



Virginia Mason™

Parkinson's Disease Management

A Multidisciplinary Approach

John W. Roberts, MD

APDA Symposium
June 27, 2017

Parkinson's Disease

2017, the 200th anniversary of James Parkinson's famous essay.

AN
ESSAY
ON THE
SHAKING PALSY.

BY
JAMES PARKINSON,
MEMBER OF THE ROYAL COLLEGE OF SURGEONS.

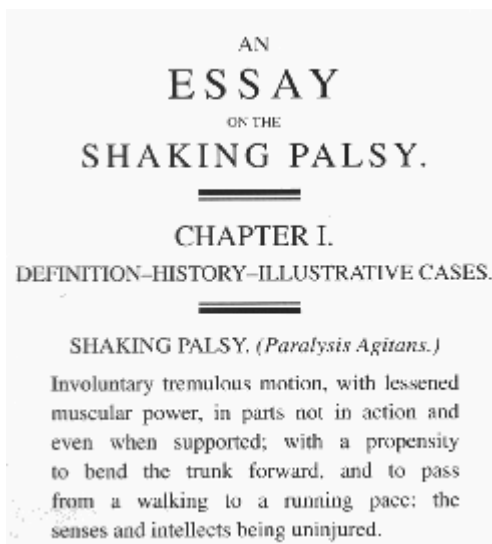
LONDON:
PRINTED BY WHITTINGHAM AND ROWLAND,
Osnell Street,
FOR SHERWOOD, NEELY, AND JONES,
PATERNOSTER ROW.

1817.

History of Parkinson's Disease

“An Essay on the Shaking Palsy”

- Published 1817
- Clinical description of 6 patients
 - most of them simply observed over time walking on the streets of his London neighborhood

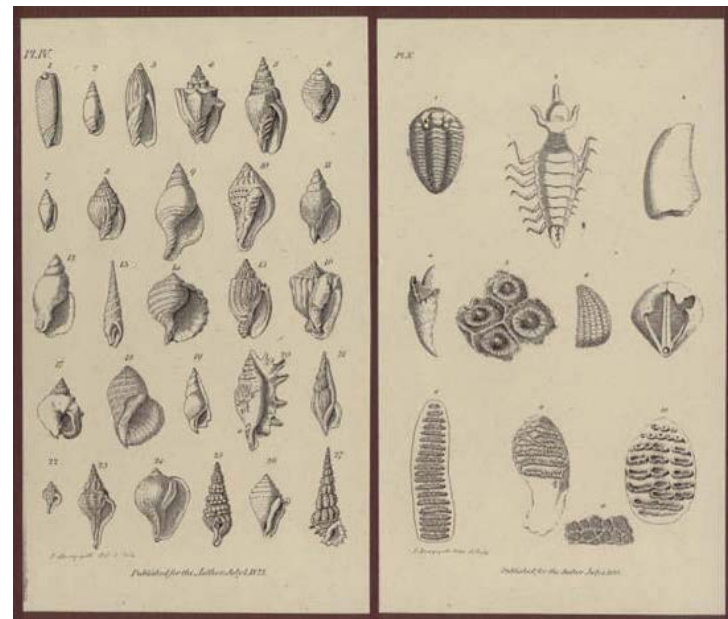


James Parkinson

James Parkinson 1755-1824

London physician who also published papers on chemistry, paleontology, and more

With his surgeon son, published the first description, in the English language, of a ruptured appendix



History of Parkinson's Disease

Jean-Martin Charcot 1825-1893

- French Neurologist
 - Salpêtrière Hospital, Paris
- Further described the shaking palsy in late 1800s and called it “Parkinson's disease”



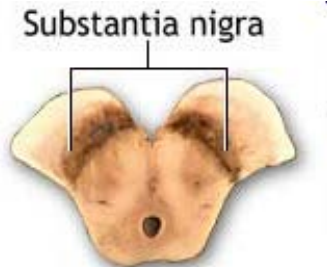
History of Parkinson's disease

Friedrich H. Lewy 1885-1950

- German-American neurologist and pathologist
- First described Lewy bodies

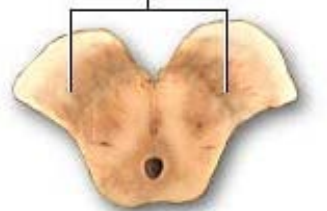


Cut section
of the midbrain
where a portion
of the substantia
nigra is visible

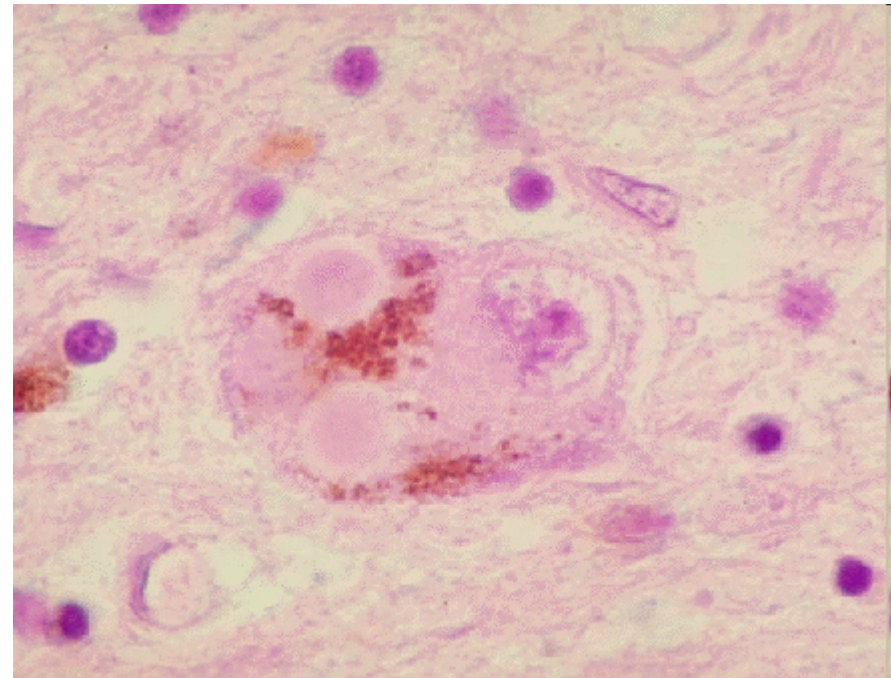


Substantia nigra

Diminished substantia
nigra as seen in
Parkinson's disease



© ADAM, Inc.

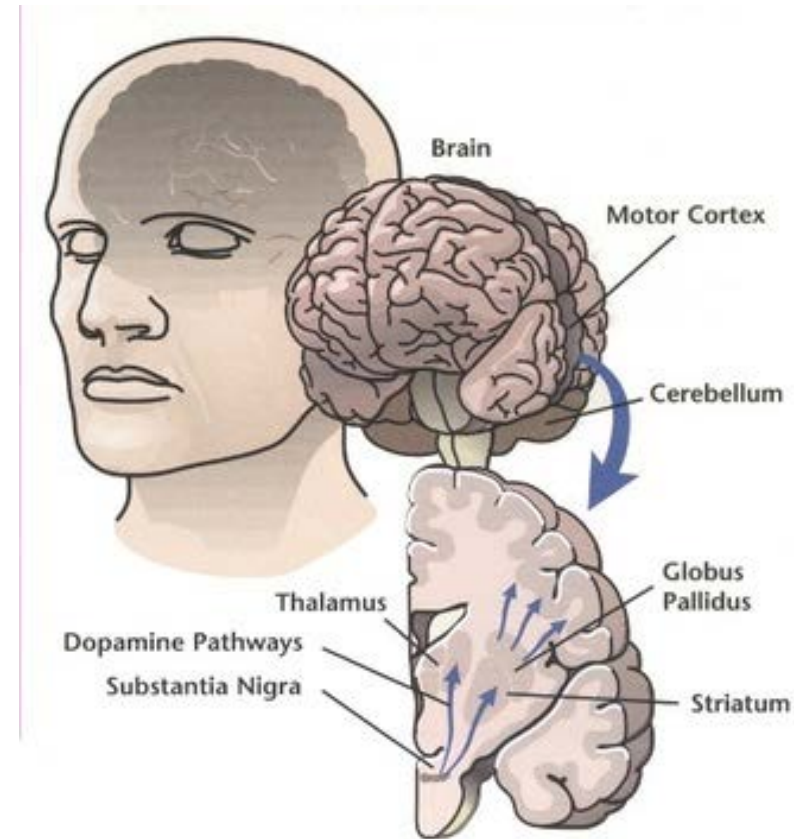


Dopamine

Loss of dopamine brain cells in the substantia nigra leads to motor symptoms

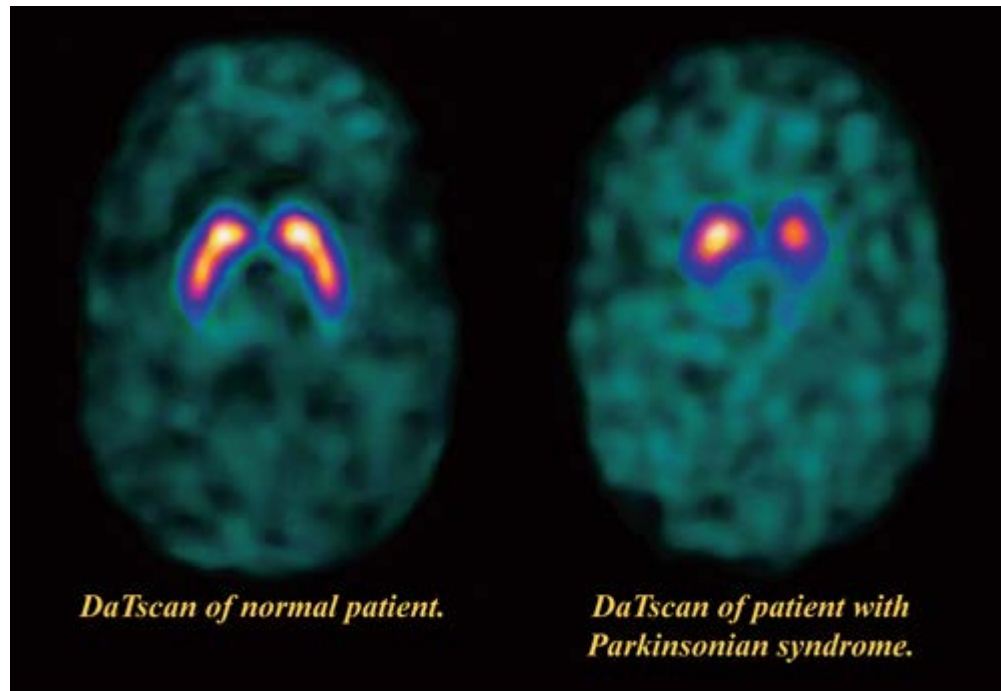
Dopamine loss seen in

- Parkinson's disease
- and certain mimickers
 - MSA
 - PSP
 - CBD



DaT Scan

DaT Scan can determine the quantity of dopamine brain cells



Parkinson's disease

Motor Symptoms (usually greater on one side of the body)

Resting tremor

Slow Movement (Bradykinesia)

Rigidity

Other Motor Symptoms

Stooped posture

Shuffling Gait

Poor Balance



Parkinson' Disease Staging

Hoehn & Yahr stage

0: No visible symptoms of Parkinson's disease

1: Parkinson's disease symptoms just on one side of the body

2: Parkinson's disease symptoms on both sides of the body and no difficulty walking

3: Parkinson's disease symptoms on both sides of the body and minimal difficulty walking

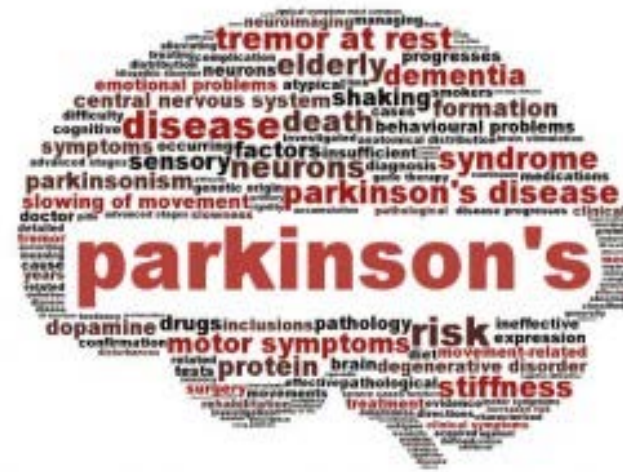
4: Parkinson's disease symptoms on both sides of the body and moderate difficulty walking

5: Parkinson's disease symptoms on both sides of the body and unable to walk

The Bigger Picture

There are many symptoms beyond the basic motor symptoms of tremor, slowness, rigidity, walking and balance.

Loss of dopamine is not the only problem.



"Preclinical" Disease

Anosmia (reduced sense of smell)

- Degeneration of olfactory bulbs

REM Behavior Disorder

- Medulla (part of brainstem)
- Strong predictor of Parkinson's disease

Constipation

- Enteric (intestine) nervous system

Restless Legs Syndrome

Other Parkinson's Symptoms

Depression

- At least 50% of patients

Anxiety

Cognitive impairment

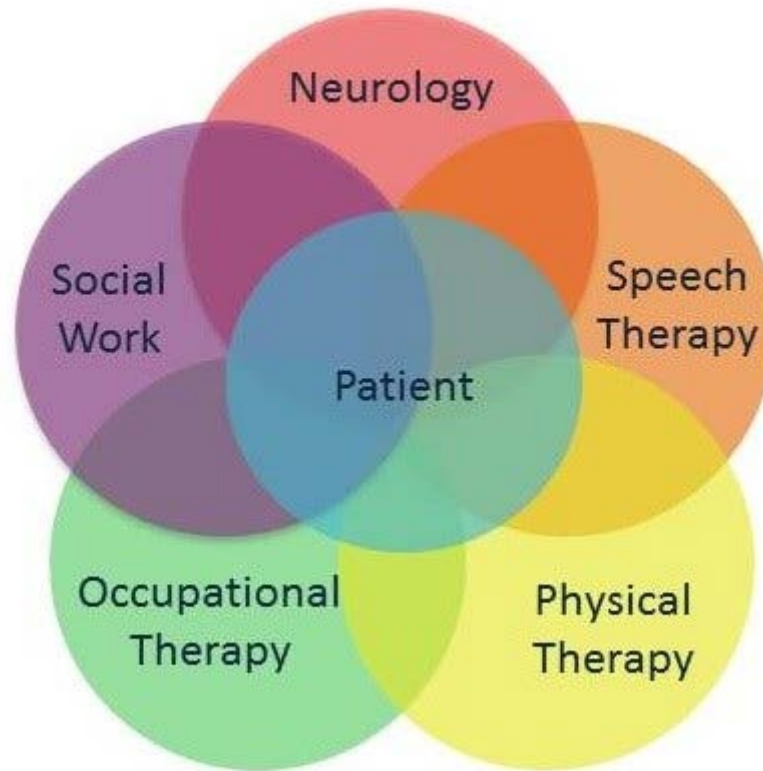
- Mostly attention

Dementia

- Up to 1/3 of patients
- Seen in later stages of disease

Speech disorders

Multiple Disciplines



Neurologist

What does it take?

4 years College (BS or BA)

4 years Medical School (MD or DO)

4 years Internship/Residency

Movement Disorders Subspecialist

All of the above plus

1-2+ year Fellowship

Neurologist

Diagnose diseases of the nervous system

Manage neurological diseases

- Medications

- Education

- Referrals to other treatment

 - Rehabilitation Therapists

 - Neurosurgical Treatment

 - Social Worker, etc.

The Alternatives

INTRODUCING THE INTERNET SCHOOL OF MEDICINE!

Have you always wanted to be a doctor, but couldn't spare the time and also weren't smart enough at science?



Then why not become an INTERNET DOCTOR?

JUST THINK! WITHIN SECONDS, YOU'LL BE ABLE TO:

- ★ Discover millions of diseases you never knew existed...
- ★ Read papers written by actual doctors...
- ★ Study X-rays and slides just as if you knew what you were looking at...

... AND MUCH, MUCH MORE!!!

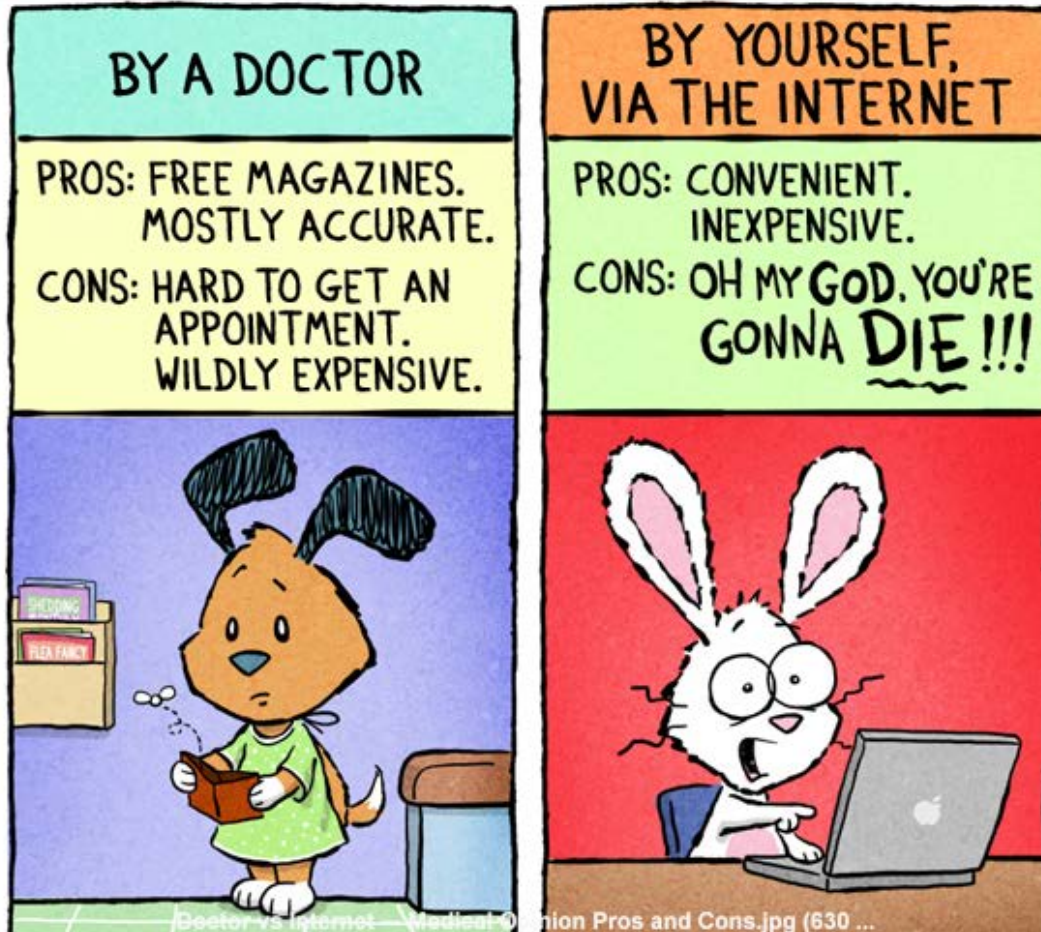
ENROLL NOW AND WE'LL SEND YOU A FREE INTERNET DOCTOR COAT!



VISIT OUR
WEB SITE

→ www.internetschoolofmedicine.com
and **SEE FOR YOURSELF!**

The Alternatives



Physical Therapist

What does it take?

4 years college (BS or BA)

3 years doctorate (DPT)

(formerly masters level)

What can they do?

Improve mobility

Improve safety

Improve independence

Improve fitness

Physical Therapy



Occupational Therapist

What does it take?

4 years college (BS or BA)

2 years OT school for Masters or

3 years OT school for Doctorate

What do they do?

Help people achieve independence in

activities of daily living (ADLs)

physical, cognitive, psychological

Occupational Therapy



Speech-Language Pathologist

What does it take?

4 years college (BS or BA)

2 years SLP school for Masters or

2-3 years more for Doctorate

What do they do?

Diagnose and treat

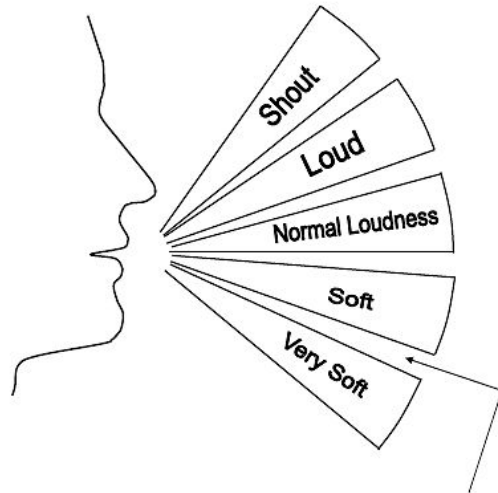
Speech disorders

Language and cognitive disorders

Swallowing disorders

Speech-Language Pathology

RELATIVE VOCAL LOUDNESS LEVEL OF AN INDIVIDUAL WITH PARKINSON DISEASE

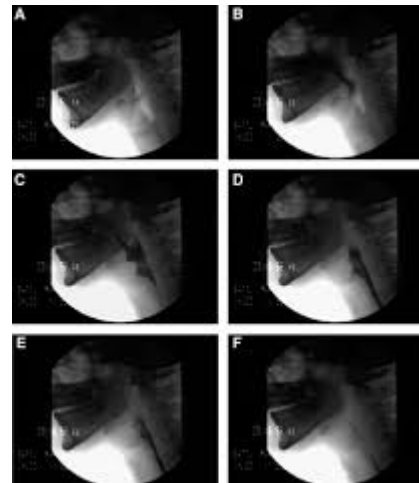


(Adapted from Carolyn Mead Bonitatti, 1987)

Vocal loudness level of an individual with Parkinson disease

THINK LOUD!

(LSVT LOUD / SLP)



Social Worker

What does it take?

4 years College (BSW)

2 years Masters (MSW)

What do they do?

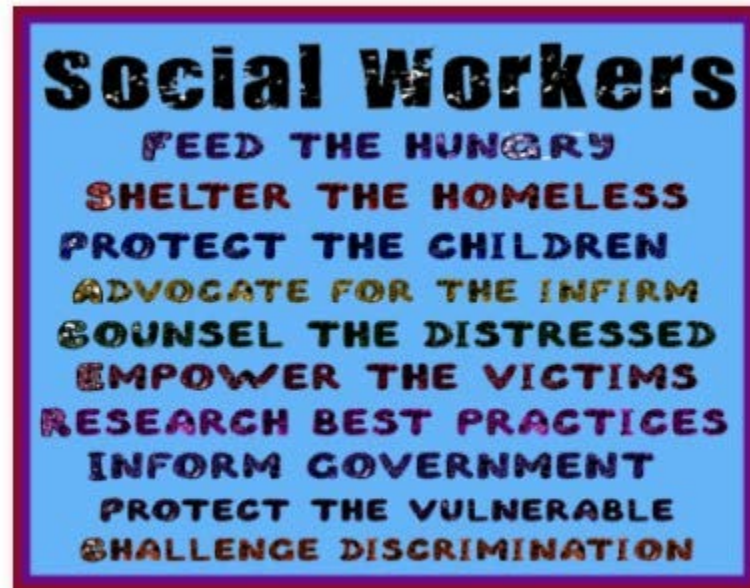
Help people cope with their disability

Counselling

Advocacy

Finding resources

Social Work



Nursing

Registered Nurses

Assistance with “everything”

Often the front line

In Clinic

On Telephone

By Electronic Messaging



PARKINSON'S Disease

- NURSING INTERVENTIONS
- 1. Improve mobility
- 2. Enhance Self- care activities
- 3. Improve bowel elimination
- 4. Improve nutrition
- 5. Enhance swallowing
- 6. Encourage the use of assistive devices

Advanced Care Practitioners

Physician Assistant (PA-C)

Advanced Registered Nurse
Practitioner (ARNP)

And Others

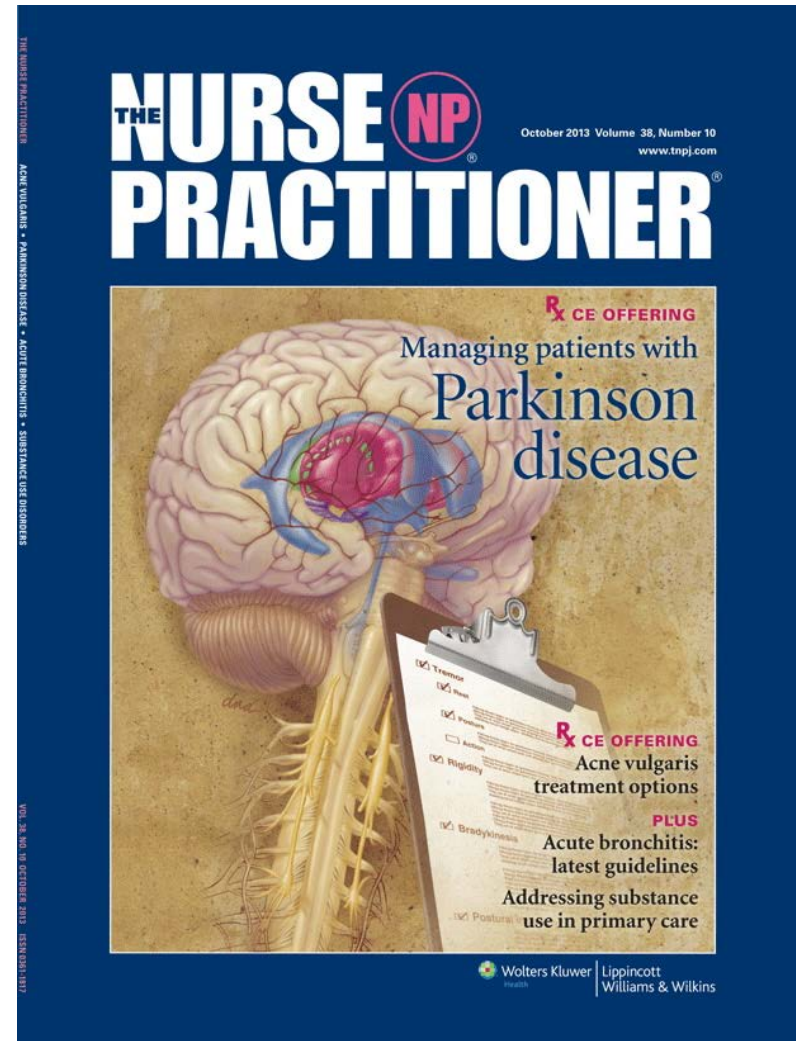
Advanced-degree medical providers
Clinics, hospitals, care centers, etc
Can do care management similar to
physicians

Advanced Care Practitioners

Medication
adjustments

Deep Brain
Stimulation
programming

Follow-up by
clinic visits
telephone
messaging



Neuropsychologist

What does it take?

- 4 years college (BS or BA)

- 3-7 years graduate school (MS, PhD)

What do they do?

- Evaluate cognitive disorders

 - Neuropsychological testing

- Some provide counselling

Neuropsychologist

What Do Neuropsychological Tests Measure?

- Attention and Processing Speed –
- Motor Performance –
- Sensory Acuity –
- Working Memory –
- Learning and Memory
- Intelligence
- Language
- Calculation
- Visuospatial Analysis
- Problem Solving and Judgment
- Abstract Thinking
- Mood and Temperament
- Executive Functions



Neurosurgeon

What does it take?

4 years college (BS or BA)

4 years medical school (MD or DO)

7+ years residency

2+ years fellowship

What do they do?

Surgical management of
neurological disorders

Neurosurgery for Parkinson's

Deep Brain Stimulation

Most common now

Pallidotomies

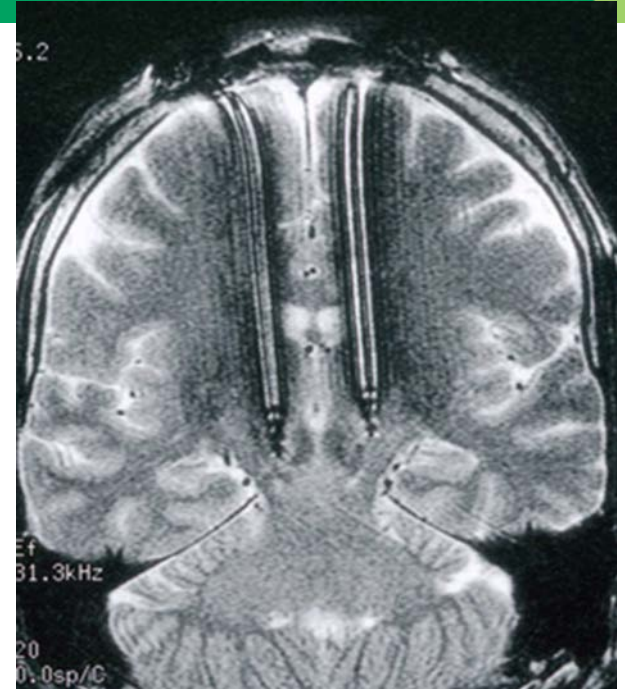
Thalamotomies

Cell transplants

Future

Genetic implants

Future



Primary Care Provider

Physician or Advanced Care Provider in various specialties

Family Practice, Internal Medicine or Geriatrics

Parkinson's disease is not likely your only medical problem

You cannot blame everything on PD

Primary Care

What Is a Primary Care Provider?

A primary care provider (PCP), also referred to as a primary care physician, diagnoses and treats medical conditions and provides patients with regular health checkups and preventive care services.

Primary care doctors can include:

- Family practitioners
- Internists
- Nurse practitioners
- Obstetricians/gynecologists
- Pediatricians
- Physician assistants



Multiple Disciplines of Care

Summary

Parkinson's disease is complex

No single medical provider can manage every aspect of this disease

The best care is received from a team of knowledgeable providers



We are all in this together!



Virginia Mason™

Each Person.
Every Moment.
Better Never Stops.