.800.367.6712 (toll-free)

About the Exercycle Company

Founded in 1932, The Exercycle Company is a Boston area manufacturer of motorized exercise/therapy equipment for people with movement disorders.

Over a decade ago, our CEO Peter Blumenthal experienced first hand the lack of exercise equipment for people with physical limitations after he suffered a serious spinal cord injury.

Our principal product is the award-winning Theracycle—a unique exercise bicycle designed to meet the safety and exercise needs of people who don't have the strength and endurance to use traditional exercise equipment.

For more information please visit www.theracycle.com. Or call us today at **1.800.367.6712**.

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