Objectives
This poster aims to raise awareness of the rapidly expanding curricula of Remedial Processes [i.e., Rehabilitative Interventions and other non-pharmacological approaches] increasingly applied by Occupations Therapists, Physiotherapists and Speech & Language Therapists, to address the ‘gaps’ left by current available medical treatments, for the motor and non-motor symptoms of Parkinson’s.

Background
In his essay on the Shaking Palmy [chapter v paragraph 2] James Parkinson suggests ‘reason for hoping that some remedial process may be long be discovered’ (1817) [reparative means might be employed [in the first stage] with success…]

200 years on the modern [multi-disciplinary] management of people with Parkinson’s encompasses many novel non-pharmacological, non-surgical, therapeutic activities and clinical interventions, that can be used to support motor, cognitive and psychological function. Brain Repair, Rehabilitation and Motor Relearning.

Methods
Over two decades of professional experience, involving more than 800 people with Parkinson’s is synthesised here. In addition, this work is informed by the growing canon of peer-reviewed articles about physical activity approaches and other non-pharmacological (i.e., surgical) methods to provide well-being specifically of people living with Parkinson’s.

Results and Discussion
Brain repair using pharmacological or another agent [to halt or even reverse the progression of Parkinson’s] may one day be available. Meanwhile, a growing body of evidence shows that regular engagement in physical activity is of great benefit to people living with Parkinson’s. It is of particular interest that participation in moderately intense activity undertaken relatively often [on most days, even in short sessions (e.g., 10–15 minutes)] can benefit brain health in people with Parkinson’s. Regularly engaging in creative pursuits, undertaking physical activity and enjoying participation in social events, have all been shown to either protect against the risk of developing Parkinson’s disease [artistic pursuits - Snider et al., 2015] or to yield benefits in terms of management of symptoms and improving the Quality of Life of those with this condition.

Rehabilitation
Many non-pharmacological Parkinson’s-specific interventions have been shown to be useful for management of difficulties associated with gait, mobility and posture. Some non-pharmacological management methods have also been developed for: to aid sleep, to improve lung capacity, to boost cognitive, increase emotional well-being, cope better with self-care, ease eating and drinking, to support mood and aid cognitive function.

Motor relearning
Contrary to earlier assumptions, recently published functional imaging studies and evidence from studies of Dual Task Training** - involving people with Parkinson’s [asked to walk & carry a tray with a drink on it] show that functional improvements can be achieved by people with a pre-existing diagnosis of Parkinson’s. Thus, when desirable, individuals can learn to undertake two problematic tasks simultaneously again with confidence, after suitable motor re-training. Adaptive movement strategies commonly employed to overcome start hesitation, freezing gait, to change direction more easily, to change the bed and to adjust position in bed, are taught by Occupational Therapists and Physiotherapists with experience of Parkinson’s. Training exercises range from simple to one-or, or small group sessions, to ‘high-tech’ methods harnessing common devices such as the Nintendo Wii Fit® with balance board, or much rarer Virtual Reality techniques.

Motor exercise-type activities such as Tai Chi, moving to Rhythms and Music and styles of partnered and un-partnered Dance have been shown to be of value. Furthermore, Parkinson’s-specific methods that employ Action Observation and Motor Imagery as innovative approaches [i.e., exoskeletons] have also recently been demonstrated to be of value in the rehabilitation of people with Parkinon’s.

Conclusion
A small but fast-expanding evidence base shows people with Parkinson’s can benefit from participation in Rehabilitative Approaches that support Coping, mediated through the processes of Adaptation, Brain Repair and Motor Relearning. People wishing to find ways to manage functional difficulties and specific symptoms associated with Parkinson’s can benefit from participation in activity-based interventions and by learning practical coping strategies. Suitable informed Occupational Therapists, Physiotherapists and Speech & Language Therapists can equip people with individually tailored, activity-based interventions - employing Parkinson’s-specific techniques and Coping Strategies.

Until a cure is found, all Clinicians can suggest participation in physical activity to people with Parkinson’s. It is, of course, important to consider individual interests, choice, availability of the right type of activity or class [ideally led by a trainer with experience of people with balance difficulties] and travel. One local Occupational Therapist [or Physiotherapist] to be able to access a range of suitable activities.

*Supporting evidence - Further reading...


