



Invitation to ParkinsonNet training for physical therapists



ParkinsonNet Entry-level Course

ParkinsonNet aims to optimize Parkinson care

ParkinsonNet is a non-profit foundation initiated at the Radboud university medical centre in Nijmegen, the Netherlands.

The goal of ParkinsonNet is to guarantee the best possible care for people suffering from Parkinson's disease by doing research, developing clinical practice guidelines, providing education, facilitating collaboration and making Parkinson expert health professionals visible over other health professionals and to people with Parkinson's.

Evaluations have shown that ParkinsonNet improves quality of care and health of people with Parkinson's, at reduced costs.

For more detailed information on ParkinsonNet on how it is currently functioning in the Netherlands:

www.ParkinsonNet.info

<https://www.youtube.com/watch?v=XmFSofSePg4> (English version of a video explaining ParkinsonNet)

<http://www.parkinsonnet.de/parkinsonnet-team> German version of a video explaining ParkinsonNet)

Implementation of ParkinsonNet within Luxembourg: health professional trainings

LCSB (Luxembourg Centre for Systems Biomedecine) is now implementing ParkinsonNet within Luxembourg. This initiative is sponsored by the Ministry of Health and governed by LCSB.

After having had a positive outcome on a feasibility study done within Luxembourg late September this year, LCSB is now progressing to the next phase of implementing ParkinsonNet within Luxembourg by **inviting you to become one among the first physical therapist trained and certified by ParkinsonNet**.

Please find below some information about the training that consists out of three days, where the first and second day will be held on the **23rd and 24th of March 2018** at the **University of Luxembourg**. The date for the third day of training still needs to be defined.

The training is **free of charge** for you.

Contents

| | | |
|---|--|----|
| 1 | Introduction..... | 5 |
| 2 | General information to the course..... | 6 |
| 3 | Information and learning outcomes Day 0 (e-learning) | 7 |
| 4 | Information and learning outcomes Day 1..... | 8 |
| 5 | Physical therapists: preparation | 10 |
| 6 | Physical therapists: information and learning outcomes for Day 2 | 12 |
| 7 | Physical therapists: information and learning outcomes for Day 3 | 13 |

1 Introduction

This course syllabus provides essential information for physiotherapists participating in the ParkinsonNet Entry-level Course 11-06-2017. This course, a product of ParkinsonNet, is organized in collaboration with LCSB.

The course is developed by:

ParkinsonNet International.

- Ingrid Sturkenboom PHD: occupational therapist (expert/trainer)
- Hanneke Kalf PHD: speech and language therapist (expert/trainer)
- Maarten Nijkrake PHD: physiotherapist (expert/trainer)
- Bart Post MD, PhD: neurologist (movement disorder specialist)
- Bas Bloem MD, PhD: neurologist (movement disorder specialist)

In collaboration with:

LCSB

Wishing you an inspiring event!

Abbreviations

The following abbreviations are used in the document:

PD: Parkinson's disease

PT: physiotherapy

PwPD: person with Parkinson's disease

OT: Occupational Therapy

SLT: Speech Language Therapy

2 General information to the course

| ParkinsonNet Entry-level Course | | | |
|-----------------------------------|--------------------|--|--|
| Date | Times ¹ | Location | Audience |
| Period | | e-learning (new) | Health professionals from multiple disciplines |
| Day 0 | | | |
| 23rd March 2018 | 09.00 – 16.45 | University of Luxembourg (Campus Belval) | Health professionals from multiple disciplines |
| Day 1 | | | |
| 24th March 2018 | 09.00 – 17.15 | University of Luxembourg (Campus Belval) | Physical therapists Occupational therapists Speech and language therapists |
| Day 2 | | | |
| Day 3² | 09.00 – 16:30 | [Still needs to be defined] | Physical therapists Occupational therapists Speech and language therapists |

A brief contents description

The ParkinsonNet entry-level course starts with an e-learning that has to be completed before the course that starts at 23rd of March 2018. The e-learning consist of two modules. Module one focuses on Parkinson's disease and module two focuses on both medical and non-medical treatment. The e-learning has to be completed by all health professionals from the multiple disciplines.

During day 1, all health professionals from the multiple disciplines will meet each other and follow the same program. The presentations will go more into detail about Parkinson's disease, atypical forms and multidisciplinary treatment options.

On the second and third day, physical therapists (PT), occupational therapists (OT) and speech therapists (SLT) will be trained separately in using their evidence-based guidelines and how to collaborate with other professionals, patients and their caregivers. These training days focuses on knowledge and skills, for which practical sessions with people with Parkinson's are included.

General learning outcomes

At the end of the ParkinsonNet Entry-level Course:

- You will have insight in state-of-the-art knowledge about Parkinson's disease and medical treatment
- You will have insight in (referral criteria and) treatment options of multiple health disciplines
- You will have insight in the method and benefits of ParkinsonNet
- You will have insight into your role regarding the implementation of ParkinsonNet within the region
- Physical therapists, occupational therapists and speech therapists will be up to date regarding their professional assessments and treatment options using their guidelines for decision support

¹ The times indicated may be able to change (they only are indicated here in order to give people a general idea on the time that need to be calculated in if people want to participate in the training)

² The date of day 3 will be defined based on the availabilities of the participants of day 1 and 2 as well as of the availability of the trainers.

Certificate

All participants will receive a certificate after completion of both the e-learning and the 3 day course.

3 Information and learning outcomes Day 0 (e-learning)

A unique username and password will be sent to each participant by email.

| Module I The basics of Parkinson's disease | |
|---|--|
| Learning outcomes | <p>At the end of module I you will be able to:</p> <ul style="list-style-type: none">• name and recognize the core features of PD• name the motor and non-motor symptoms of PD• place PD into the perspective of the International Classification of Functioning, Disability and Health (ICF)• name and recognize supportive criteria, absolute exclusion criteria and red flags for the diagnosis of Parkinson's disease• explain the levels of certainty of diagnosis of PD• name the main types of atypical parkinsonism.• explain why it is important to distinguish between PD and atypical parkinsonism• explain the purpose of a MRI (Magnetic Resonance Imaging) and a DAT-SPECT (Dopamine Receptor Scintigraphy - Single-photon Emission Computed Tomography) for diagnosis of parkinsonism• name the most important prognostic factor for life expectancy of PD.• describe the general pattern for progression of motor and non motor symptoms and disability in PD• name the definition of stages of PD according to Hoehn and Yahr• name the two main groups of risk factors for PD• name the pathological hallmark of PD• describe current understanding of the pathological process of PD |

| Module II Medical and Non-medical Treatment for Parkinson's Disease | |
|--|---|
| Learning outcomes | <p>At the end of this module you will be able to:</p> <ul style="list-style-type: none">• explain the need for a multidisciplinary and system approach in parkinson care• explain the difference in focus, treatment goals and working mechanism between medical management and allied health care• name the working mechanism and effects of the main groups of PD medication.• explain the characteristics of the on and off stage and their relation to therapeutic window of effect of dopamine medication• explain the 3 types of advanced therapy• explain the 4 general strategies that allied health professionals use to compensate for the specific movement problems of person's with Parkinson's disease (PwPDs) |

- explain general training principles related to type of learning, context, timing and intensity to consider when setting up an exercise or training program for PwPDs
- explain the different groups of types of interventions that can be used
- explain how the focus of type of interventions evolves over the course of disease
- name the referral criteria to refer PwPDs to PT, OT and SLT
- name the intervention options used by PT, OT and SLT

4 Information and learning outcomes Day 1

| An introduction to ParkinsonNet | |
|---|--|
| Learning outcomes | At the end of this presentation you will be able to: <ul style="list-style-type: none">• describe the aims of ParkinsonNet• describe the methods of ParkinsonNet• name the effects of ParkinsonNet in the Netherlands |
| Motor and non-motor symptoms in Parkinson's disease and atypical parkinsonisms | |
| Learning outcomes | At the end of this presentation you will be able to: <ul style="list-style-type: none">• recognize the four most important motor symptoms• describe the most important non-motor symptoms of PD• describe the impact of PD on health and quality of life• describe and recognize clinical features of Multiple System Atrophy (MSA), progressive supranuclear palsy (PSP) and Lewy Body Dementia (LBD)• differentiate clinical picture of MSA, PSP and LBD from PD |
| Medication and advanced treatment in Parkinson's disease | |
| Learning outcomes | At the end of this presentation you will be able to: <ul style="list-style-type: none">• explain the influence and current care consensus regarding the use of levodopa and dopamine-agonists for Parkinson symptoms• describe the interaction effects of proteins and levodopa• recognize side effects of medication• describe the indications and contra-indications for advanced therapy• describe the most important benefits of advanced therapy• describe the possible adverse events of advanced therapy |

Application of multidisciplinary care

Learning outcomes

At the end of these presentations you will be able to:

- Explain the need for a multidisciplinary and system approach in parkinson care
- Provide examples of intervention options by physical therapy, occupational therapy and speech and language therapy for people with Parkinson's

5 Physical therapists: preparation

Required preparation:

- Before day 1
 - Fill out the *survey* to provide insight into your current practice and learning needs which you get access to via your mail.
 - Complete the e-learning modules I and II which you get access to via your mail.
- Before day 2:
 - Read the Quick Reference Cards (QRC) of the European Physiotherapy Guideline for Parkinson's disease (English version) which is available in the e-learning or at www.ParkinsonNet.info. (last 4 pages of the Guideline main document)(If your computer says that the download is blocked, please go ahead and do download the file. It's a safe PDF document)
 - For measurement tools and type of interventions mentioned on the Quick reference Card that you are unfamiliar with, read in depth the information in the Guideline (see the Guideline contents for page numbers)
- Before day 3:
 - Let a PwPD complete the Pre-assessment Information Form (PIF)(guideline main document, pages 98-101) and bring it with you (ensure confidentiality by removing name).

Additional reading/resources (not compulsory):

PD and disability

- Shulman LM et al. The evolution of disability in Parkinson disease. *Mov Disord*. 2008;23:790–96.

Posture

- Doherty et al. Postural deformities in Parkinson's Disease. *Lancet Neurol* 2011; 10: 538–49

Exercise

- van Nimwegen M, Speelman AD, Hofman-van Rossum EJ, Overeem S, Deeg DJ, Borm GF, et al. Physical inactivity in Parkinson's disease. *J Neurol*. 2011.

- Speelman AD, van de Warrenburg BP, van Nimwegen M, Petzinger GM, Munneke M, Bloem BR. How might physical activity benefit patients with Parkinson disease? *Nat Rev Neurol*. 2011.

- van Nimwegen M, Speelman AD, Overeem S, van de Warrenburg BP, Smulders K, Dontje ML, et al. Promotion of physical activity and fitness in sedentary patients with Parkinson's disease: randomised controlled trial. *BMJ*. 2013;346:f576.

- Petzinger GM, Fisher BE, McEwen S, Beeler JA, Walsh JP, Jakowec MW. Exercise-enhanced neuroplasticity targeting motor and cognitive circuitry in Parkinson's disease. *Lancet Neurol*. 2013;12(7):716-26.

- van der Kolk NM, Overeem S, de Vries NM, Kessels RP, Donders R, Brouwer M, et al. Design of the Park-in-Shape study: a phase II double blind randomized controlled trial evaluating the effects of exercise on motor and non-motor symptoms in Parkinson's disease. *BMC Neurol*. 2015;15:56.

Freezing

- Nonnекes J, Snijders AH, Nutt JG, Deuschl G, Giladi N, Bloem BR. Freezing of gait: a practical approach to management. *Lancet Neurol*. 2015;14(7):768-78.

Dual task training

- Strouwen C, Molenaar E, Munks L, Keus SHJ, Zijlmans JCM, Vandenberghe W, et al. Training dual tasks together or apart in Parkinson's disease: Results from the DUALITY trial. *Mov Disord.* 2017. *Falls*
- Hiorth YH, Larsen JP, Lode K, Pedersen KF. Natural history of falls in a population-based cohort of patients with Parkinson's disease: an 8-year prospective study. *Parkinsonism Relat Disord.* 2014;20(10):1059-64.

Useful Apps:

- Metronomes:
 - [MetroTimer, IOS](#)
 - [Metronome Beats, Android](#)

6 Physical therapists: information and learning outcomes for Day 2

| Understanding & using the European Physiotherapy Guideline for Parkinson's disease; Experience within Norway | |
|---|---|
| Brief description content | <ul style="list-style-type: none">• Presentation on the development and general contents of the Guideline• Discussion on how this Guideline may differ from your current practice |
| Learning outcomes | At the end of this workshop you will be able to: <ul style="list-style-type: none">• Explain the strength and weakness of the Guideline• Describe the four elements in the model of physiotherapy care• Explain how to use the Guideline for decision-support |

| History taking & physical examination | |
|--|---|
| Brief description content | <ul style="list-style-type: none">• Presentation: how to address all ICF (International Classification of Functioning, Disability and Health) domains and ensure patient-centeredness during history taking; how measurement tools benefit physical examination and how to choose them• Discussion on how this may differ from your current practice |
| Learning outcomes | At the end of this workshop you will be able to: <ul style="list-style-type: none">• Make motivated choices in history taking and physical examination• Interpret results of measurement tools used |

| Practice measurement tools | |
|-----------------------------------|---|
| Brief description content | <ul style="list-style-type: none">• Practice session with colleagues for selected measurement tools (selection will be based on the web-based survey results) |
| Learning outcomes | At the end of this workshop you will be able to: <ul style="list-style-type: none">• Use the most important measurement tools in PD |

| Compensatory strategies: Theory cueing & sequencing | |
|--|---|
| Brief description content | <ul style="list-style-type: none">• Presentation with theory on cueing, focused attention and strategies for complex movement sequences (30 min)- joint with occupational therapists• Discussion on how this may differ from your current practice |
| Learning outcomes | At the end of this workshop you will be able to: <ul style="list-style-type: none">• Explain the rationale behind compensatory strategies• Select specific strategies in collaboration with the PwPD |

| Patient demonstration cueing & sequencing | |
|---|--|
| Brief description content | <ul style="list-style-type: none"> • Demonstration of selection and application of strategies • Discussion on how this may differ from your current practice |
| Learning outcomes | <p>At the end of this demonstration you will be able to:</p> <ul style="list-style-type: none"> • Train PwPDs how to apply compensatory strategies |

7 Physical therapists: information and learning outcomes for Day 3

| Exercise: what , how and when | |
|----------------------------------|---|
| Brief description content | <ul style="list-style-type: none"> • Presentation of the rationale behind exercise, types of exercise and minimal requirements of an exercise program for PwPDs • Discussion on how this may differ from your current practice |
| Learning outcomes | <p>At the end of this workshop you will be able to:</p> <ul style="list-style-type: none"> • Explain the rationale behind exercise • Support PwPDs in having sufficient physical activity levels • Describe the effects of different types of exercise • Prepare an effective, person-specific exercise program |

| Postural deformities and motor learning in PD | |
|---|--|
| Brief description content | <ul style="list-style-type: none"> • Presentation about the different postural deformities in PD and their therapeutic approaches • Discussion on how this may differ from your current practice • Presentation of the rationale behind practice for motor learning and how put this into practice • Discussion on how motor learning in PwPDs may differ from your current practice |
| Learning outcomes | <p>At the end of this workshop you will be able to:</p> <ul style="list-style-type: none"> • Explain the different postural deformities • Describe the effects of different types of interventions for posture • Explain the rationale behind practice for motor learning • Provide an effective, person-specific practice intervention |

| Cases: Pre-assessment Information Form (PIF), complex cueing and sequencing cases | |
|---|--|
| Brief description content | <ul style="list-style-type: none"> • Discussion about how to interpret a completed PIF • Discussion on complex cueing/sequencing cases |
| Learning outcomes | <p>At the end of this workshop you will be able to:</p> <ul style="list-style-type: none"> • Adapt cueing and sequencing strategies to complex situations |

| What we have learned and what will we do differently in clinic tomorrow | |
|--|--|
| Brief description content | <ul style="list-style-type: none">• Summarizing the main lessons learned for each discipline and implications for interprofessional collaboration.• Round the table discussion on implementation issues: what has been done, what needs to change and how can we implement the lessons learned. |
| Learning outcomes | <p>At the end of this workshop you will be able to:</p> <ul style="list-style-type: none">• Understand the main lessons learned for each discipline and what this means for interprofessional collaboration. |