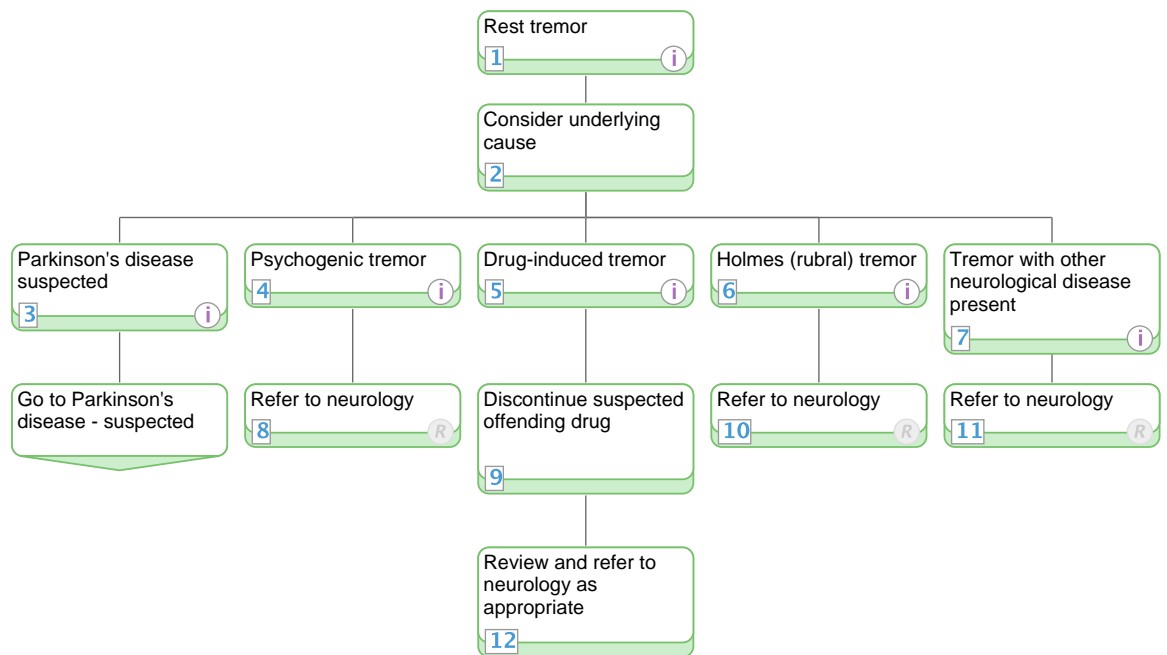


**i** Information  
**■** Primary care  
**■** Secondary care



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# Resting tremor

Medicine > Neurology > Tremor

## 1 Rest tremor

Quick info:

Scope:

- this page provides information on the different causes of rest tremor

Definition:

- rest tremor is present in a body part that is not voluntarily activated and is completely supported against gravity
- often caused by Parkinson's disease and other causes of parkinsonism
- however other causes of rest tremor should be considered

Features of Parkinson's disease:

- typical unilateral onset of tremor in hand and occasionally a leg
- "pill rolling tremor" rare but a characteristic of Parkinson's disease
- rest tremor present in 70% of Parkinson's disease patients (practical tip - to induce rest tremor ask patient to count down from 10 out loud)
- Look for
  - facial or vocal impassivity
  - reduced arm swing on walking and shoulder shrug test (look for arm swing whilst shaking patient's shoulders)
  - cogwheel rigidity
  - bradykinesia
  - micrographia
  - postural instability
- refer to a person with expertise in Parkinson's disease prior to instigating medication

Main causes:

- Parkinson's disease (see pathway)
- other causes of parkinsonism
- drug-induced tremor
- dystonic tremor syndromes
- severe essential tremor
- Holmes tremor (also termed rubral)
- psychogenic tremor
- Wilson's disease
- vascular parkinsonism - multiple system atrophy, progressive supranuclear palsy
- drug induced parkinsonism - phenothiazines, metoclopramide, hydrocephalus, encephalitis, toxicity (eg. manganese)

Investigations:

- routine biochemistry, including thyroid function, liver function tests, calcium & phosphate
- Other possible investigations:
  - to rule out Wilson's disease copper studies if <50 years old at onset, but still consider if >50 years
  - dopamine transporter scan
  - consider genetic tests in appropriate cases
  - in young people (less than age 30 years) consider diagnostic studies to rule out Wilson's disease

Reference:

PRODIGY. Parkinson's disease. Newcastle upon Tyne: PRODIGY; 2005.

## 3 Parkinson's disease suspected

Quick info:

Features of Parkinson's disease

- typical unilateral onset of tremor in a hand and occasionally a leg
- "pill rolling tremor" rare but characteristic of Parkinson's disease
- rest tremor present in 70% of Parkinson's disease patients (practical tip - to induce rest tremor ask patient to count down from 10 out loud)
- Look for:
  - facial or vocal impassivity
  - reduced arm swing on walking and shoulder shrug test
  - cogwheel rigidity
  - bradykinesia (slow movements with decrement)
  - micrographia
  - postural instability
- refer to a person with expertise in Parkinson's disease prior to instigating medication

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# Resting tremor

Medicine > Neurology > Tremor

## 4 Psychogenic tremor

Quick info:

The following are clues to a psychogenic aetiology:

- history:
  - sudden onset, remissions or both
  - unusual combinations of rest, postural or intention tremors
  - somatization in past medical history
- consider medical causes for tremor with psychiatric illness (eg. Wilson's disease)
- Examination:
  - decreased tremor amplitude during distraction
  - variations in tremor frequency with distractions or voluntary movements of the other hand (entrainment)
  - co-activation sign of psychogenic tremor (tremor only present when arm is voluntarily stiffened)
  - appearance of additional and unrelated neurological signs
  - finger tremor is unusual in psychogenic tremor
  - simple reflex time studies
- consider other causes of tremor
- focus of treatment should be predominantly psychological

## 5 Drug-induced tremor

Quick info:

- can be caused by numerous drugs or drug withdrawal
- usually presents as postural tremor, but rest and/or intention tremors may occur
- Commonly associated with:
  - alcohol
  - sympathomimetics
    - bronchodilators -  $\beta_2$  agonists
    - theophylline
    - caffeine
    - dopamine
    - epinephrine and norepinephrine
  - lithium
  - sodium valproate
  - antipsychotic medication
  - anti-emetics (metoclopramide, prochlorperazine)
  - tricyclic antidepressants
  - corticosteroids

NB. any drug with a primary effect on the central nervous system can produce tremor as a side-effect

## 6 Holmes (rubral) tremor

Quick info:

- Typically three tremor components are present: rest, postural tremor and intention tremor
- often severe. The action tremor severity is usually greater than that of the rest component
- slow (frequency <4.5Hz) irregular tremor
- tends to involve proximal (action tremor) and distal (rest tremor) muscles
- Holmes tremor has numerous causes including stroke, vascular malformations, tumours, head injury, toxoplasmosis, major tranquilizers, radiation)
- typically 2 weeks to 2 years delay from causal lesion to tremor onset
- lesions typically sited in midbrain or thalamus
- structural imaging (MRI scan) recommended
- dopamine transporter scan often abnormal
- multiple sclerosis is a rare cause of Holmes tremor

## 7 Tremor with other neurological disease present

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# Resting tremor

Medicine > Neurology > Tremor

## Quick info:

- multiple sclerosis (predominantly postural and intention tremor)
- peripheral neuropathy (predominantly postural and intention tremor)
- Wilson's disease
- hereditary ataxia

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# Resting tremor

Medicine > Neurology > Tremor

## Key Dates

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Updated: 26-Aug-2008

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