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The New York Times

Kitra Cahana for The New York Times

Getting Their Groove Back, With Help From the Magic of Dance

By ROSLYN SULCAS
Published: August 25, 2007

David Leventhal, a member of the Mark Morris Dance Group, is teaching a combination from Mr. Morris's "Three Russian Preludes" to a crammed class of dance students. "Mark made this for Baryshnikov," he tells them. "Then I danced it. Now you're the third people to learn it."

The students laugh. They are not young, not lithe, not professional dancers. Most have Parkinson's disease; several walk or stand with difficulty. But after watching Mr. Leventhal carefully as they copy his slicing arm movements, the group performs a commendable version of the sequence.

As improbable as it may seem to those familiar with the disease's toll on motor functions — impaired balance, tremors, slowness of movement, rigidity — this dance class is not a toned-down therapy session. It is both physically demanding and artistically exacting. "Sharp, then soft," Mr. Leventhal calls out as the students dance in the airy studio at the Mark Morris Center in Fort Greene, Brooklyn. "Like clouds across the stage."

Exercise has long been considered beneficial for those with Parkinson's, which is medically defined as a movement disorder caused at least in part by a loss of brain cells that release the nerve-to-nerve signaling chemical dopamine. But the daily physical difficulties patients experience, along with attendant isolation and depression, often result in a sedentary lifestyle and dependence on medication.

Such were the observations of Olie Westheimer, who in 2000 started a support group for Parkinson's patients and their caregivers at the request of her husband, Dr. Ivan Bodis-Wollner, director of the Parkinson's Disease and Related Disorders Center in Kings County Hospital Center and SUNY Downstate Medical Center in Brooklyn.

"I could see there was a mismatch between what was written about the disease — it's not going to kill you, you have to live with it — and how treatment works," said Ms. Westheimer, who is the outreach coordinator for the Parkinson's center and has become a passionate advocate of dance as treatment for movement disorders. "What happens is that people aren't living with the disease, they are defined by it, and their lives are a round of doctors' appointments and therapy. Even a support group is part of that world, and I felt like they should be doing something else."

Ms. Westheimer, who had seriously studied dance when she was growing up, also noticed that some

The New York Times

Parkinson's patients were using techniques similar to dancers' to master or memorize movement. "They would describe how they would put a hand on the wall or another person as a cue to turn, or play familiar music in their heads to get up, or start walking again if they froze. I thought, 'They need to dance!' "

Soon after, she went to see Nancy Umanoff, executive director of the Morris company, and asked if there was a dancer interested in teaching Parkinson's patients. "I said, 'I can raise the money,' " Ms. Westheimer recounted. "She said, 'We have the money.' "

Ms. Umanoff offered to provide not only a teacher and the space, but also a pianist, using part of the company's allocation for community outreach. By 2003 the classes, initially once a month, had so grown in size and popularity that the director of education, Eva Nichols, suggested making them weekly. (They take a break over the summer. The next class starts Sept. 5.)

"It is altruistic on our part," Ms. Umanoff said. "But what it does for us is give us a sense of engagement in the community in a very deep way, and that gives us greater strength as an institution. And as silly as it sounds, it feels good; the classes positively affect people's lives. What's better than that?"

Ms. Westheimer was clear from the start that she wanted a real dance class, and this has proved to be the crucial factor in the class's popularity. "The most important thing is that people find joy in the movement and a sense of community just as in any dance class," said Mr. Leventhal, who teaches alongside John Heginbotham, another member of the Mark Morris Dance Group, and Misty Owens, a faculty member at the school.

The classes, which begin seated to increase confidence in balance and stability, move from simple point-and-flex leg exercises to sweeping sequences across the floor. "People will stand up straight, walk with long strides with their heel hitting the ground and swing their arms — all things that are atypical of Parkinson's," said Carroll Neesemann, whose disease was diagnosed 11 years ago. "I don't know if it happens to everyone, but I lose my symptoms when I'm there. And the pleasure of the experience is that it's not a therapy session. They teach us as if we were any students, and that makes me feel good."

The structure and content of the class have changed over time, Mr. Heginbotham said, "but the seated structure, the importance of the kind of catchy, familiar music that our pianist, William Wade plays, and the Mark Morris repertory — that has all been there from day one."

"The big breakthrough," he added, "was asking the class to improvise; that really freed people up in a serious way. And Misty has developed oppositional exercises that are incredibly successful, so we're always trying to refine it."

Ms. Owens, who has also introduced elements of tap dance to the classes, became so interested in the classes' effects that her thesis for her master of fine arts degree focused on the topic.

"When we repeat a physical task over and over, our bodies learn it," she said. "That's called muscle memory, and it's what dancers rely on. In addition, there is the phenomenon of mirror neurons, when your brain basically imprints what it sees over and over again. The dance classes are incredibly useful for people with Parkinson's for these reasons. You can be bogged down by symptoms, but if you've done it enough, your body will remember the movement with the right cues."

Neurologists are more cautious about the prospects for long-term improvement. "There is some scientific rationale that exercise helps people with Parkinson's disease, but not that much," said Dr. Michele Tagliati, director of the Parkinson's Center at the Mount Sinai School of Medicine in New York, who is interested in the benefits of dance for Parkinson's sufferers. "So mainstream neurology looks at it as a kind of alternative medicine with short-term benefits."

The Morris Center now offers a second weekly dance class, run by a former dancer who has Parkinson's, as well as a weekly music and singing class taught by Mr. Wade. Ms. Westheimer, Mr. Heginbotham and Mr. Leventhal presented their work at the 16th International Congress on Parkinson's Disease in Berlin in 2005. In October, the teachers will give a workshop at the center that has attracted interest from neurologists in England and Norway.

"There is a constellation of symptoms that don't respond to dopamine treatment, and we are still not very good at taking care of them," Dr. Tagliati said. "We don't know what dance does, exactly, for these, but it's a complex and fascinating area of research. And the idea of having something that is considered an expression of beauty and youth and coordination to help those whose with an inability to move — well, it's romantic."

Dennis Danfung, for USA TODAY
Hilma Griffis, 72, center, who has Parkinson's disease, participates in a dance class in London. Through a partnership with the Brooklyn Parkinson's Group, dancers from Mark Morris Dance Group lead weekly customized dance workshops for people with Parkinson's and their caregivers.

Dance class 'uplifting' for Parkinson's patients

By Mary Brophy Marcus, USA TODAY
November 12, 2008

Pity is not for the students with Parkinson's who study dance at the Mark Morris Dance Group in Brooklyn. Not when one student, well into his 70s, bent crookedly in his chair, lifts his arms gently skyward to the strains of Pachelbel's *Canon in D Major*.

Not when the dancers glide gracefully across the floor behind their instructor, professional dancer David Leventhal.

They're just plain classy-looking. No small feat when you consider they have the degenerative movement disorder Parkinson's disease, which is marked by imbalance, tremors and muscle stiffness.

Yet at Morris' renowned dance studio, pliés elicit pleasure in the participants, and waltzing helps oil rigid, trembling limbs.

Company founder and director Morris gave the OK for the classes half a decade ago when two of his instructors, Leventhal and John Heginbotham, along with Olie Westheimer, executive director of the Brooklyn Parkinson's Group and a dancer, proposed the idea.

Attendance began on the small side, Morris says.

"Five years later I'm walking past their studio, and I see like 40 people in there, and I realize it's the Parkinson's mob and all their caregivers, and I hear this live music, and I see all these different ages and disabilities dancing. It was gorgeous," says Morris, who is giving a lecture on dance and Parkinson's this weekend at the Society for Neuroscience's annual meeting in Washington, D.C.

Leventhal says the initial aim was to encourage movement and mostly to make something joyful happen.

"A lot people have said, 'It's so wonderful. You're healing people.' That's flattering, but it's a dangerous slope," Leventhal says. "We're careful not to make any medical claims about the class. Its strength is that it's outside the clinical arena. For those 75 minutes, you don't have Parkinson's. You're a dancer."

Unlike other classes at the school, students in the weekly class start seated. After warming up by performing basic moves that improve coordination, the dancers move to a ballet barre to focus on balance.

"We'll do ballet and tap exercises at the barre, then progress across the floor, getting participants to move fully in various styles — ballet, Broadway, tap — that integrate rhythm, spatial awareness and mostly fun," Leventhal says.

Something for everyone

Students range from the newly diagnosed to those with canes, walkers and wheelchairs. Moves are modified based on a dancer's abilities.

Parkinson's disease occurs when the dopamine-producing cells in the brain that normally help muscles move become impaired or destroyed, says Stephen Lee, co-medical director of the Parkinson's Center at Dartmouth Hitchcock Medical Center. Patients may experience tremors, coordination troubles or muscular rigidity depending on the path the condition takes and how far advanced it is.

One in 100 people over age 60 live with Parkinson's, according to the Michael J. Fox Foundation for Parkinson's Research.

There's not much research in humans on how dance or other exercise helps on a physiological level, Lee says. Ivan Bodis-Wollner, professor of neurology and ophthalmology and director of the Parkinson's Disease and Related Disorders Clinic at SUNY Downstate Medical Center, says preliminary animal studies suggest exercise may promote positive chemical changes in the brain. "Movement like dance and exercise seem to be neuroprotective," says Bodis-Wollner, who has attended Morris' class.

Scientists at Washington University School of Medicine in St. Louis reported in one recent study that patients who took part in regular tango classes showed significant improvements in balance and mobility compared with those who did conventional exercise. Author Gammon Earhart, assistant professor of physical therapy, says participants also reported they enjoyed the social aspect of the dancing: "Their sense of well-being improved."

Movement catches on

"The dance class is uplifting," says Carroll Neesemann, 67, a commercial arbitrator from Brooklyn who has had Parkinson's for 12 years and has attended classes with his wife, Helena, since the beginning. "I know I'm not moving exactly straight up, but I feel symptom-free."

Last week, Leventhal and other Morris company members visited the English National Ballet in London, where they performed and shared details of their Parkinson's program with dancers. They've also helped instructors in San Francisco and Chicago launch similar programs.

Neesemann says the best thing about the class is to be able to move gracefully. "The ability to emulate some of the great dancers and reacquire a little bit of gracefulness is really valuable."

DAILY NEWS

Mark Morris dance class aids Parkinson's sufferers

By Joyce Shelby
DAILY NEWS STAFF WRITER

Tuesday, October 23rd 2007

Before the start of the class at the Mark Morris Dance Center in Fort Greene, Maria Parker sat in a wheelchair and her home attendant, Ursula Bailey, stood close beside.

Parker's hands trembled uncontrollably. The frail, 67-year-old woman has Parkinson's disease and did not appear ready to dance.

But she was. The Mark Morris Dance Center offers weekly classes for people with Parkinson's, a chronic and progressive brain disorder.

"The people who stay active and involved are those who do best," said Olie Westheimer, founder and executive director of the Brooklyn Parkinson Group.

Her husband, Dr. Ivan Bodis-Wollner, heads the Parkinson's Disease Center at Kings County Hospital/SUNY Downstate Medical Center.

Westheimer, who has studied dance, came up with the idea for the class. The Mark Morris Center readily agreed to provide teachers, a pianist and a spacious studio.

Just before last Wednesday's session, Parker exchanged her wheelchair for a folding metal chair and sat in a circle with 23 other dancers. Most also had Parkinson's.

"Inhale, one, two, three, four. Slowly raise your hands. Now lower them. Imagine you are floating," dancer David Leventhal instructed as pianist William Wade played softly.

Parker followed every move. She gracefully lifted and lowered hear hands and arms. She stretched her legs, pointed her toes, arched her back, leaned forward.

Over the next 75 minutes, teachers Leventhal, John Heginbotham and Misty Owens got their dance students out of their chairs and put them through their paces. There were demi-pliés at ballet barres, modern dance and tap steps, and marches across the studio floor to the strains of "Seventy-Six Trombones." The group also did moves from the company's own repertoire.

"When members of the class see us in performance, they see that they've learned some of the same movements," said Leventhal. "That gives them a sense of empowerment and a sense of community."

Parker, back in her wheelchair when the session ended, said, "The class is very nice. It helps me to go."

Gladys Medina, 72, of Jackson Heights, Queens, said she considers the class "the best thing I have found. It helps me a lot to control my body."

And Sam Tulman, 89, of Brooklyn Heights, delighted in both the dancing and "seeing all these people and seeing they are functioning."

For Robert Simpson, 58, of Manhattan, the class is transforming. He used to dance professionally.

"There was a point a couple of weeks ago when, before I knew it, I felt I was being lifted. It was a feeling of being transcended. It was so wonderful," Simpson said.

Parkinson's Patients Find Grace In Dance

by Jacki Lyden

Broadcast on All Things Considered December 13, 2008

Kate Davidson/NPR

Before he had Parkinson's disease, Robert Simpson was a dancer.

For the past seven years, the studio of internationally celebrated choreographer and dancer Mark Morris has held a special class for people with Parkinson's disease.

They all dance together in an airy, light-filled building in Ft. Greene, Brooklyn — despite the inhibited movement that marks Parkinson's sufferers.

"People come in barely shuffling along," Morris says, "and the class sort of frees people. It's not a miracle and I don't know the science. I know that music, rhythm, repetition, encouragement makes everybody dance. You don't even know that you're moving."

Class Begins

On Wednesdays, the studio fills with older, less perfect bodies moving through space. Here, for an hour and 15 minutes, wheelchairs and canes are set aside.

Things begin with a loose circle around several instructors from the Mark Morris Dance Group. Misty Owens is an elegant, dark-haired dancer. She says Parkinson's dancers who've been coming for years find their bodies have more control, more understanding of movement — the muscle memory of a learned pattern.

"It's that moment of bringing all that together — not just being a human being with Parkinson's but being a human being in a live, vital, creative class, that I find is the explosive mixture that makes this a wonderful opportunity," Owens says.

There is one dancer who stands out in this group, a tall man in a sleeveless shirt. His upper torso dives backward and forward in constant, jerky circles. But he possesses a delicacy of quality, says one teacher. Robert Simpson was a dancer before he was diagnosed with Parkinson's in 2005.

"I'd just love to fly across the floor if I could," Simpson says, "cause I'm thinking I want to fly as much as I can while I can still do it. I just love the feeling of it."

Learning To Move With Parkinson's

Dancers refer to plies and pirouettes. Parkinson's dancers have another vocabulary to learn — and it's a cruel one. Ataxia: a loss of coordination. Festination: short, shuffling steps. Dyskinesia: involuntary body movements that can involve twisting and turning.

When a person has Parkinson's disease, a certain kind of nerve cell in his or her brain starts to die — the kind of cell that produces the chemical dopamine. Dopamine facilitates movement, so one of the biggest challenges for

Parkinson's patients is to voluntarily initiate movement. Reaching out for a coffee mug can produce unpredictable results.

"It's one of the paradoxes in our understanding of Parkinson's that it's the *voluntary* decision to move which is the most impaired, and it's not the ability to actually perform the action," says Dr. Eve Marder, past president of the Society for Neuroscience.

"For example, a Parkinson's patient may be able to catch a ball if it's thrown at them, but they may not be able to decide to throw the ball," she says.

The idea is that dance takes the voluntary movements that are so difficult for people with Parkinson's and turns them into more instinctive movements. Movements made in reaction to a familiar tune on the piano, for example, or movements made by mirroring the teacher, or the memorized movements of a choreographed routine.

"Thus the Parkinson's patient may find themselves moving much more fluidly and much better than they would if they were alone in a room and just saying, 'Now I want to do those same movements,'" Marder says.

"When people come in, they're scared of moving because they've been told by doctors and professionals that they can't move," says David Leventhal, who has danced with the Mark Morris group for 12 years. "Somebody once said, 'You don't want to see what I'm doing; it's just not very pretty.' And I said, 'It's the contrary. It's beautiful because it's so unique. Nobody else is moving the way you're moving.'"

Moving Together

Still, the class is not a cure. There's not even scientific proof that dance helps the symptoms of Parkinson's. As the dancers get up from their chairs to begin moving across the floor, something happens. Leonore Gordon freezes, arrested in her movement. Akinesia.

"So I got frozen, which means sometimes the medication does not work with the Parkinson's," Gordon explains as she recovers. "So I can be doing great, running around all over the city, all over the place, then all of a sudden I can't move at all. So I couldn't enjoy the tap, which I usually love to do, and I can't do anything right now. I took extra medication a few minutes ago, so I may be able to be completely fine in a few minutes, but it's completely unpredictable, which is kind of the pain in the butt about Parkinson's. It's just so unpredictable."

Eventually the episode passes and Gordon gets up to join her fellow dancers. They've formed a community with each other — a microcosm as diverse as Brooklyn.

"You forget that you are with a group of people who have an illness," says Bobbye Butts, whose husband is in the class. "There's a kind of joy; there's a kind of jubilation. You get the feeling that everybody feels as normal as the next person."

Simpson's hands involuntarily grip the flesh of his arms — the skin on his bare shoulders turns pink from the grasp, but his face glows as he describes what it felt like to enter a studio again.

"It all kind of just swelled. Wonderful feeling from dancing, just felt wonderful. Felt a little bit like I found home again. I just love it," he says. "It's the thing I look forward to most, coming to class and hopefully flying across."

At the end of the class, the dancers march in an almost royal, Renaissance procession, as if they were lords and ladies at court. Grace, says one of the Morris dancers, is a visual representation of a whole set of feelings, confidence being one of the strongest ones. And on this floor, for an hour and 15 minutes, grace and confidence imbue the dance.

People With Parkinson's Discover the Joy of Dance

March 13 2009

By Rachel S. Cox

Grace, the physical kind at least, is a quality not often ascribed to people with Parkinson's disease (PD), a neurological disorder that gradually robs patients of the ability to perform even the most basic movements without great difficulty.

But on Tuesday afternoons in a spacious studio of the Maryland Youth Ballet in Bethesda, Anne Davis, diagnosed with Parkinson's eight years ago, recaptures a feeling she once knew well during a girlhood of horseback riding and ballet lessons. Urged on by choreographer and teacher Lucy Bowen McCauley, buoyed by the rhythms of familiar piano tunes, Davis dances, and afterward her pleasure and gratitude are palpable. The dance classes give her, she says, "a chance to really feel graceful again."

PD patients have long recognized the power of music to liberate them, at least temporarily, from the disease's debilitating constraints. Now a growing number of dance studios across the United States, including some of America's most renowned, are offering classes on a regular basis for people with PD. Students and teachers alike report marked improvements not only in physical symptoms but also in dancers' and caregivers' states of mind. And the first controlled studies of dance and Parkinson's disease—part of an ever-growing body of evidence that supports the therapeutic value of exercise for people with PD—bear out the empirical evidence.

Still, it seems an improbable coupling—dance, the realm of exquisite, extraordinary movement, and Parkinson's, which results from the dying of brain cells that produce dopamine, a chemical messenger or neurotransmitter, critical to the initiation of movement. About 1 million Americans have the disease, according to the Parkinson's Disease Foundation, and roughly 60,000 new cases are diagnosed annually.

As the disease progresses, patients experience varying degrees of tremor, stiffness, slowness of movement, difficulty of speech, and impairment of balance and coordination. The standard medication, levodopa, is administered in combination with other drugs and alleviates symptoms but loses effectiveness over time. And levodopa can cause side effects called dyskinesias, involuntary movements like those sometimes displayed during public appearances by one of the most famous people with PD, actor Michael J. Fox.

But to David Leventhal, a dancer with the Mark Morris Dance Group (MMDG) who teaches Dance for PD classes in Brooklyn, the pairing is not at all paradoxical. Dancers and people with PD "really have a lot in common," he says. "We share the challenge of bringing superconsciousness to movement. Neither can take a movement for granted."

It was her intuitive recognition of this similarity that in 2001 led Olie Westheimer, a professionally trained dancer and now the executive director of the Brooklyn Parkinson Group, to approach MMDG about starting the first artist-taught dance classes for patients, their families and caregivers. "Dancers train their bodies, but they dance with their minds," Westheimer says. "When dancers are given a complicated series of movements, they use cognitive methods and strategies to get it. Dancers have been doing it for hundreds of years. That's useful. [And they know that] the purpose of teaching is to help people enjoy moving."

Dance for PD classes have spread, through dancer-to-dancer training, to California, Massachusetts, Tennessee, Chicago, Toronto and the Washington, D.C., area. Financing and organizing generally comes from local nonprofits such as the Parkinson Foundation of the National Capital Area, which supports the Bethesda, Md., classes. MMDG will offer another teacher training workshop in March. Increasingly now, Westheimer works to educate the scientific community about the ability of dance and music to improve mobility and lift spirits. Last November Leventhal led a

group of McCauley's Parkinson's dancers in a closed-circuit demonstration for neuroscientists at their annual convention in Washington.

Neurologist Kathleen Shannon, M.D., a Parkinson's specialist at Rush University Medical Center in Chicago who strongly supports the benefits of dance, is designing a randomized, controlled study to compare changes in two groups of Parkinson's patients. One group takes regular dance classes with artists from Chicago's Hubbard Street Dance Group, and the other practices another form of exercise such as Pilates.

The first controlled study to examine the effects of dance classes on people with Parkinson's, published in December 2007 in the Journal of Neurologic Physical Therapy, focused on the Argentine tango, a dance form that researchers at Washington University School of Medicine in St. Louis say targets problems specific to PD patients, such as balance, multitasking, moving backward, initiating movement and moving at a variety of speeds. In the results, patients who took part in regular tango dance classes showed significant improvements in balance and mobility when compared with patients who did conventional exercise.

Lead researcher Gammon Earhart, assistant professor of physical therapy, points to another, peripheral result of the study that she feels is nevertheless also very important. After the study ended, half of the participants in the tango lessons continued to attend classes, while all those engaged in conventional exercise classes dropped out. The key to maintaining healthy movement, Earhart says, "is to remain as active as possible. If they enjoy it, find it engaging, they're motivated to do it."

"PD is not a life-and-death disorder, it's a quality-of-life disorder," says Mahlon R. DeLong, M.D., a neurologist and PD expert at Emory University School of Medicine in Atlanta. "PD is initially and predominantly a movement disorder, but [it is] associated with behavioral, nonmotor aspects that become more and more prominent" as the motor aspects are addressed. Depression, for instance, is as common to PD as tremor is, he says, especially as the disease progresses and patients become increasingly self-conscious and isolated.

As a result, DeLong says, an alternative therapy like dance, which gets patients "engaged, moving, socializing, feeling their bodies, gets them out," has tremendous value. "I'm very supportive," he says. "I think it's a wonderful thing for patients."

To observe one of McCauley's Dance for PD classes in Bethesda is to sense why this must be so. Preparing for class in the mirrored, yellow-walled studio, she unfolds metal chairs in a large circle, where her students will do their warm-up routines. The pianist settles herself at the piano. As students arrive, one parks her cane on the barre on the wall. The most debilitated is a thin, gray-haired man who wants to be identified as Ed. He hunches in his wheelchair, his arms and legs rising and falling spasmodically, as a helper rolls him into place in the circle, then sits down in the chair beside him.

Class progresses, like all dance classes, from small, supported movements—think of a ballet dancer at the barre—to larger, unsupported movements across the floor. McCauley and her assistant, company dancer Alison Crosby, use the language of ballet as students stretch out their legs in tendu and rond de jambe, first seated in their chairs, then standing by the barre, which Ed uses to pull himself out of his wheelchair, McCauley hovering nearby to help with balance.

Teachers enjoin students to "pull up" their posture to improve freedom of movement, deploy imagery to engage their imaginations and improvise movements of their own. In one favorite opening exercise, each PD dancer and care-partner says his or her name and demonstrates a gesture to go with it. On this January afternoon not long before Inauguration Day, Ed chooses to be the new president-elect. "Obama!" he shouts exuberantly and throws his arms in the air in a classic victory pose.

By the second part of class, when the piano breaks into a familiar tango and McCauley directs the dancers to walk in rhythm across the floor, faces are animated, smiles are spreading, cheeks are flushed and all but Ed swing their arms as they strut. Ed is deeply, and remarkably successfully, engaged otherwise. He is making his wheelchair dance.

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Dancing Begins with a Cognitive Act for Professionals and Parkinson's Patients

By Ben Mauk
January 02, 2009

Dance engages the brain's sensory and learning processes in a way unique among the arts, neuroscientists and professional dancers agree. The challenges of movement seem to reward the minds of dancers both professional and amateur, and even have found an enthusiastic audience among people with Parkinson's disease.

Mark Morris speaks about dance, movement and the brain during the Society for Neuroscience meeting. The Mark Morris Dance Group also presented a workshop on its dance program for Parkinson's patients. (Copyright © 2008, Society for Neuroscience. All rights reserved. Photo by Jeff Nyveen)

The Mark Morris Dance Group presented their ongoing dance program for Parkinson's patients Nov. 15 before a workshop audience of scientists and guests at the 2008 Society for Neuroscience meeting in Washington, D.C. The group, headed by dancer and choreographer Mark Morris, has been teaching "Dance for PD" classes for six years at its location in Brooklyn, N.Y., in conjunction with the Brooklyn Parkinson's Society.

"I am no kind of scientist nohow," Morris began. "But I do have an interest in this Parkinson's program. ... It turned into a dance craze that is sweeping the nation," with at least eight programs associated with Morris's group in other U.S. cities, as well as independent programs in the U.S. and Europe. As for the Brooklyn program, "It started as once a month, now it's a couple times a week," Morris said, and it fills to capacity with both regulars and newcomers.

The classes consist of seated and standing solo movements as well as activities in pairs and groups, all of which can be modified depending on a student's mobility.

Longtime student Carroll Neesemann said of his experience in Morris's program, "There was a time before I began to have more severe [periods without medication] in which the dance class would make things perfect. In the class you would be symptom-free."

Morris and the class instructors stressed that the class is not a clinical treatment and that they make no medical claims. "This is not a medical experience, it is an artistic experience," David Leventhal, a Dance for PD teacher and a dancer with Morris's group, said in an interview.

Joining several patients in a sample class, which reached the workshop audience via live closed-circuit video feed, were SfN past president and Brandeis

University neuroscientist Eve Marder and Wellesley College neuroscientist Bevil Conway. "It was an extraordinary, extraordinary event," Marder said later. Conway said that learning the timed moves challenged him cognitively, suggesting that dance affects the healthy brain as well.

Movement Begins in the Brain

Morris shared his insights on dance, movement and the brain at the "Dialogues between Neuroscience and Society" event following the workshop. Marder and Conway interviewed Morris, asking about his methods and about possible biological explanations for the art form. "There's a necessity to 'corporalize' music," Morris said. "[Dancing exists] in every culture I know of."

Conway asked Morris about proprioception, the sense of where one's body parts are situated in space. Proprioception makes coordinated movement in space possible.

"In the dance realm," Morris said, "the term proprioception includes feeling what you're doing, kinesthetic awareness, how much space your taking up, how far you can reach, if your backpack is hitting someone on the subway, your sense of if someone is near you."

As with many complex activities, honing proprioception and "muscle memory" starts as a conscious process but becomes natural and automatic in experts. "I always thought [dance] was just about getting your body to do the right thing," Leventhal said.

But teaching Parkinson's patients has taught him that "really, it's about learning how to learn. ... The beginning of the process is 99 percent mental, one percent physical."

However, when pressed at the dialogue event, Morris admitted that "by the time you've done a particular sequence thousands of times, it's nothing. It's like driving. You just got there; you don't have to consciously look at your feet."

"Professional dancers and people with Parkinson's have the same challenge," Leventhal said. "To take unfamiliar movement ... and to make it graceful, getting it to a point where it could be automatic."

The Seattle Times

Dance class helps Parkinson's patients use movement as a strategy

By Janet I. Tu
Seattle Times staff reporter
Thursday, July 29, 2010

People with Parkinson's disease learn movements that help with stability and coordination — and have fun — in a Dance for Parkinson's class in Kirkland led by dancers Deborah Magallanes (hands up, in front) and Corrie Befort (in green top).

At this dance class in Kirkland, the students walk in slowly, some rigidly or with a bit of a tremor. They take their places, not at a ballet barre or on the dance floor, but sitting in chairs.

As the live music starts, they flutter their fingers like hummingbird wings, point their toes along the ground. Limbs loosen and start to flow. And perhaps something even more important happens: Smiles emerge and laughter erupts.

An unusual dance class is taking place: one taught by professional dancers and offered free of charge for people Parkinson's disease and their caregivers. It's one of a small growing number of such classes worldwide.

The class is called Dance for Parkinson's, based on the Dance for PD program created in 2001 by the Brooklyn-based Mark Morris Dance Group and the Brooklyn Parkinson Group. Seattle and Spokane are among some 40 communities worldwide that have replicated the model.

The idea is that dance helps ease the symptoms — and some hope might even slow the progression — of Parkinson's disease, a disorder of the brain that leads to rigid muscles, shaking, impaired balance and difficulty with walking, movement and coordination.

It's long been accepted that exercise and movement are important for those with Parkinson's. In addition to physical therapy, there are yoga and tai chi groups for people with Parkinson's, for instance.

But the idea of dance as beneficial for those with Parkinson's is fairly new. While there hasn't been much research yet that shows the benefits of dance for those with Parkinson's, one recent study did find that at least one form of dance — the tango — helps improve balance and mobility in such patients.

Dr. Monique Giroux, medical director of the Booth Gardner Parkinson's Care Center at Evergreen Hospital Medical Center in Kirkland, says that, in many ways, dance is ideal for those with Parkinson's.

Research is showing that exercises that are more creative and engaging may help the brain enhance its nerve connections and improve how the brain works, she said.

But just as important, the dance class is an opportunity for joy, creative expression and socializing — an antidote to the depression and isolation that can come with Parkinson's.

"Putting someone on a treadmill and just asking them to walk more — that's a challenging task for someone who already has movement problems," Giroux said. But "tapping into an exercise that's fun and engaging — that's going to work."

"The joy is wonderful"

At a recent class at the Peter Kirk Community Center in Kirkland, where the Dance for Parkinson's sessions are held, the teachers led the students in movements inspired by birds.

They learned the steps first while sitting in chairs, then standing up, then moving across the floor, building on each movement until they had an entire routine: swooping like herons, lumbering like owls, fluttering like tropical birds.

A musician, improvising on an electric violin, accompanied throughout.

"The joy is wonderful," said Jenny Getchell, 46, of Sammamish, who has had Parkinson's since she was 8. Plus, "I feel real comfortable around people with Parkinson's because they know what it's like."

When someone has Parkinson's, the nerve cells in the brain that produce the chemical dopamine are slowly destroyed. Dopamine facilitates movement, so when there's a lack of dopamine, it's hard for a patient to initiate and control movements, unless she or he consciously thinks about and directs them.

That makes movements like walking unpredictable for those with Parkinson's. They may end up shuffling. But when they focus on where they put their feet, things go more smoothly.

The idea for the Dance for PD program began when the director of the Brooklyn Parkinson Group realized the way dancers consciously think about movement was in some ways similar — and could be beneficial — to Parkinson's patients.

"Dancers train — even at a most basic level — to figure out strategies to learn movement, to string movements together seamlessly," said David Leventhal with the Mark Morris group and one of the founding teachers of Dance for PD.

Music seems to help, too. "Many Parkinson's patients will freeze. But if there's music playing with a constant steady beat, it's almost like a reminder to keep stepping," said Leilani Pearl, director of communications with the National Parkinson Foundation.

Program to expand

The Dance for PD program began spreading in 2006 when the Mark Morris Dance Company started putting on the class wherever the company tours — including Seattle in 2008. Local classes started when demand continued even after the Mark Morris company left.

The local program — a partnership between Seattle Theatre Group, Spectrum Dance Theater and the Booth Gardner Center at Evergreen — began offering six-week sessions in fall 2009. Starting this September, it's expanding to eight weeks.

All classes follow the same basic format, though local dancers add their own flair: movements from their own dance company's repertoire, for instance.

Each class starts with participants practicing dance moves in chairs, then standing with the chairs or ballet barres for balance, before moving on to circle work and movements across the floor.

Through it all, the principle is to teach not to the symptoms, but to hold a real dance class, based on imagination, imagery and movement.

"It takes the focus off their limitations and it puts it on what they can do," said Shawn Roberts Hensley, school and outreach director for Spectrum Dance Theater.

There's something beautiful about seeing those with Parkinson's and their caregivers taking a dance class together, she said. "Especially a husband and wife — seeing them dance together again."

Jean Norsworthy, 84, of Bellevue, loves the social aspect and says the classes have improved her confidence in moving.

"Before the class, she wasn't confident even walking by herself," said her daughter, Tina Norsworthy, who takes the class with her mom each week. "Now she danced by herself on a cruise! I love seeing my mom smile, how happy she is dancing."

June 11, 2009

Dance for Parkinson's Disease Comes to the Bay Area

By Jaime Robles, The Berkeley Daily Planet

In a studio with mirrored walls and ballet barres, dancers are learning a series of steps from "Gorgeous tragedy," a solo variation from Mark Morris' L'allegro, il penseroso, ed il moderato. They cup their hands as if they were holding water and throw their arms backward, tossing that water over their shoulder; at the same time, they kick a foot outward. They bring their arms and hands together before their face, part their hands, and lean forward, arms dropped toward the floor and dangling, with the smallest suggestion of a pendulum swinging. The dancers finish the combination of movement by tracing a serpentine curve with their fingers in the air in front of them.

What may appear strange about the class is that everyone is seated in chairs. And there's something else different about these dancers: although half of them are dance teachers from different parts of the East Bay, the other half are sufferers of the neurological disease called Parkinson's.

A degenerative disease of the brain, Parkinson's disease is a movement disorder characterized by muscle rigidity, tremor and a slowing of physical movement. It has been known for some time that exercise helps ease the symptoms and may even slow the progression of the disease, but it has only recently been suggested that dance might be the most effective form of exercise for the Parkinson's patient.

How Dance for PD came about

Eight years ago the Brooklyn Parkinson Group and the Mark Morris Dance Group (MMDG) began an unusual collaboration at the Dance Group's studio in Brooklyn, when members of the company, David Leventhal and John Heginbotham, began giving classes on a weekly basis to people affected by Parkinson's.

The collaboration was proposed by Olie Westheimer, the founder and director of the Brooklyn Parkinson Group, a chapter of the National Parkinson Foundation.

Westheimer's lifetime interest in dance had led her to the MMDG studio. "Olie didn't want us to know anything about Parkinson's before we started teaching class," Leventhal says. The idea was that dancers are experts at movement and that they have a similar relationship to movement that PD patients do, which is to be "totally mindful" of how they move, and "to bring consciousness to movement."

What is taught in class has developed continuously over the years as a process of feedback between the dancers teaching and the PD participants. Before class begins, Leventhal cautions everyone to move only as much as is comfortable. "You are your own very best choreographer," he explains.

The movements taught are generally simple, but their accomplishment is subtle. Heginbotham instructs the students on the dynamics of a single movement of the arm, or a shift between kinds of movement: "The first movement is like you're in a beer hall. You are wearing lederhosen. And the second movement should

be as much like ballet as you can make it. So it's from beer hall to ballet."

Unlike beginning dance classes that often emphasize the repetition of codified movement, the Dance for PD classes ask for creativity and individual expression as well. "I think it's time," says Heginbotham, "for our Name Game." Leventhal explains, "This is a choreographic identification. You are going to give us a little phrase that is your identifying movement." One after another each dancer improvises a series of steps they feel is reflective of themselves while the other dancers mirror the action and the pianist improvises, flowing melodically between classical music, jazz and show tunes, slow and fast rhythms.

Here at last

MMDG's dancers first began their Dance for PD in the Bay Area several years ago, through Susan Weber, the assistant artistic director at Berkeley Ballet Theater. A former dancer with the Lar Lubovitch Dance Company in New York, Weber is currently Mark Morris' assistant on projects at San Francisco Ballet and often teaches company class for Morris' dancers. Weber provided the connection between Leventhal and Heginbotham and the Berkeley Ballet Theater, which is now the main organizer of Dance for PD in the Bay Area.

Last year, with the support of Cal Performances, Berkeley Ballet Theater applied for and received funding from the Chancellor's Community Partnership fund, which they are seeking to renew in order to further develop the program.

The classes have been so inspiring that the PD dancers attending founded their own organization, PDActive, an advocacy group of Berkeley/Oakland-based people impacted by Parkinson's disease whose mission is to strengthen the local PD community. Dance classes are a main focus of their activities, and the organization acts as advisor to the Berkeley Ballet Theater, helping to develop movement programs, publicize the program and raise funds. Currently, classes are held three times a month at a Berkeley Ballet Theater studio in the Julia Morgan Theater building. And a Thursday semi-monthly class is also given at Oakland's Danspace at 473 Hudson St.

In his book *Musicophilia: Tales of Music and the Brain*, neurologist Oliver Sacks writes that music gives Parkinson's sufferers exactly "what they lack, which is tempo and rhythm and organized time." He might have added that dancing to music infuses their lives with energy and joy.

Dance Helps Parkinson's Patients Harness Therapeutic Power of Movement

First Broadcast: Dec. 10, 2012 | Rebroadcast June 10, 2011

Transcript

JIM LEHRER: Next: a unique program that brings together dancers and people living with Parkinson's disease. Special correspondent David Iverson tells the story.

DAVID IVERSON: The Mark Morris Dance Center occupies a busy corner of Brooklyn. It's home to one the best-known modern dance companies in the world, where the physical defines the art.

But it's also home to a different group of dancers, where the physical defines a disease: Parkinson's.

DAVID LEVENTHAL, Mark Morris Dance Group: Our society tells us again and again that there are people who can dance, and there is everybody else, who shouldn't even bother, and I think that's such a tragedy.

DAVID IVERSON: David Leventhal and John Heginbotham have performed lead roles in some of the Mark Morris Dance Company's signature works. But they also teach some of those same moves to people with Parkinson's, creating both a unique class and a special community.

Mary Good (ph) was diagnosed with Parkinson's two years ago.

MARY GOOD, sufferer, Parkinson's Disease: The world judges us by how we look. And Parkinson's -- people with Parkinson's have really a look that people shy away from.

DAVID IVERSON: Is the class, then, a place where you're not judged?

MARY GOOD: That's exactly right. That's exactly right.

JOY ESTERBERG, sufferer, Parkinson's Disease: It's one of those situations where everybody is in the same boat.

DAVID IVERSON: Class member Joy Esterberg (ph) has had Parkinson's for seven years, but this class has given her something new.

JOY ESTERBERG: It's given me a community that you don't have in New York, for the most part. This community is like being in a small town.

JOHN HEGINBOTHAM, Mark Morris Dance Group: My impression is that many people with Parkinson's feel like they are outside of the human experience. And dance is a huge part of the human experience. And so, to come in and dance, you're human again.

DAVID IVERSON: At a meeting before the class begins, the cardinal symptoms of Parkinson's are often apparent: a hand that shakes, muscles that stiffen. But when class starts, symptoms often seem to slip away.

Class member Reggie Butts (ph):

REGGIE BUTTS, sufferer, Parkinson's Disease: When the dance class is going on, there are no patients. There are dancers.

DAVID IVERSON: It's a phenomenon that neurologist Dr. Claire Henchcliffe finds striking.

DR. CLAIRE HENCHCLIFFE, neurologist, New York-Presbyterian Hospital/Weill Cornell Medical Center: It's fascinating to see people who may have walked in slowly and sat down slowly and stood up slowly, and then, when the music comes on, they really just get going.

DAVID IVERSON: But it's not just the music and motion that's helpful. With Parkinson's, everyday actions like stepping and reaching take greater focus and concentration, which is exactly what dance demands.

DR. CLAIRE HENCHCLIFFE: You have to learn a complex series of steps, for example.

DAVID LEVENTHAL: I'm starting out with my palms facing me, and I'm going to rotate my hands, so my palm is now facing down.

DR. CLAIRE HENCHCLIFFE: There are pauses. There are turns. There are points where you go backwards. There are points where you mirror what your partner is doing. It has the physical component, but I think it also has the cognitive component.

DAVID LEVENTHAL: In dance class, the mind and body are constantly working together. You know, dancing is the ultimate mind-body connection.

DAVID IVERSON: Dance requires mind and imagination, focus and physicality. So does living with Parkinson's. It's grace that's hard-won.

JOHN HEGINBOTHAM: To be in control of your own movement and making it pleasing to yourself is a wonderful thing.

DAVID LEVENTHAL: Toss the flower petals.

REGGIE BUTTS: It's liberated a part of me, created a sense of freedom, a sense of creativity.

DAVID IVERSON: Perhaps that's why this isn't a class people skip. Reggie Butts is here just out of the hospital. His wife, Bobbi (ph), never misses either.

BOBBI BUTTS: The movement of butterflies and birds and throwing flowers. With dance, you soar.

JOY ESTERBERG: It's really like -- like bliss, in a way, because there is no constraint. If it's physical, and you extend your arm, you have an ideal sense of what an extended arm looks like. It doesn't look like this. But, if you try to do it, and, in your mind's eye, you are feeling it and doing it utterly to the extent that you can imagine it, then you are there.

DAVID IVERSON: And when you're there, Parkinson's isn't, at least not in the same way, which is why Dance for Parkinson's, as it's officially known, is now stretching beyond its Brooklyn borders.

DAVID LEVENTHAL: The best thing to plan around would be our regular Dance for P.D. class.

DAVID IVERSON: And David Leventhal, who this year won a New York Dance and Performance Award honoring his storied dance career, is leaving his performance life behind to devote all his time to Dance for Parkinson's.

DAVID LEVENTHAL: Now I spend a lot of the week on conference calls, which is something I never imagined. We have classes right now in about 14 states, from California to Washington State to Texas -- Houston, Texas -- all the way down to Florida. There are three classes down there.

This class has given me a completely new and welcome understanding that movement is everybody's right, that we're all entitled to move, we're all entitled to dance in the most natural, free, joyous way.

DAVID IVERSON: Joy, it's not a quality you associate often with Parkinson's. And, yet, it is what you see here. There are people in this class whose condition limits how they move, but not their smile or spirit.

DR. CLAIRE HENCHCLIFFE: We don't as yet know how to measure that objectively, and someone's sense of happiness, and how that affects their Parkinson's disease. We don't know how to measure joy or happiness. But we should try.

DAVID IVERSON: And if you could measure joy in this corner of Brooklyn, you would also find that what you give, you receive, and that every bit of it is shared.

To watch the program, please follow this link:
http://www.pbs.org/newshour/bb/health/jan-june11/parkinsons_06-10.html

NEW YORK POST

They've got the moves

By LEIGH WITCHEL

November 9, 2012

The dancers at Mark Morris' Brooklyn studios are rehearsing excerpts from "Four Saints in Three Acts."

But as they move to the Gertrude Stein lyrics — grouping together like figures on ancient pottery — here and there a hand flutters in a way Morris hadn't choreographed. The dancers have Parkinson's disease. And not only have they learned to dance with it, they're about to perform.

The group, Dance for PD, started 11 years ago as the brainchild of Olie Westheimer, the director of the Brooklyn Parkinson Group. She'd studied dance when she was younger, and searched for ideas to help her clients.

"Someone described the steps of how she managed to stand up and go to the kitchen, and the sequence was like how I learned to do a pirouette," recalls Westheimer, 70. "This is the solution, I thought. We have to dance!"

Scientific research seems to back her up. "The neurons that control automatic movement are compromised in Parkinson's — and they are related to mood as well," she says. "Dancing, its rhythm and imagery, [helps] someone move more easily."

Right around the time of her brainstorm, Morris' company had just moved into a new building down the block from BAM and the Brooklyn Parkinson Group. Soon, his dancers were offering free classes to PD patients that helped them with balance and coordination.

Now there are more than 40 affiliated groups in seven countries, and some of the original students have moved beyond class to performance.

One of them is Carroll Neesemann, a 71-year-old retired lawyer. Five years ago, he saw Morris' company perform "Mozart Dances," a work of gentle circles and snaking lines.

Neesemann went up to program director David Leventhal and said, "I want to do that."

Neesemann, a hulking ex-Marine, is not someone you'd say no to. It's on the bill tomorrow, and he's in it.

There'll be five short pieces in all, accompanied by live piano music and singers.

Dancing is a small victory for everyone involved.

"What I do every time I come to class is celebrate," Carol Enseki, a trim 58-year-old with salt-and-pepper hair, says of her weekly dance lessons.

"Parkinson's doesn't discriminate," observes Maria Portman Kelly, who began to volunteer with the PD group because her father was afflicted. "It brings together people who might never have crossed paths — a weird silver lining."

The disease affects people differently. Some PD dancers move with difficulty and without expression. With others, the symptoms are less noticeable, especially when they're in motion. When the piano plays, Enseki seems transported, sweeping back and forth.

Leventhal adapts Morris' choreography for the group — staying loyal to the movement, but allowing the dancers to follow through without a struggle. Because Parkinson's can affect memory, there are two pros among the amateurs to keep things on track.

But tomorrow's performance isn't about the steps you'll see onstage: It's about the journey it took to get there. If you look only with your eyes and not with your heart, you'll miss the real dancing.

Dance for PD performs tomorrow at 3 p.m. at the Mark Morris Dance Center, 3 Lafayette Ave., Brooklyn. Admission is free.