MDS Allied Health Summer School 2014

Transfers

European Physiotherapy Guidelines for Parkinson’s Disease

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- What is the problem?
- Assessment
- Interventions

Transfers: the problem

Automated performance motor programs

Regulate simultaneous & consecutive movements

Meaningful planning / organisation
1. Energizing deficit: too late

2. Scaling deficit: too small

3. Relaxation problem

Additional problems:
- Muscle power (hip & knee)
- Joint mobility
- Altered postural responses
- Multi-morbidity
- Non-physical aspects
- Night: levodopa levels & visual guidance

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**Transfers: assessment**

**Five Times Sit-to-Stand**
- Sit back against chair & arms folded
- Stand up and sit down 5 times as quickly as possible
- Stand straight legs
- Not touch back of chair

**Timed Up and Go** – practice at end

**Modified Parkinson Activity Scale**
- Chair
- Bed
Modified PAS: chair transfers

1.a. Rise without using hands
Please rise without using your arms on the knees or chair

(4) normal, without apparent difficulties
(3) mild difficulties: toes dorsiflex to maintain balance, arms swing forward to keep balance or use of ‘consciously performed rocks’ (compensations) with the trunk
(2) difficult, several attempts needed or hesitations, very slow and almost no flexion of the trunk
(0) impossible, dependent on physical assistance (perform I-B)

1.b. Rise with using hands (only scored if rising without using hands is impossible)
Please try to rise again. When standing, you have to wait a second again.
You may use your hands now

(2) normal, without apparent difficulties
(1) difficult, several attempts needed or hesitations, very slow and almost no flexion of the trunk
(0) impossible, dependent on physical assistance

2.b. Sit down without using hands
Please, sit down again without using your arms

(4) normal, without apparent difficulties
(3) mild difficulties (uncontrolled landing)
(2) clear abrupt landing or ending in an uncomfortable position
(0) impossible, dependent on physical assistance (perform I-B)

2.b. Sit down with using hands (only scored if rising without using hands is impossible)
Please, sit down again. You may use your hands.

(2) normal, without apparent difficulties
(1) abrupt landing or ending up in an uncomfortable position
(0) dependent on physical assistance

Modified PAS: chair transfers

Condition: without using hands
Condition: with using hands

Courtesy Dr. Maarten Nijkrake & Prof. Alice Nieuwboer

Balance: M-PAS Bed

Conditions: 1. without blanket; 2. with blanket

INTO BED

PAS III: seomobilitaat

A: Zonder deken
Will u op uw rug of de deken geen liggen, zoals u dat thuis ook zou doen? Let erop dat u goed en comfortabel in bed komt te liggen.

B: Met deken
Will u op uw rug in bed gaan liggen, onder de deken. Let erop dat u goed en comfortabel in bed komt te liggen en goed onder de deken.

 Courtesy Dr. Maarten Nijkrake & Prof. Alice Nieuwboer

Transfers

Based upon your findings...

Which interventions?

Pwp tips & tricks

• Successful bed turners:
1. Used support
2. Hip-hitched
3. Sat up and moved
Not all could turn successfully both ways

Exercise: physical capacity & functional mobility

Progressive & vigorous
- exertion: Borg Scale 6-20 from 13 to 17
- heart rate: MHR from 40-60% to 60-80%
- load, speed and number of repetitions
  -1 to 3 sets
  -8 to 15
  -at 60% to 80% of 1 repetition maximum

Practice of skills
- H&Y2-3: Delay through motor learning
- Goal-based: repetition, specificity and complexity
- Cognitive engagement: motivation, attention, cues, dual task
- From on to off state practice
  - Tai Chi (Li, NEJM 2012): dynamic balance, challenging movements
  - Dance (Duncan, NNR 2012): coordination, cueing, complexity
  - Dual task training (Strouwen, BMC Neurol 2012): task automaticity vs efficiency neural resources
  - Treadmill (Mirelman, BMC Neurol 2013: gait & virtual reality (V-TIME)

Compensation BG dysfunction

- Automatic performance motor programs
  - conscious movement execution
  - external cues
- Regulate simultaneous & consecutive movements
  - Divide into single components to carry out consecutively
- Meaningful planning / organisation
  - Divide into single components/activities, external planning

= Cueing & Self-instruction strategies

Compensatory strategies

Strategies for complex motor sequences

GDG advice: Steps to consider when applying strategies
1. Observe pwp: analyse limited components
2. Agree with pwp about most optimal [4-6 ]components
3. Summarise: support with visuals
4. Physically guide pwp
5. Ask pwp to rehearse aloud
6. Ask pwp to use a motor imagery
7. Ask the pwp to perform: consciously controlled
Strategy complex motor sequences

Reminders
Cards
Video
Written
Skype
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What about Getting up from the floor?

Acknowledgements and questions
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