

## Spouses Connect Brain Science and Dance Art to Help Reverse Husband's Parkinson's Disease

BY EMBER REICHGOTT JUNGE

“I THINK IT’S PARKINSON’S. IF IT IS, we’re gonna deal with it,” the general practice physician told Michael Finney over six years ago. Michael, then 58, presented a tremor in his right hand, had recently fallen off a ladder, and had a family history of essential tremors.

“I felt the initial ‘Oh my God, my life is over,’” Michael recalled. “But in reality, I had worked with people with Parkinson’s for most of my career, and I knew there were things you could do to improve your quality of life. It was a question of knuckling down and doing it.”

And he did. When first diagnosed, Michael was rated a 9 on a scale measuring Parkinson’s impairment. Six years later, he is a 4. “I’ve actually been decreasing the degree of impairment over the course. It’s not like it goes into remission or anything. A lot of the functional balance training and functional strength training translates into a much better quality of life.” Michael still works around the world for his professional role as Director of Special Projects for the Thinkwell Group (a Tait Company) managing the design and production of visitor experiences ranging from museum attractions to “Warner Bros. Studios London—The Making of Harry Potter.” Yes, he cut back on physical site inspections, turning more to the teaching he loves. “It probably isn’t a good idea for me to be climbing up on high steel installations anymore, anyway,” he laughed. To Michael, there is also an advantage to putting someone with a later life issue like Parkinson’s Disease in front of younger learners. “You can have PD

and you can be doing a very cool thing with your life. That’s one of the reasons why I don’t hide my diagnosis,” he said.

### Michael and Linda: One Couple’s Journey

Michael isn’t managing this alone. He is a strong advocate for the Struthers Parkinson’s Center in Golden Valley, MN, which has provided him a holistic approach to dealing with Parkinson’s for over four years. And he is an unabashed admirer of his wife, Linda Muir, a well-known ballet teacher in the Twin Cities, who has danced ballet and modern dance 60 of her 64 years, performed in dance companies throughout the country, and has been teaching children at the Summit School of Dance in Plymouth and Larkin Dance School in Maplewood since she moved to Minnesota 24 years ago.

As a professionally-trained dancer, Linda was eligible to enroll in the New York-based Mark Morris international “Dance for PD” program, completing the course and a workshop. This training, her years of professional dance experience, and her collaboration with the physical and music therapists at Struthers have made her a powerful volunteer teacher for Struthers Parkinson’s Center and for Michael.

Perhaps most unusual about this couple is that they *both* understand at a professional level the value of connecting art and science. Linda has been interested in the science of the brain for years. “We must open our minds to what the sciences can offer our art form. Dance is taught through oral history, passed down from generation to generation. How we do things is not necessarily scientifically based, but science can inform a great deal.



*Veteran ballet teacher Linda Muir is an advocate for her husband Michael Finney, who was diagnosed with Parkinson's Disease six years ago. Photo provided by Michael Finney.*

Because of my interest on both sides, I see how the two can inform each other. I understand how dance can change the neurological pathways of the brain, replacing those pathways closed off because of Parkinson's Disease. I understand from the science that new [neurological pathways] can be created. And the way to creating those pathways is new movement learning. Any new experience, if it can be related to the life of the Parkinsonian dancer, will both enrich their spirit and support the development of the plasticity of their mind, their brain. It's a complex world that comes down to something simple."

Linda is working with Michael's physical therapist Laura DesHotels and music therapist Sandra Holten at the Struthers Parkinson's Center. "I kind of straddle the two because I understand movement to music and I understand how to communicate that to participants. That is what I do as a teacher. And I understand what a physical therapist is trying to get because I understand anatomy and kinesiology and how our bodies work. They accept my expertise and we learn together."

Linda believes she has learned as much from that interaction as from the Mark Morris course online. Sometimes it is "three on one" in working with Michael. "It's a good working relationship we have together."

Michael also straddles both worlds. "I am the answer to what you do for a career when you have a degree in theatre and in engineering," said Michael. His first love was theatre, but engineering was always a viable career for him because his father was an engineer. He started in theatre but got to a point where he wanted to build new structures and buildings. So he built a degree program that let him pursue both. At one point, his class schedule included ballet, theatre history, Strength of Materials, and Engineering Management. "You sprain your brain that way," he said. Michael danced ballet and modern dance during college, and even did some ballroom when "thrown into" musicals that needed another man. "My physical therapist recently asked me, 'Why do you point your foot every time it comes off the floor? That must be more challenging.' I don't think about it. I was taught

when your foot leaves the floor, it points."

Today, Michael manages large projects for his entertainment design firm, putting him squarely between the creative artistic side and the engineering construction side. "The running joke is that I'm the one who translates. I speak both languages, artistic and technical." Kind of like Linda.

## Taking on Parkinson's Disease Together

Everyone's journey with Parkinson's Disease is different. This is the story of how Linda and Michael, both dancers, have made movement and exercise work for them. The adjoining story explores Linda's broader outreach to assist the larger Struthers Parkinson's Center community.

Linda credits the movement and related therapies from her and Michael's therapists for Michael's improvement, since other factors like medications have not changed. But she also credits Michael. "He is by nature an optimistic person, and from day one he has been engaged in the physical activity he needs to do. If he doesn't get something right away, he insists on continuing it until he gets it. He's very invested in doing everything that he can do to stave off symptoms for as long as possible. That is invaluable. Period. Attitude!"

During Covid, Linda and Michael worked in their home studio space. "We have mirrors, which are an important component for [Parkinsonians] to see. They can often perceive that they are not using opposite limbs, for instance, when they watch. Their proprioception doesn't give them the feedback from inside their body. So the fact that we have full mirrors where he can observe himself is important. And often if he is not getting something, he can get it



*Dance movement and exercise have helped Michael Finney to continue his international professional work in entertainment venue design. Photo provided by Michael Finney.*

from following me. I will physically do with him what I'm asking him to do."

Linda continued, "I don't really do dancing with him. I create movement exercises that work on coordination, balance, range of motion, and also cognition. I've learned a lot from the physical therapist here at Struthers. We do an exercise with a walking stick where he twists and does relevés, and we might have him say a different woman's name each time starting with C, like Carol. So now not only is he having to *learn* a physical sequence, actually *do* a physical sequence, but he also puts a cognitive aspect to it."

Michael sees it this way: "It is a lot of alignment, a lot of balance transitional work. Moving from static position to static position dynamically has been incredibly good. My balance is such that I was slipping on ice in winter and catching myself before I fell. It's really good. Both Linda and my physical therapist have been doing a lot of work with me by giving me cognitive challenges to perform while I'm doing balance-based exercise. They especially focus on diagonal and cross body, which helps speed of motion, helps your proprioception. That's one of the things I lost when PD came on. I was losing track of where my body was in space. Stupid things like bumping my hip on the kitchen table, reaching for something and missing it by six inches. Doing a lot of this exercise that Linda and Laura provide has helped that tremendously."

What are Michael's current symptoms as a 4 on the impairment scale? "I have vocal stuff occasionally; I can't speak for hours at a time like I used to, which may be good," Michael joked. "I'm still dealing with tremor. I don't have to be as consciously aware of my balance as when I was first diagnosed. The big thing is tremor and speed of movement. Speed of movement is not

coming back. I don't move as fast as I did previously, especially if I'm thinking about moving fast. But if I'm just letting the body do its thing, I do OK. One of the big issues with Parkinson's is falls. I haven't had a fall."

So what is it like to work with your wife as your teacher? Michael laughed. "Well, she is probably the best ballet teacher I've ever worked with. She has extraordinary ability to teach motion. The great thing about working with her is that she's got such a mind for putting motion together. She's been able to take what she learned from 'Dance with PD' and Struthers and translate that into exercise sequences that work well for her and that seem to work well for me. The great thing is that she obviously knows how I move."

"The challenge for her, or for both of us, is that she is my wife and she hates to see me struggle with something. The good thing is that, because of her professional experience, she will let me struggle with it until I get it. I get a little bullheaded about this; I will get this right. My personal trainer commented on this. If I do an exercise, I don't count the movements I do wrong. That's the dancer background. It's like you don't repeat and learn the wrong movement. The other good thing? I've got a resource that I can look at in the morning and ask, 'am I moving funny?' And she will tell me."

For Linda, it's all about trust. "There's a trust that I'm trying to do what is best and beneficial for him; that I have expertise to back that up, and third, there is continuing communication. 'Is this too much for you?' or 'Linda, this is too complicated, we need to step back a bit.' That's because his cognition is very good at this time. It's that idea of trust, and of course love and understanding."

As to the future? Said Linda, "Cognitively, Michael is really with it.

For that I'm grateful. One of my goals is to keep him doing the work he loves for as long as we can make that happen. For me, one way I manage this whole thing is to say, 'What's in front of me today?' And not concern myself with what will happen. I don't have control of that. We have control of taking our meds, doing our exercise, having a fulfilling life as well as we can, for today. Period."

Michael is looking further out. Professionally he is making some adjustments, such as not temporarily relocating to Japan for a project. He packs lighter in his carry-on suitcase. He provides more time for sleep after travel. He carries a motion tracker app on his phone that is basically a fall alert that calls Linda or 911 if Michael has no response.

For Michael, dance movement is working. "It's given me control of how I deal with my motion challenges. It's given me a toolbox. It has hardwired some coping skills to a degree that would not be possible with just regular exercise. It keeps me interested because there is an endless variety of options for how to teach movement, balance, application of strength. It gives me community, which I think is incredibly valuable. I'm doing things I've never done before. Some things I'm doing I thought I stopped doing in my 20s. Apparently not."

*Ember Reichgott Junge is an amateur competitive ballroom dancer and co-founder of the nonprofit Heart of Dance. She invites story ideas for her book-in-progress, tentatively titled "Life Stories of Resilience from the Ballroom Dancer's Heart." E*



## Movement Art Experience Takes Parkinsonians “Up Up and Away”

BY EMBER REICHGOTT JUNGE

I COULDN'T HELP BUT SMILE AS I recorded a video of Linda Muir's elegant stretches and rhythmic dance movements as Frank Sinatra crooned “Fly Me to the Moon.” As I watched her demonstrate her routine at the Struthers Parkinson's Center in Golden Valley, MN, I could barely resist the impulse to follow her every move or dance my arms, body, and hips. Linda was sitting in a chair, but somehow she was engaging every part of her body, even her feet and legs. And her joy was unmistakable.

This was a routine that Linda taught to Parkinsonians, people with Parkinson's Disease, over Zoom during Covid through the Struthers Connect Community series of 30-minute programs. A teacher of the Movement Art Experience and an experienced ballet teacher and performer, Linda volunteers her expertise in part because she is also an advocate for her husband Michael, a Parkinsonian.

Linda continues these Zoom sessions for the Struthers community, though she longs for the day that she can again receive feedback from dancers in person.

So what does Linda bring to people with Parkinson's Disease (PD) through Movement Art Experience? She describes three things. First is the art experience, or “building community with art.” That allows personal self-expression that doesn't really come into being through other forms of exercise. Second is “engaging your cognition and your ability to memorize movement,” an important aspect of a workout for a Parkinsonian. Finally, there is “moving your joints through the whole movement range,” a benefit as important as any physical therapy.

The cognitive part of dance is key. “As a dancer, you learn a sequence of movements like sentences, and those sentences create a paragraph and then a story,” said Linda. “When pedaling

a bike you might consider how high you are rotating the pedals, but the reality is you are doing a very high repetition of one action. In dance you are sequencing different kinds of motions and coordinating your arms and legs and your facings, and that supports your cognition.”

“Then there is the concept of brain dance. These [exercises] go through all the developmental phases that we do as a child to build our neurological pathways for learning. Simple things as crossing your limbs across your body or opening and expanding your body and becoming small help rebuild neurological pathways that may have diminished with Parkinson's.”

Dance also helps Parkinsonians with knowledge of their body in space. Parkinsonians lose the ability to understand where they are in space. Their proprioception is diminished. Continued Linda, “They may not understand that they are moving very



slowly or very small-ly, or which arm they are using. What dance does is free them from being concerned about the specifics and to simply follow along. Because my motion is reflected to them, they can mirror that motion. It becomes easier for them to experience the expansive movement because they are following somebody who is moving expansively.”

There is also the sense of community that is so important for mental health. And just like any dancer, they practice their dances. “You’re not just doing an exercise routine. We’re developing and repeating and practicing the dance, so that the coordination of the sequence becomes more readily accessible to the Parkinsonian,” said Linda.

Linda starts her classes with warm ups, and moves into the dances she teaches over several weeks. “It’s not so important that they get everything,” explained Linda. “It is important that I give them range of motion, that they follow along, that somehow over Zoom we create community, and that for those who are movement limited I say ‘Do what you can, and adjust where you need be.’ To be safe, we are always in the chair, because we don’t know who is at home with them, should they have a fall. And for those who are bedridden, this is something for them to enjoy.”

The routine must be meaningful for Linda as well. “I’m an artist. I can’t just do this to help them. I have to find some fulfillment for myself. That is an artist’s responsibility to find that fulfillment. So when I’m making these dances, it has to be something that I love and something that I make an emotional connection to, movement-wise and music-wise.”

As I watched Linda perform her routines to “Fly Me to the Moon” and “Up Up and Away,” I couldn’t help but notice her animated joyful expressions. “Yes!” said Linda. “And why is that important? Because Parkinsonians lose the ability of facial expression. So I want them to see through a camera that I enjoy it, because if I enjoy it, they’ll enjoy it!”

The first technique Linda incorporates is repetition. “I’m trusting the music, and when the refrain comes it is a repeat, just like in the music. That grounds the choreography but also makes it comfortable for the dancers,” described Linda. “Second, I’m using a lot of gestural movement, mostly initiating with my arms. Because I’m sitting in a chair, I’m limited, but the idea is to incorporate expansive movement in the arms and legs, spiraling the back for flexibility and range of motion.”

“I use the feet, not necessarily in the way a dancer does, but it’s a folk

dance kind of movement. Notice there was no ballet in that. I’m teaching them dances I think they would like that require coordination, sequencing, learning step by step. I do feet first, then arms later; I break it down and maybe only do one verse. Incrementally, I’m building the sequence.” Linda also uses visual analogies, like imagining a carnival hawker is enticing them to “fly in my beautiful balloon.”

Linda continued, “I don’t have an expectation that their movement will be as large as mine. I want them to do the largest motion they can do or perceive they can do. I don’t have any idea that it’s going to be sequentially perfect; I want them to do what they can do and what they remember. By requiring a little bit more, I can also engage someone who is still cognitively with it, and still engage the person who is maybe bedridden and can simply enjoy watching.”

Linda wants to teach until she can’t do it anymore. “I’m 64. Most people are looking to retire. This is the love of my life, sorry Michael! This I love more than anything. This has been my identity, my passion since I was a child. I have faced every fear possible because I wanted to be a dancer more,” she said.

“I’m at a place in my life where all I want to do is be helpful. If I can help Parkinsonians with my expertise and

knowledge, I'm going to do that. If I can help a person recovering from a stroke, I'm going to do that. If I can help my student dancers be the best dancers they can be, that's great, I'm going to do that. It keeps me active and vital. I've done in my life what I've wanted to do—anything else is the cherry on top."

Linda keeps in touch with students all over the world. She currently consults weekly with a former student's mother who had a stroke a year ago, causing issues with gait and weakness. "There is something that a dancer understands more than anybody which is articulation of the foot," said Linda. "I work with her on balance and gait; I have a stretch routine. We use the mirror because she can see how her foot is moving. I do specific ballet exercises with her like tendu,

relevé, plies; simple things you would teach a beginner but are translatable."

Linda currently teaches ballet at Larkin Dance School in Maplewood. Her first love is teaching children. "I don't look at my young students like everyone's going to be a dancer. Dance is my particular idiom for giving and creating space for learning. Before the learning you first love the child. Then you create an environment of curiosity. Within that curiosity you create a place of problem-solving and all of that is learned through the discipline of ballet."

Could adults also learn this through the discipline of ballroom dance? "Absolutely," replied Linda. "Everybody! It's about community, compassion, observing in the moment what needs to happen and changing out how you

communicate. It's about empathy, how it's enough to be there with another person. The being there, being present, is the most important thing we can bring as teachers. Being present with the dancer is the greatest gift we can bring."

*To See Linda Muir's dance artistry of "Fly Me to the Moon" and "Up Up and Away," visit [www.embercommunications.com/dancestoriesofresilience](http://www.embercommunications.com/dancestoriesofresilience).*

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Dustin Donelan

I ASKED MY CINEMA BALLROOM Dance Instructor Dustin Donelan, who earned a Bachelor of Fine Arts Degree in Theatre Arts Performance with emphasis in Movement from the University of North Dakota, to identify Linda's movement techniques of special interest to ballroom dancers. Here are just five of them:

## Ballroom Hidden In Plain Sight

BY EMBER REICHGOTT JUNGE

AS DESCRIBED BY DUSTIN DONELAN

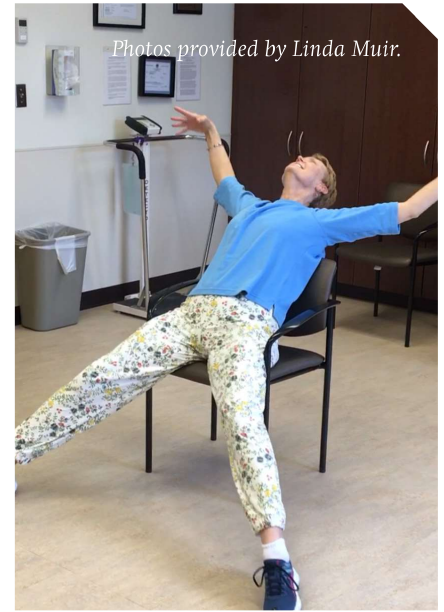
### Aerial Choreography:

Everything happens above the feet. There is lots of contra body movement where Linda works her body across to the other side to create angles and tension in the body that create structure and power. That creates balance. She reaches her left side across to the right to close one side, so she can open it up to go the other direction. That creates speed, as in Latin and Rhythm dances. Seated in the chair, she must use her upper body; ballroom dancers are dependent on their feet. She's teaching choreography that is not foot-based, essential for anyone who does Open dancing. The chair stabilizes the base and assists her, as would her partner.

The stronger your base, the more expressive you can be with your top. The chair back prevents her from leaning too far back, a common issue for Smooth and Standard dancers.

### Arm Coordination:

Note the mechanics of sweeping back and forth. Linda's shoulder moves across, then her elbow, then her wrist, then her hand finishes. All move at different rates, just as in American Smooth. It gives that delayed, floaty, soft effect. It allows for elegance of movement that she occasionally contrasts with more striking mechanics that are short and direct. Her movement always goes from the inside out. She's not putting her hands in space;



the movement is almost always internal around the shoulder, elbow, wrist. Even in ballroom frame, we move from the inside out. It's just easier to see in Open dance.

### Arm Styling:

It's always complete. Arm styling may seem superfluous, only for effect and performance. That's just half of it. It also provides function. Full arm style actually generates from the body and makes the whole body dance. If I stretch out my left arm, my body responds to it which helps me stabilize my core and connect to my partner. Linda dances

everything all the way through her fingers because that awakens the entire body. This takes great awareness. She dances her hands fully. Every finger, every touch is important.

### Impact and Impulse:

This creates drama. For impact, Linda either slices or strikes her hand out quickly and it stops. She grabs the chair and stops. For impulse, Linda performs a short action and it continues to expand, like a firework. Fireworks explode and then they go down. She does a lot more impact than impulse.

### Perception Matches Body:

You know exactly what your body looks like. Advanced dancers have a good understanding of this. You know what you look like, versus discovering a different truth in your video. Linda rotates her body to give the perception that her arm is behind her. She doesn't put her arm behind her. Her proprioception is clean, she does what she might see in a mirror, not what she might see in her head. This is critical for both Parkinsonians and ballroom dancers. **E**

