

PARKINSON'S DISEASE

WHAT QUESTIONS SHOULD I AND MY FAMILY BE ASKING?

- Do I have tremors (shakiness) when not moving and muscle stiffness?
 - Am I falling often or backward?
 - Do I have difficulty with balance or starting to move?
 - Do I have sleeping problems such as trouble going to sleep or acting out my dreams? Do I have nightmares or sleepwalking?
 - Is my voice getting softer and more whispery? Is my handwriting becoming smaller and more difficult to read?
 - Am I taking any medications that can cause Parkinson's symptoms?
 - Do I see things that others do not see (visual hallucinations)?
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WHAT ACTIONS CAN I TAKE FOR THIS AGENDA?

- See your doctor for any tremors (shakiness), falling, or problems walking
 - You might need a gait aid such as a cane or a walker to reduce falls
 - Review your medications with your doctor in case some cause Parkinson's
 - If diagnosed with Parkinson's disease, talk to your doctor about potentially taking Levodopa (Sinemet)
 - Always have a plan on how to take your medications if you cannot move
 - Manage your risk factors such as weight gain, diabetes, alcohol intake, high cholesterol, high blood pressure, and low vitamin D
 - Ask your doctor about a palliative care service to help manage symptoms
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WHAT IS PARKINSON'S DISEASE?

- Parkinson's disease is a progressive disease of the nervous system. It usually occurs in those above age 40 but the risk increases with age
- Around 100 to 200 people per 100,000 have Parkinson's disease
- It is known for causing tremors, slowing down of movement, and muscle stiffness but can also affect other body parts

WHAT ARE THE SYMPTOMS OF PARKINSON'S DISEASE?

- The most commonly known symptom is a tremor (shakiness) of the hand
 - These tremors are usually while the arm is at rest (not while moving)
 - Another important symptom is slowing down (bradykinesia) and muscle stiffness when moving (rigidity)
 - Feeling weak, tired, and unable to move are common issues
 - Your risk of falling is also increased
 - Some describe having trouble starting their movements or stopping them
 - Most people feel and notice these muscle and “motor” symptoms first before the other symptoms
 - It is important to note other symptoms can impact almost all body organs
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PARKINSONS DISEASE IS PROGRESSIVE AND INVOLVES THE NERVOUS SYSTEM

IT CAUSES TREMORS (SHAKINESS), MUSCLE STIFFNESS, AND SLOW MOVEMENTS

ARE THERE SYMPTOMS THAT ARE NOT JUST RELATED TO THE TREMORS AND SLOWING DOWN?

- Yes, Parkinson's disease can affect many body parts
- Not everyone gets these symptoms
- Their severity and rate are also different for everyone
- Some develop early while others much later
- The following are examples of other symptoms:
- Decreasing sense of smell
- Nausea and vomiting
- Weight loss

- Feeling tired (fatigue)
 - Swallowing difficulty
 - Constipation
 - Urinary symptoms (incontinence)
 - Depression and anxiety
 - Loss of interest and motivation (apathy)
 - Muscle pain
 - Sleep problems (difficulty sleeping, nightmares, or acting out dreams)
 - Blood pressure drop when sitting or standing
 - Seeing things that are not there (visual hallucinations)
 - Thinking (cognitive) impairment known as dementia
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IF I HAVE A TREMOR (SHAKINESS) DOES THAT MEAN I HAVE PARKINSON'S DISEASE?

- Not necessarily. There are many causes for tremors
 - It is important to see your doctor if you have a tremor so that they can assess you. A key part of a Parkinson's disease tremor is that it happens while the arm or hand is at rest (not moving)
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PARKINSONS DISEASE CAN INVOLVE OTHER BODY PARTS AND CAUSE MANY SYMPTOMS

THERE ARE MANY CAUSES FOR TREMORS NOT JUST PARKINSON'S DISEASE

WHY DOES PARKINSON'S DISEASE HAPPEN?

- There is an important protein in our body called "Dopamine"
- It is mainly in the brain and has many functions

- When it is reduced, our body can develop Parkinson's disease. Some nerve cells also die as other parts of our brain are affected too
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CAN SOME MEDICINES CAUSE PARKINSON'S DISEASE?

- Yes, some medications can cause Parkinson's symptoms as a side effect. They can cause tremors that look like Parkinson's disease
 - If that is the case, then it is called "drug-induced parkinsonism"
 - Just because you are taking these medications it is not guaranteed to get these symptoms. Usually, stopping these medications causes Parkinson's symptoms to go away
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PARKINSON'S DISEASE HAPPENS BECAUSE OF LOW DOPAMINE

SOME MEDICATIONS CAN CAUSE PARKINSON'S SYMPTOMS BUT USUALLY GO AWAY WHEN STOPPED

HOW IS PARKINSON'S DISEASE DIAGNOSED?

- Parkinson's disease is a "clinical diagnosis"
 - A clinical diagnosis means it is diagnosed with symptoms and signs, not with blood tests or imaging
 - A key part of your assessment is having a nervous system physical examination
 - Your doctor might send blood tests to make sure other diseases are ruled out. Sometimes they need to get a brain CT scan (an advanced x-ray) or other brain imaging too
 - Your family doctor, neurologist, or geriatrician are the best to look into your Parkinson's disease
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WHAT INCREASES MY RISK OF GETTING PARKINSON'S DISEASE?

- Older age
 - Family history of Parkinson's disease
 - History of brain injury
 - Low vitamin D levels
 - History of migraine headaches
 - Living in rural areas
 - Farming or agriculture work
 - The use of well water
 - Type 2 diabetes
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THERE IS NO SPECIFIC LAB TEST TO DIAGNOSE PARKINSON'S DISEASE

THE KEY RISK FACTORS FOR PARKINSON'S DISEASE IS OLDER AGE, A FAMILY HISTORY OF PARKINSON'S, AND BRAIN INJURY

ARE THERE DIFFERENT TYPES OF PARKINSON'S DISEASE?

- Yes, there are other types of Parkinson's disease
 - As mentioned, some medications can cause Parkinson's symptoms
 - A stroke can also cause Parkinson's symptoms
 - There are a group of diseases called "Parkinson's Plus"
 - These diseases involve having Parkinson's disease plus other symptoms
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ARE THERE TREATMENTS FOR PARKINSON'S DISEASE?

- Even though there is no cure for Parkinson's disease, there is treatment
- Treatment goals are to control and reduce the tremors, slowing down, and stiffness. Other goals are to control the effects on other body parts and keep you as functional as possible

- There are many medications that can help but the best one that works for many is called “Levodopa” (Sinemet). It is well-tolerated in older adults compared to other medications for Parkinson’s disease
 - Levodopa is usually taken by mouth in tablet or pill form three or four times a day. Another class of medications to treat Parkinson’s disease is “Dopamine Agonists”
 - These medicines control symptoms almost as well as levodopa. However, their side effects are greater especially for older adults
 - Examples of Dopamine Agonists include Pramipexole (Mirapex), Ropinirole (Requip), and Bromocriptine (Parlodel)
 - There are other classes of medications other than Levodopa or Dopamine Agonists. Examples of these classes are “COMT-I”, “Anticholinergics”, and “MAO-I”
 - We will not discuss these other medications here as they are complex
 - Talk to your doctor for more information about them
 - These medications are complex and have many serious side effects
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THERE ARE DIFFERENT TYPES OF PARKINSON’S DISEASE

SOME MEDICATIONS AND STROKES CAN CAUSE PARKINSON’S SYMPTOMS

THE MAIN MEDICATION USED TO TREAT THE MUSCLE (MOTOR) SYMPTOMS IS CALLED LEVODOPA (SINEMET)

WHAT ARE THE SIDE EFFECTS OF LEVODOPA (SINEMENT)?

- Levodopa is generally a well-tolerated medication
- However, every medication has side effects
- Your doctor should monitor you while on Levodopa
- They can reduce the dose or number of times taken to reduce side effects
- The following are potential side effects:
- Blood pressure drops when standing from sitting
- Stomach upset causing nausea
- Dizziness and feeling tired

- Abnormal muscle cramps (dyskinesia)
 - Wearing off of the Levodopa causing Parkinson's symptoms to return
 - Rarely can cause visual hallucinations (seeing things that are not there)
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LEVODOPA HAS SIDE EFFECTS SUCH AS BLOOD PRESSURE DROPPING, NAUSEA, MUSCLE CRAMPS (DYSKINESIA), AND WEARING OFF OF THE MEDICATION

IS THERE TREATMENT FOR THE OTHER BODY PARTS AFFECTED BY PARKINSON'S DISEASE?

- Depending on the symptoms, some treatments can be offered. As mentioned, Parkinson's disease can involve different body systems but not necessarily
- These are called “non-motor symptoms”
- Levodopa is a main treatment for tremors and stiffness but will not treat the other symptoms
- These other symptoms are complex. Always talk to your doctor about them before starting treatment
- The following are the other symptoms mentioned with treatments:
- Decreasing sense of smell: No good treatment
- Nausea and vomiting: Eating smaller meals more frequently. A medication that can help with nausea is called “Domperidone.” Do not use the anti-nausea medication called “Metoclopramide” as it can worsen Parkinson's symptoms
- Swallowing difficulty: Refer to a specialist for a swallowing assessment. They are usually known as “Speech-Language Pathology” (SLP)
- Constipation: Increase water and fiber intake such as with probiotics
- Urinary symptoms such as loss of bladder control: Levodopa can help. So can a medication called “Mirabegron”
- Depression and anxiety: Antidepressants from the class of medications called “SSRI” can help. This class is tolerated better for older adults too
- Loss of interest and motivation (apathy): No good treatment
- Muscle pain: No good treatment

- Sleep disturbance (difficulty going to sleep, nightmares, acting out dreams, or sleepwalking and talking): The medication called “Melatonin” can help with your sleep cycle and has been studied for this specific issue. It is a natural hormone in the body too and generally well-tolerated in older adults
 - Blood pressure drop when sitting or standing: When changing positions, pause for a minute then continue your movement. This will allow your blood vessels time to react and keep your blood pressure from being low for too long. Be sure to stay hydrated and eat a normal amount of salt
 - Seeing things that others do not (visual hallucinations): Levodopa might make this worse however that is not the case for everyone. A careful review of your medications is needed to rule out causes too. Medications from the class “Antipsychotics” can help. These medications need to be monitored by a doctor carefully given their side effects. Some can make the Parkinson’s worse
 - Thinking (cognitive) impairment known as dementia: The same medications that help with Alzheimer’s Disease (a type of dementia) can help here too. The medication class is known as “Cholinesterase Inhibitors.” It is important to note there is limited evidence and moderate benefit with these medications. At best, it slows down the impairment but is not a cure at all
 - Refer to the “mind”, “constipation”, “mental health”, “falling” and “end of life” agendas for more details
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WHAT SHOULD I DO IF I CANNOT MOVE WELL AND NEED TO TAKE MY MEDICINE?

- Always have an emergency plan to have your pills next to your bedside and couch just in case
 - If you live with others, let them know to give you these medications in case you can’t move from your Parkinson’s symptoms
 - If you have swallowing problems, there are medications for Parkinson’s that can be taken by the skin (patches) or other routes
 - Talk to your doctor about options for when this happens or is needed
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PARKINSON'S DISEASE CAN CAUSE OTHER SYMPTOMS AND NOT JUST TREMORS AND MUSCLE STIFFNESS. SOME OF THESE NEED OTHER TREATMENTS, NOT JUST LEVODOPA

ALWAYS HAVE A PLAN ON HOW TO GET YOUR MEDICATIONS IF YOU CAN'T MOVE FROM YOUR PARKINSON'S SYMPTOMS

WHAT IS PALLIATIVE CARE AND SHOULD THEY BE INVOLVED?

- Palliative care is a service provided by your healthcare system. They specialize in reducing patient suffering
 - They are experts in trying to control complicated symptoms such as trouble breathing, pain, nausea, and much more
 - A palliative care physician is a doctor that specializes in palliative care. Palliative care is recommended to be involved early in Parkinson's disease
 - They are not just for end of life treatment. They can help with the final stages of the disease in particular
 - Ask your doctor if you need a palliative care team to assess you and help
 - Refer to the "[end of life](#)" agenda for more details
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