

## PARKINSON PLUS SYNDROME

### ► What are Parkinson Plus Syndromes?

Slowly progressive, neuro-degenerative disorders and includes diseases like Progressive Supranuclear Palsy (PSP), Multiple System Atrophy (MSA), Cortico-Basal Degeneration (CBD), Diffuse Lewy Body Dementia (DLBD).

### ► Which age group does it affect?

Usually affects after 60 years of age.

### ► What is the cause?

Cause is not known.

### ► What are the symptoms?

Shaking of hands or legs, slowness of activities, stiffness of limbs, postural instability, frequent falls, urinary problems, eye movement abnormalities, sleep problems, hallucinations, memory and other cognitive problems, abnormal twisting of the limbs.

### ► What is the treatment?

Dopamine replacement by Levodopa tablets.

### ► How is the response to treatment?

These disorders are poorly responsive to treatment. The disease progresses relentlessly.

### ► Is there any surgical treatment for these disorders?

No. Deep brain stimulation (DBS) or any other surgeries does not help.

### ► How to consult Parkinson Plus Syndromes and Movement disorders specialist at NIMHANS?

The patients can consult in OPD (F1) on Monday and Thursday. Subsequently these patients can come on 1st or 3rd Saturday to the Parkinson's Disease and Movement Disorders (PDMD) clinic following evaluation in F1 OPD.

### ► Where to find this brochure?



**NIMHANS Arogya Jagruti Kendra,**  
G-5 ground floor, OPD block, NIMHANS.

**Contact us at:**  
[nimarogyajagruti@gmail.com](mailto:nimarogyajagruti@gmail.com)

[Mentalhealtheeducationnimhans.org](http://Mentalhealtheeducationnimhans.org)

#### **Mind space initiative:**

<https://nimhans.ac.in/mind-space/>

Developed with support from Swacchta  
Action Plan 2020-21 under the  
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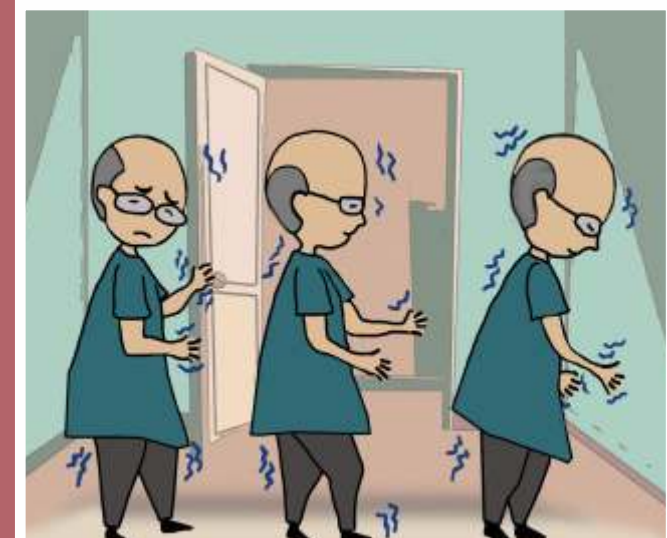
  
**NATIONAL INSTITUTE OF MENTAL HEALTH & NEURO SCIENCES**  
Institute of National Importance  
Bengaluru

### **Department of Neurology**

In collaboration with

**Department of Mental Health Education and  
Department of Psychiatric Social Work**

## Parkinson's Disease and other Movement Disorders



Design by : Ujwal creations | Illustrations by: Sridevi M V

## MOVEMENT DISORDERS

### ► What are Movement Disorders?

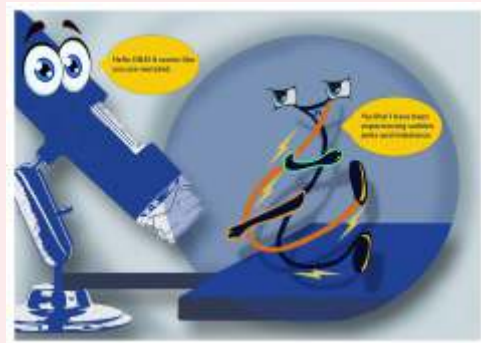
Neurologic disorders in which there is either an excess of movement or a paucity of voluntary and automatic movements

### ► What are the different Movement Disorders?

Parkinson's Disease, Parkinson Plus Syndromes, Tremors (*Shaking of limbs*), Dystonia (*Twisting of limbs or other body parts*), Chorea (*dance like movements*), Myoclonus (*sudden jerks of limbs*), Ballismus (*violent flinging movement of the limbs*) and ataxia (*imbalance*).

### ► What is the cause?

There are many causes. It can be genetic or acquired.



### ► What is the treatment?

Both surgical and medical treatment options are available. Medical management includes use of medicines either

singly or in combination. Surgical treatment includes **Deep Brain Stimulation (DBS)** and **Lesional (Thalamotomy, Subthalamotomy, Pallidotomy)**. The choice of treatment depends on the nature and cause of movement disorders.



DEEP BRAIN STIMULATION USING A BRAIN PACEMAKER

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## PARKINSONS DISEASE

### ► What is Parkinson's Disease?

Slowly progressive, neuro-degenerative disorder due to insufficient dopamine levels in the brain.

### ► Which age group does it affect?

Usually affects after 60 years of age. Some times it can affect individuals before 45 years of age.

### ► What is the cause?

Majority not known. In about 5-10% the cause is genetic. Progressive death of dopamine containing neurons due to accumulation of abnormal protein "**Lewy bodies**".

### ► What are the symptoms?

Shaking of hands or legs, slowness of activities, stiffness of limbs and postural instability with sense of imbalance and tendency to fall.



### ► What are the other symptoms?

Reduced sense of smell, constipation, sleep problems. Later they develop urinary problems, psychiatric problems, memory and other cognitive problems.

### What is the treatment?

Dopamine replacement by Levodopa tablets. Later patient may require surgery in the form of deep brain stimulation.



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