

About Dance for Parkinson's

History

Dance for people with Parkinson's was developed by Olie Westheimer in Brooklyn, New York in 2002 with the Mark Morris dance company. David Leventhal, one of the dancers in the Mark Morris company who has been very involved with the programme, has since collaborated with the English National Ballet (ENB), and in 2010 ENB developed a Dance for Parkinson's programme in London. Since then ENB have developed a national programme and courses for dance leaders and health professionals, and have researched the model of dance for Parkinson's in collaboration with Roehampton University. A network has been developed, (Dance for Parkinson's UK), and the aim is for every person who has Parkinson's to have access to a high quality dance class in their locality.

Some of the key symptoms of Parkinson's

- Difficulty in initiating movement (akinesia / freezing).
- Slowing of movement (bradykinesia).
- Changes in gait (eg shuffling, slowness, freezing. It is especially difficult to turn, walk backwards, and engage in conversation whilst walking).
- Stooped posture.
- Muscular tremors.
- Postural instability.
- Loss of axial mobility (mobility of the head, neck and trunk).
- Loss of smell.
- Reduced vocal power.
- Loss of facial expression.
- Cognitive function may be affected – poor problem solving, fluctuation in attention, slowed cognitive speed and memory problems.
- Poor sleep.

Many people with Parkinson's are at higher risks of falls because of some of the above symptoms, and along with a higher incidence of osteoporosis, they are at high risk of fractures.

How does dancing help people with Parkinson's?

(Summarised from the Dance for Parkinson's course resource literature).

- Difficulty in initiating movement
In Parkinson's, sometimes the mental directive to move can take time to arrive at the muscles. Movement can often be accessed more readily through rhythmical musical cues, or counting.
- Freezing.
Freezing most often occurs when there is a break in concentration from a disruption – eg, when walking and someone crosses your path, or when stepping through a door / over a threshold.
This has the effect of the weight being thrown forwards, as the feet stop moving, leading to instability and a potential fall. An effective way to overcome this is to take a deep breath, allow the heels to settle into the floor again, then gradually shift the body weight from one foot to the other, until momentum allows for a good step forward again. These strategies can easily form part of every dance class, and practising them to rhythmic music (which itself can cue movement) can be of direct benefit to people with Parkinson's. Walking and stepping around the room (simulating the busy street environment) can give participants the chance to practise how to keep moving.

- **Gait problems**
Gait can be unsteady – sometimes the steps get smaller and quicker, so the upper body tends to pitch forwards, and falls can occur as control of balance is lost. Attention to posture and larger steps regulated by a clear musical beat can be helpful. Practising heel strike in sitting and at the barre can be beneficial, as well as rotational movements and arm swings to aim to get a more normal, balanced gait pattern. Practising change of direction when walking can also help balance, which is experienced in most dances.
Loss of arm swing (especially on one side) is often an early symptom of Parkinson's. Restoration of the co-ordination of arm and leg swing can be worked on and incorporated into dance.
- **Reduced feedback (reduced proprioception / awareness of the body in space)**
People with Parkinson's have diminished feedback from their movements, so they perceive that their knees may be extended when they are not, or they may think they are standing up straight, when they are stooped. This gradually weakens musculature, and compromises posture, which then has a negative effect on balance. Exaggerating movements in dance into full extension, with musical cues to keep a movement going can aid proprioception and muscle memory.
- **Tremor**
This is a commonly recognised symptom of Parkinson's, and can be very visible and distressing. The tremor in Parkinson's is a 'resting tremor', which may disappear during active, purposeful movement. Being in class with other people with Parkinson's can help people feel more comfortable. Having less anxiety about the tremor can make it less troublesome.
- **Rigidity**
For some, rigidity and muscle stiffness are prevalent features. Encouraging stretching, rotation, deep breathing, different facial expressions and relaxation can all help. Some self massage techniques can be incorporated into the class when necessary, which can also help to relax muscles.
- **Lack of 'flow'**
Automatic movement is interrupted from the condition of Parkinson's. Involuntary movements can occur from the condition or due to medication. In combination, there is a perceived lack of flow to movement. In dance, harnessing imagery, can improve the flow of movements – eg, imagining moving underwater. Alternatively, music with a beat that encourages more purposeful movement can help promote a regular gait pattern – eg, imagine walking like a person in a hurry to get to work.
- **Reduced vocal power**
Facial muscles can become stiff, affecting speech clarity. Also the voice can become reduced in volume from reduced strength in the muscles controlling the vocal cords. Combining the voice with movements can encourage communication, act as a further cognitive activity, and act as a further cueing aid. It can aid relaxation by use of breathing control, and improve volume of the voice. Using song and dance (using voice and gestures) can also encourage facial expressions and improve body language.
- **Poor sleep**
Physical and mental activity needed to perform in a dance class can naturally improve sleep patterns.

Research

There are over 170 papers on the benefits of dance in people with Parkinson's.

Research into dancing and Parkinson's has shown to improve balance, gait (walking pattern) and endurance. Most people also report an improvement in their posture, though this is more difficult to measure. Subjective improvements include improved socialisation, activity participation, cognition and quality of life.

Any type of dancing has demonstrated these improvements, and dance has out-performed exercise classes for Parkinson's.