

# information

## PARKINSON'S SYMPTOMS

Parkinson's is a progressive neurological condition, which is characterised by both motor (movement) and non-motor symptoms.

The provisional medical diagnosis is based on symptoms because there is no definitive medical test or radiological procedure which diagnoses Parkinson's. The diagnostic criteria is composed of four cardinal symptoms which are:

- Tremor
- Bradykinesia
- Muscle rigidity
- Postural instability

### Tremor

Although tremor is the most commonly recognised symptom, it is not present in all cases of Parkinson's (30% of those with the condition will not experience tremor) and tremor is common to other conditions.

Tremor is related to an imbalance of neurotransmitters, dopamine and acetylcholine, for this reason, tremor may be the least responsive symptom to dopamine replacement therapy.

The classic Parkinson's tremor, if present, is described as a 'resting' tremor in that it is present when the affected limb is at rest. The tremor is regular and rhythmic and occurs at the rate of 4-6 times per second.

Initially tremor may be unilateral. However, with the natural progression of the condition it can be experienced on the other side. A classic tremor presentation of Parkinson's involves the thumb and first finger and is referred to as 'pill rolling'.

Tremor may be exacerbated by stress, anxiety, fatigue and lack of sleep. It diminishes with voluntary action and is absent during sleep. Cognitive testing and motor tasks in a different body part increase the resting tremor. Unlike Essential Tremor the resting tremor of Parkinson's is less likely to be increased by caffeine or improved with alcohol.

Tremor, if unresponsive to Parkinson's medication, may be managed surgically by Deep Brain Stimulation in the appropriate patient.

### Bradykinesia

Bradykinesia can be the most disabling symptom of the condition and refers to slowness of voluntary movements and a lack of normal associated movements. Initially it may be misinterpreted as slowing due to aging – however, it is out of proportion to normal aging.

Bradykinesia affects critical aspects of daily living – walking, talking, swallowing and speaking. In the eyes and face it presents as a decreased blink rate and a lack of facial expression.

For further information contact  
your state Parkinson's organisation:  
**Freecall 1800 644 189** [www.parkinsons.org.au](http://www.parkinsons.org.au)

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Bradykinesia is usually unilateral and initially may be confined to the distal muscles of the hand resulting in slow finger tapping and problems with fine motor tasks such as keyboard skills and fastening buttons. These difficulties are increased when dual tasking is involved.

Generalized bradykinesia is assessed by the overall slowing of all body parts – typically how easily the person rises from the sitting position and their speed of walking.

## Muscle Rigidity

Muscle rigidity may not be apparent to the person with Parkinson's but is felt by the medical practitioner in limb muscles when they are passively moved. It is described as 'lead pipe' or 'cogwheel' rigidity. Muscle rigidity as with most Parkinson's symptoms first present as unilateral. However, with progression they become bilateral.

Muscle rigidity is commonly present in the wrist, shoulder and neck. It may also manifest as a slightly flexed elbow on the affected side. Early reports of a painful shoulder are associated with increased muscle rigidity and tone. The pain associated with Parkinson's is often underestimated and reported, and is usually associated with muscle rigidity.

As the condition progresses muscle rigidity can lead to the characteristic forward flexed posture.

## Postural Instability

Postural instability and gait disturbances often develop later in the progression of the condition. If a loss of postural reflexes and resulting falls occur early, it is not suggestive of typical Parkinson's.

In early Parkinson's the posture may show a slight flexion of the neck or trunk with a slight lean to one side. Gait changes include reduced arm swing (unilateral) and shortened stride height and length which may lead to shuffling.

In addition to these four cardinal motor symptoms there are many others which are also considered in the diagnostic process. Often the non-motor symptoms are more challenging for the person living with Parkinson's.

## Other Symptoms

**Anosmia** refers to a decrease or loss of sense of smell. This often precedes the diagnosis.

**Anxiety** is a common phenomenon in Parkinson's and can exacerbate the motor symptoms.

**Constipation** is a common early symptom and is due to reduced motility of the intestines and may be exacerbated by a reduction in physical activity and the introduction of Parkinson's medication.

**Bradyphrenia** is the term used to describe slowness of thought experienced by people with Parkinson's.

**Depression** is commonly experienced prior to the diagnosis and is due to a chemical imbalance. A reactive depression may occur with the diagnosis and support and information is essential at this time. Frequently apathy and lack of motivation are evident and are mistaken for depression.

**Fatigue**, which is not relieved by resting, is a common early symptom. This can be related to a variety of causes including disturbed sleep pattern due to changes in bed mobility, restless legs symptoms, urinary frequency and/or leg cramping.

**Festination of speech** describes the change in verbal fluency. This can be mistaken for a stuttering speech pattern.

**Impotence** (long-term) is frequently reported.

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**Micrographia** refers to the changes in hand writing (especially cursive). This becomes smaller in height and the written words may be unclear by the end of the sentence.

**Microphonia** describes decreased volume of speech often not obvious to the person with the condition.

**Postural hypotension** refers to a drop in blood pressure especially on rising from a lying or sitting position. This can result in unsteadiness, dizziness and falls. In addition the medications used in the treatment of Parkinson's may cause a drop in blood pressure.

**Sialorrhea** describes excessive saliva and is often due to decreased frequency of swallowing and poor mouth closure. In addition dry mouth can be experienced due to the medications used for the management of Parkinson's.

**Sleep disturbances** – a common early symptom is the tendency to 'act out' one's dreams and call out while dreaming. This can often lead to an unintentional injury to the person experiencing the dream or their bed partner.

**Swallowing changes** may occur in relation to liquids or solids.

**Sweating** and increased sensitivity to temperatures is often reported. Cold weather may exacerbate tremor. Hot weather may lead to increased sweating and postural hypotension.

The symptoms listed above reflect changes some people may experience. Not everyone will experience all symptoms. For this reason a review by a medical specialist with an interest in Parkinson's is recommended.

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