ORTHOSTATIC TREMOR

Physiotherapy Treatment & Strategies

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- Born in Australia, lived half of my life in the US
- Studied pre-med science while majoring in psychology at Hunter College at the City University of New York
- Moved to Australia in 2012 after being accepted into the Doctor of Physiotherapy program at the University of Melbourne
- Currently work as a private practice physiotherapist at Docklands Health in Melbourne
- Stumbled upon OT by chance when a patient presented to my clinic
Topics

01  What does the research say?

02  How to find a physio and questions to ask

03  Physiotherapy treatment and case study

04  Allied health support

05  Questions
Research & Evidence

What does it say about OT and physiotherapy?
Evidence for physiotherapy for OT

• Very little research on OT and physiotherapy
• Most research findings are based on case studies of just a few people


• No current clinical guidelines exist for OT and physiotherapy
Evidence for physiotherapy for OT

• Research shows positive benefit of balance, strength, and endurance training on length of time standing and postural sway

• Physiotherapy is effective with and without vision but effect appears stronger with eyes closed

• To treat OT combine elements of OT research with findings on systemic benefits of physical activity

• Identify problems according to the International Classification of Functioning, Disability, and Health (ICF model)
Assessing the therapist

Never assume all physios are the same

Appointment Checklist

1. **When making appointment**
   Ask receptionist if the therapist has special knowledge or interest in neurological conditions

2. **Initial consultation**
   Educate the therapist about your condition. You are your own best advocate

3. **State your goals for treatment**
   Let the therapist know the ways that OT impacts your life and what your prioritized goals are

4. **Do your exercises!**
   Non-compliance can be a reason why physio doesn’t work
ICF Model – Mapping Therapy Goals

Interaction of ICF Components

Health Condition (Disorder or Disease)

Body Functions
Body Structures

Activities

Participation

Environmental Factors

Personal Factors

Adapted from the World Health Organization International Classification of Functioning, Disability and Health (ICF) model, WHO 2001.
ICF Model: OT

Interaction of ICF Components

- Quadricep tremor
- Standing at social event
- Community involvement
- Tripod stool
- Pessimistic nature

Adapted from the World Health Organization International Classification of Functioning, Disability and Health (ICF) model, WHO 2001.
TREATMENT CASE STUDY:

- 60 year old female presents with 5 year history of OT, lower back pain, and decreasing ability to stand: affecting ability to engage in social situations and everyday activities like supermarket shopping due to trouble standing in line. She reports depression, anxiety, weight gain, and debilitating fatigue.

- On examination she exhibits palpable antagonist/agonist tremor in the thigh (both quadriceps and hamstrings). Multiple trigger points in muscle. Tender lumbar spine. She can stand for a maximum of ~45 seconds before needing to sit down. Community walking has been decreasing – having trouble stepping up and down the curb. Balance is affected by tremor. Normal reflexes and sensation. She walks with a stick and uses WC for longer distances.

- Her goals are to increase standing time and community walking so she can attend various activities related to her hobbies.
Treatment Plan

• Increase general fitness with gentle functional exercise (previous program with a personal trainer had been too aggressive and had set her back)

• Structured home exercise program

• Gradually increase time standing by increments of one minute as tolerated over time

• Utilize weight shift strategy to offload limb to minimize tremor

• Find flat, level path to practice overground walking

• Manual therapy to treat lower back pain and multiple trigger points – mix in with exercise

• Hydrotherapy – added benefit of social support

• Regular discussion about fatigue, motivation and medication
TREATMENT RESULTS:

• Progress was gradual over time

• Time standing increased using weight shift strategy. Reached 15 minutes without assistive device

• Overground walking time and speed increased

• Participation in activities increased: going to the beach, attending social groups, travel, hydrotherapy

• General fitness increase: strength, endurance, balance, and mobility - transfers

• Some weeks limited by periods of debilitating fatigue

• Overall increase in sense of self-efficacy.
Exercise Program

WHICH EXERCISES SHOULD I DO?
- Functional!
- Related to goals and problems
- Preserve and maximize functional ability
- Improve cardiovascular fitness
- Improves mood
- Don’t overdo it
- Progress isn’t always linear
Functional Exercise Examples

- Sit to Stand
- Stand to sit
- Calf raises
- Squats
- Walking
- Step up and down
- Balance on one leg
- Pushing (wall push ups)
- Pulling (elastic bands around a door handle)
- Reaching
Coordinate your care!

- Physiotherapist
- Neurologist
- Psychologist
- Social Worker
- General Practitioner
- Pharmacist
Questions!