

WHAT IS PARKINSON'S MASKED FACE?

*Medically reviewed by Heidi Moawad, M.D. —
By Corey Whelan on June 10, 2021*

Parkinson's disease affects the control of movement throughout the body. This includes the facial muscles that are used to express emotion. When the movements of the face are rigid or slow to respond, it can result in a mask-like expression that appears to lack emotion. This is known as facial masking, stone face, or Parkinson's masked face. The scientific term for masked face is hypomimia.

What does 'Masked Face' mean?

Hypomimia is a common symptom of Parkinson's disease. It's included in the Unified Parkinson's Disease Rating Scale as a characteristic that can range from slight to severe. The face contains 42 individual muscles. These muscles are used, often unconsciously, to display happiness, sadness, confusion, contentment, and many other emotional states. If you have Parkinson's masked face, your facial motor control isn't working as they usually would. This causes a disconnect between what you're thinking, saying, or feeling with how your face appears to others. A person with Parkinson's masked face may seem uninterested or uncaring, even when the opposite is true. They may also look angry, sad, or completely free of emotion. Parkinson's disease can also affect the movements that control your voice, giving you a flat, low monotone. This together with masked face can make it hard to communicate what you're feeling and thinking.



Why does Parkinson's cause 'Masked Face'?

Parkinson's disease affects the brain cells that make dopamine. Dopamine helps control muscle movements, and without enough dopamine, the regulation of movement is impaired. This affects the face as well as other movements throughout the body. Parkinson's disease can affect the facial movements in several important ways by causing:

- **Rigid, stiff muscles.** Muscle stiffness can make it hard or impossible to smile or raise your eyebrows.
- **Bradykinesia (slowed movement).** Bradykinesia reduces your visible facial responses. This can make it difficult to accurately show visual responses during a conversation.
- **Fewer autonomic movements.** Facial movements, such as blinking, smiling, and laughing can occur involuntarily in response to emotions or other stimuli rather than by deliberate control. These autonomic responses may be significantly impaired in Parkinson's disease.

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- **Apathy.** Depression and a lack of emotional responses can affect facial expressions.

When might you have 'Masked Face' with Parkinson's?

Parkinson's disease is a chronic, progressive condition. There are five different stages of Parkinson's when certain symptoms may appear or worsen. Masked face can manifest as an early symptom in stage 1. Masked face severity can progress and worsen as Parkinson's takes hold. According to the Unified Parkinson's Disease Rating Scale, masked face symptoms are categorized from slight to severe. Each masked face stage includes the symptoms of the previous stages, plus new ones. Here is a breakdown of each stage:

- **Slight.** In this stage, you may blink less often than usual.
- **Mild.** This stage includes minimal masked facies (the distinctive facial expression associated with a particular medical condition) and less movement in the lower face, including mouth movements and spontaneous smiling. People with mild hypomimia still have the ability to keep their lips closed.
- **Moderate.** The moderate stage has an increase in masked facies. The lips are held in a parted position for some of the time when the mouth is at rest.
- **Severe.** There's an increase in masked facies, and the lips are parted most of the time when the mouth is at rest.

Can 'Masked Face' be Treated?

There are no specific medications for treating masked face. However, treatments for Parkinson's disease can help reduce masked face, as well as other symptoms of this condition. Some medications used to treat Parkinson's disease focus on increasing dopamine activity in the brain. Some examples of these medications include carbidopa and levodopa. Levodopa is one of the main medications used to treat Parkinson's. It is a natural chemical that converts to dopamine in the brain. It is often paired with carbidopa, which helps levodopa work more efficiently and prevents certain side effects like nausea and vomiting.

Together, carbidopa-levodopa can be given as an:

- oral medication (Levodopa or Lodosyn)
- inhalant ([Inbrija](#))
- infusion that is administered through a feeding tube directly into the small intestine ([Duopa](#))

Other medications for rigidity, as well as facial exercises and physical therapy, may also be recommended to treat masked face. Participating in activities that you love or feel passionate about may help improve your facial expressions. This includes creative pursuits, such as singing, dancing, or watching movies and plays.

Tips for Living with 'Masked Face'

If you have Parkinson's, masked face can be a barrier between you and those you care about most. It may also impact the relationships you have with caregivers, including your doctors. Masked face may also be frustrating for caregivers at times, who find it hard to understand what their loved one is feeling or thinking.

Here are a few tips for living with masked face:

- If you or your loved one has masked face, discuss it with a doctor. In many instances, a change of medication or dosage may help to alleviate or reduce this symptom.
- Keep active for as long as possible by participating in physical and creative activities.
- If you're a caregiver to someone who has this symptom, be aware that apathy and depression may or may not accompany it. Work on communicating by asking questions without assuming the answers. "Are you OK?" probably won't be as effective as "Are you sad?" or "Are you enjoying this outing?"
- Try to be empathetic and to use empathetic phrasing whenever possible. Let the person know you understand their frustration and what they're feeling.
- If you're a caregiver to a loved one with a chronic condition, it's vital that you take care of yourself as well as them. Find someone who can shoulder the day-to-day with you. Also, make sure to carve out time for self-care.

The Bottom Line

Masked face (hypomimia) is a common symptom of Parkinson's disease. Masked face may start as early as stage 1 of this disease. It may get progressively more pronounced as Parkinson's continues to worsen. There is no specific treatment for masked face. However, Parkinson's medications, such as those that enhance dopamine levels in the brain, can help with this symptom. Participating in creative and physical activities can also help.

Minor Hallucinations May Be an Early Sign of Parkinson's Related Cognitive Decline

By Jeanna D. Smiley on July 13, 2023 –
Fact checked by Harriet Pike, Ph.D.

- New research suggests that people diagnosed with Parkinson's disease who have hallucinations early on face a greater risk of rapid cognitive decline.
- However, minor hallucinations often go underreported and ignored by Parkinson's disease patients and clinicians.
- European experts ran a long-term study that tied Parkinson's disease and early hallucinations to "a stronger decline in frontal-subcortical functions."
- Experts encourage anyone with Parkinson's disease who has hallucinations to inform their healthcare provider promptly.



conditions. However, these kinds of hallucinations tend to occur at a later stage of the disorder, which rules out using them as early Parkinson's disease markers. Minor hallucinations happen in the early stages of Parkinson's disease, but current research has not yet confirmed their relationship with cognitive impairment. They can present before more common motor symptoms of Parkinson's disease, such as trembling, rigidity, and bradykinesia.

What are Minor Hallucinations?

There are three main types of minor hallucinations:

- **Presence hallucinations** – intense perceptions of the presence of someone who is not there.
- **Passage hallucinations** – cause a person to think they see someone or something passing in their peripheral visual field.
- **Pareidolia** – cause someone to think they see a face or object in formless or patterned visual stimuli such as clouds or a carpet.

Parkinson's disease (PD) and related neurodegenerative diseases are often far advanced before diagnosis. This severely limits prevention and treatment options. Parkinson's disease has long been regarded primarily as a movement disorder. However, growing research points to impaired executive function as a major factor in its progression. European researchers may have found a novel way to determine the early onset of Parkinson's disease and related cognitive decline by observing cognitive and psychiatric symptoms.

Experts at the Swiss Federal Institute of Technology (EPFL) in Switzerland and Sant Pau Hospital in Barcelona, Spain, found that people with Parkinson's disease and early hallucinations may lose executive function more rapidly.

Their study appears in [Nature Mental Health](#) Trusted Source.

Parkinson's Disease and Hallucinations

Hallucinations are false sensations of things that are not present. People with Parkinson's disease may experience one or several types of hallucinations involving, sight, hearing, touch, smell, or taste. Scientists already understand that complex visual hallucinations can be a marker of cognitive decline in Parkinson's disease and related neurological

Are Hallucinations a Marker of Cognitive Impairment?

In this joint study between EPFL and Sant Pau Hospital, researchers gathered data on 75 people with a Parkinson's disease diagnosis. The patients were around 60 to 70 years of age. The team investigated whether individuals with Parkinson's disease who experienced minor hallucinations might show altered brain oscillations and whether such minor hallucinations-related [...] changes are associated with cognitive impairments that increase over time." The study participants undertook psychiatric interviews to determine whether they were experiencing minor hallucinations. They also underwent neuropsychological testing to measure cognitive function.

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The researchers collected electroencephalography (EEG) data as well. Follow-up neuropsychological tests took place 2 years later with 68 patients and five years later with 54 patients. Dr. Bernasconi and his colleagues observed that frontal theta oscillations in Parkinson's disease patients with minor hallucinations correlated with reduced cognitive frontal-subcortical functions. Doctors believe that frontal-subcortical deficits are an indicator of cognitive impairment. They noticed that the results of the neuropsychological tests were similar among the patients with and without minor hallucinations. This confirmed that neuropsychology alone is not enough to detect minor hallucinations-related changes. A 5-year follow-up confirmed the oscillations and showed a more pronounced decline in frontal-subcortical functions in the individuals who had reported minor hallucinations at the study outset. Neurosurgeon Dr. Gurmeet Singh Sawhney from Neurolife in Mumbai, India, not involved in the research, remarked to Medical News Today that the study's conclusion makes "an important finding as it highlights the need for neurologists to monitor their Parkinson's disease patients closely for signs of cognitive impairment." Dr. Sawhney explained why the researchers are investigating the correlation between electrophysiological measures of theta oscillations and clinical symptoms of hallucinations. He noted: "Theta oscillations are electrical signals in the brain, typically measured by EEG scans, that have been linked with various cognitive processes such as decision making and working memory. [...] Parkinson's disease patients often exhibit decreased theta activity in the frontal lobe, which is associated with impaired executive functions such as working memory and decision making."

Robotic Technology May Aid Early Diagnosis

MNT asked the study's lead author, Dr. Fosco Bernasconi, of EPFL's Laboratory of Cognitive Neuroscience, about other procedures under consideration for detecting Parkinson's disease early. He replied that robotic technology and virtual reality have allowed him and fellow researchers to analyze and quantify hallucinations safely. However, the unpredictable, subjective nature of hallucinations makes them challenging to study. He said: "We are currently further developing our methods and will start testing our approach to assessing whether

we can identify individuals with Parkinson's disease who may develop hallucinations in the future." Dr. Bernasconi noted that these tests are still in their early phases and will require continued follow-up with patients.

Minor Hallucinations are Underreported Symptoms

Hallucinations may happen regularly in at least one out of two people with Parkinson's disease. However, many people do not acknowledge or discuss them as symptoms of Parkinson's disease with their healthcare professionals. Dr. Bernasconi told *MNT* that "this is often due to a fear of stigma." "In addition" he further shared, "the so-called 'minor' hallucinations, which include presence hallucinations — the sensation that someone is behind the individual experiencing the hallucination, but no one is there — might be not always disturbing or distressing for the individual experiencing it and is usually associated with neutral and sometimes positive emotional sensations." If the experience is not unpleasant, the lead author said, a person is not likely to report symptoms to their healthcare provider.

Important to Seek Urgent Care for Hallucinations

In the meantime, the study authors hope their work alerts people to the urgency of disclosing the occurrence of early hallucinations. "We believe that it is important to make individuals aware that such hallucinations are part of the disease and that it's important to share those symptoms with health professionals and family," said Dr. Bernasconi. Dr. Sawhney also emphasized that: "It is [...] essential for neurologists to monitor the electrophysiological measures of their patients, particularly those suffering from Parkinson's disease, to detect any signs of cognitive impairment or decline." "Usually, individuals with Parkinson's disease are mostly followed by movement specialists. To have a global view of the symptoms affecting the patient, we believe that it is important that they also assess systematically the presence of non-motor symptoms, especially those that might be related to changes in cognitive functions, such as 'minor' and complex [visual] hallucinations," Dr. Bernasconi further noted.

HELPING YOURSELF THROUGH EXERCISE

The Benefits of Exercise for People with Parkinson's Disease

- Slowed progression of symptoms
- Improved balance
- Increased mobility
- Strengthened muscles
- Increased circulation
- Improved quality of life
- Greater ability to function independently for a longer period of time
- Heightened emotional state and overall sense of well being

What kind of exercise should I do?

All kinds of exercise help. The best choice depends on your age, physical condition and interests. The best program is one that combines a number of different activities and allows you to change as your physical symptoms and capabilities change. It is important to choose a form of exercise that you enjoy so you won't be inclined to quit.

- **Group Exercise** – Some people find that joining an exercise group helps them to adhere to exercise. For those who try to exercise on their own and fail, the group setting offers greater success. In a class setting, people engage with each other. Those with different levels of physical ability can have positive outcomes and good results if:
 - Each person competes only with himself/herself
 - Each person roots for every other person
 - Each person takes responsibility to work within his or her personal limits
 - Everyone looks out for everyone else
 - The teacher responds gracefully to a constantly changing situation
- **Daily Activities Exercise** – This is the activity you do in day-to-day living to include household chores, bathing, dressing, grooming, shopping, etc. This type of exercise will help to keep you active and limber.
- **Recreational Exercise** – These are fun activities like golf, dancing, bowling, swimming, hiking or other

activities that fit your interests. Recreation not only helps to keep muscles and joints flexible and strong but provides social interaction and fun.

Beginning your exercise program – When you begin to exercise make sure that your expectations aren't too high or unrealistic. You will not be able to perform at the same level that you did before PD. It is enough that exercise is helping you to maintain a better quality of life and giving you a sense of control and accomplishment. Your goal should be to work at the level of your own personal best.

How much should I exercise? – An ideal goal would be to perform some form of exercise every day. However, because of the nature of PD there may be some days when this is not possible. Accept this and return to exercise when you are able.

Last but not least – HAVE FUN! You will not adhere to any form of exercise that does not provide you with enjoyment.



STRESS LESS

“MANAGE STRESS OR IT WILL MANAGE YOU!”

- **THINK ABOUT IT** – What is stress? Can you hold it in your hand? Can you stomp it like a bug? Unfortunately the answer is no. Stress is intangible. It's an anxious feeling, inside of you, caused by outside circumstances, most often, beyond your control. It's triggered by difficulty, pressure and strain.

A healthy amount of stress is good because it motivates you to move. The stress of catching a plane or getting to work on time forces you to get up and go. You would be a blob without it!

- **WATCH FOR IT** – An unhealthy amount of stress can make you sick. How can you stay physically and emotionally well if non-stop feelings of worry and upset drag you down all day and keep you up all night? Overwhelming stress can quickly consume your thoughts and negate your life. Don't let it!

Take immediate action and defend yourself! Deal with stress early, when it's small, before it gets too big for you to handle. To manage stress before it manages you, you must identify it, confront it and contain it.

- **IDENTIFY IT** – When you are stressed you're in an emotional frenzy going non-stop with no focus or direction. You feel frantic and vulnerable because you're frightened and confused. More horrifying, you can't pinpoint or see the face of what's threatening you. The first thing to do is stop! Sit down, alone in a quiet place, and go inside your mind. Clearly identify what's causing your anguish, upset and pain.
- **WRITE IT** – Take time for serious thought and a long hard look. Clarify each stressor and write it down. Family issues, failed relationships, unhappy home life, hurtful friends, conflicts at work and financial worries are usually high on the list. Health problems most often take first place.

Look closely at each issue and say to yourself, “Is there anything I can do about it?” If the answer is no, throw it over the fence and forget it! If the answer is yes, begin to plot a plan to deal with it. You have now faced your stressor. By taking control with an action plan, you contain it.

- **STRESS FOR SURE** – With life, there is stress. It's part of the package. You face difficult days, pressured by daily demands. Ongoing strain, physically and emotionally, makes stress inevitable. If not kept in check, stress will grow in strength and harm you. To feel healthy and happy, you must deal with stress on an ongoing basis. Do your best to avoid it. Stay awake and watch for the warning signs so you see it coming way in advance.

- **WARNING SIGNS** – Stress affects you physically and emotionally. Emotional signs usually come first and may include apathy, anxiety, frustration, forgetfulness, irritability, distraction, quick temper, insomnia, eating disorders and depression among others.

If stress goes untreated it will worsen leading the way for physical symptoms to include fatigue; recurring headaches; noticeable weight loss or gain; intermittent chest pain; shortness of breath; nausea and vomiting; dizzy spells; frequent stomach aches; back, neck and shoulder pain; and bowel problems to name a few.

- **AVOID DEPRESSION** – Stress opens the door for depression which is a low, blue mood that lasts for more than a few weeks. The “red flag” warning signs include:

- Isolation: You stop going out
- Disinterest: You stop doing the things you love to do
- Sleeping Too Much: You prefer to be in bed in a ball
- Eating Disorders: You eat too much or too little
- Unruly Appearance: You don't care how you look
- Poor Personal Hygiene: You don't bathe and groom daily
- Apathy: You sit and do nothing
- Uncontrollable Tears: You cry for no reason
- Unhappy Face: You look sad and dismal
- Hopeless Comments: You say things like “I hate my life” or “I can't face another day” or “I don't care if I live or die.”

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Serious depression can lead to thoughts of suicide. It's frightening and tormenting. If some or all of these symptoms describe you, tell someone and get to your physician immediately as depression is treatable. Don't suffer in silence when you can get help.

- **STRESS BUSTERS THAT COULD SAVE YOUR LIFE** Say No...Limit Change...Rest Up...Eat Well... Take Time Off...Ask for Help...Get a Massage... Laugh A Lot...Have a Hobby...Take Tai Chi... Listen to Music...Stay Organized...Have Faith... Get Exercise...Practice Yoga...Do Fun Things... Seek Sunshine...Meditate Daily...Sit & Just Be... Try Aroma Therapy...Take Walks...Deep Breath... Work Out...Lighten Up... Lunch with Friends... Play Golf...Beach It...Take a Bubble Bath...See a Movie... Relax & Read... Dine Out... Soak in a Jacuzzi... Try Acupuncture...Have Fun with Family... Go Shopping...Enjoy a Spa Day...Think Positive... Pray... and on & on....

You cannot enjoy optimal health, emotional well-being and quality of life if you are stressed and depressed. It doesn't matter how you are, only how you feel. If you're overloaded with stress and distracted by scattered thinking, you won't be up and able to face life with its daily demands. Always stay alert for stressors and keep your stress level well in check.

If you are experiencing the signs of unhealthy stress or depression, contact your physician immediately for the help you need.



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Please give serious consideration to the designation of PRF in your Will, Charitable Trusts, Life Insurance, Appreciated Securities and Real Estate as this offers preplanned giving opportunities that will serve the Parkinson community for years to come. Please call Lynne Henry (941) 893-4389 at the Parkinson Research Foundation, today, for personal assistance in initiating this effort.

The following language has been reviewed and is deemed a legally acceptable form for including such a bequest in a will:

"I give and bequeath to the Parkinson Research Foundation,
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estate at the time of my death under this will or any codicil hereto)."

The Parkinson Research Foundation Federal ID number is 20-0205035

Memorial and Honor Giving

Honor a family member, friend or special event by donating to PRF. Pay tribute to someone you love whose life has been impacted by Parkinson's disease. In lieu of flowers, please consider designating Parkinson Research Foundation as your charity of choice.

Workplace Giving: Launch a Giving Campaign

Please consider leading a team at work by encouraging your colleagues and staff to join together to help those living with Parkinson disease. Launch a workplace giving campaign today.

Ask about Matching Gifts

Many gracious employers double even triple charitable donations made by individual employees. Some companies will match gifts made by retirees and/or their spouses. Contact your employees for matching gift eligibility as this allows you to maximize your personal donation.