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Second Stage – select Readings

A Report about Prosopagnosia

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Abstract

This is an report on the Prosopagnosia , which is one of the common diseases in the world, as he suffers from not remembering Faces in daily life. This report covered the definition of the disease and the medications that affected this disease, and included ways to recover from it.

What is prosopagnosia?

Prosopagnosia (pro-so-pag-no-zee-ah) is a condition where your brain can't recognize faces or facial expressions in spite of having normal vision. This can make it hard for you to recognize the faces of familiar coworkers, friends or even close loved ones. Prosopagnosia falls under a family of conditions, agnosias, which interfere with how your brain processes information from your senses. Most of these conditions happen because of damage to your brain from any number of causes. However, prosopagnosia can also happen without that damage.

Who does it affect?

Also known as face blindness, prosopagnosia can happen in two different ways, either as an acquired condition (meaning a person develops it because of damage to part of their brain) or as a congenital problem (this means a person is born with it). Available research suggests the congenital version of this condition might be genetic, as it seems to run in some families.

How common is this condition?

Experts aren't sure exactly how common this condition is in either form. There's little to no data available for acquired prosopagnosia. There is some data available for congenital

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prosopagnosia (also known as developmental prosopagnosia), with some research showing as much as 2.5% of people have it to some degree.

However, there's disagreement on whether or not that percentage is accurate. That disagreement exists partly because this condition is so

difficult to diagnose. Another part of that disagreement is that there's no clear line between this condition and having a below-average ability to remember faces.

How does this condition affect my body? Prosopagnosia is a condition that affects your brain only. However, it doesn't just interfere with your ability to recognize faces. This condition is often a source of anxiety for people. That's because many feel embarrassed or ashamed that they struggle to remember faces while others have no trouble with it. That shame and anxiety lead many with this condition to avoid social situations.

Symptoms and Causes

What are the symptoms of prosopagnosia?

There are two forms of prosopagnosia, and the symptoms depend on the form. The two forms are apperceptive and associative:

- **Apperceptive prosopagnosia.** This is when you can't recognize a person's facial expressions or other non-verbal cues.
- **Associative prosopagnosia.** This form is when you can't recognize a person's face even if you're familiar with them. You can still recognize them by other means like their voice or the sound of how they walk.

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What causes prosopagnosia?

The causes of the condition depend on how they happen. Most agnosias are acquired, meaning you develop them at some point in your life. The most common reason people develop agnosias, including prosopagnosia, are injuries to their brain. These injuries, called lesions, can happen for many different reasons.

People with congenital prosopagnosia don't have a brain injury that explains this problem. There are only a few ways — some confirmed and some not — that congenital prosopagnosia can happen.

Acquired prosopagnosia

Potential causes of brain lesions that cause prosopagnosia include, but aren't limited to, the following:

- Alzheimer's disease.
- Brain tumors (including cancerous and non-cancerous growths).
- Dementia.
- Developmental disorders.
- Head injuries such as traumatic brain injuries (TBIs).
- Cerebral hypoxia (brain damage from lack of oxygen).
- Infections (such as those that cause encephalitis).
- Seizures and epilepsy.
- Stroke.
- Toxins like carbon monoxide poisoning.

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Congenital prosopagnosia

Researchers have identified several DNA mutations that are more common in people with congenital prosopagnosia. Experts first suspected this condition had a genetic connection because it tends to run in families.

But some of the mutations aren't inherited. These "de novo" mutations — meaning new, spontaneous mutations that neither parent had — also seem to happen more frequently in people with congenital prosopagnosia.

Prosopagnosia might also have a connection to other developmental conditions like autism spectrum disorder. However, more research is necessary to confirm this.

Is it contagious?

Prosopagnosia isn't contagious. While some of the infections that can ultimately cause it are contagious, having one of these infections doesn't guarantee that you'll develop this condition.

Diagnosis and Tests

How is prosopagnosia diagnosed?

Diagnosing prosopagnosia takes a combination of a neurological exam, asking questions about your history, diagnostic imaging and testing.

The neurological exam and tests will likely include:

- Sensory tests. These tests make sure that your vision works correctly and rule out any vision-related conditions.
- Cognitive and mental status tests. These tests ensure the problem isn't with your mental abilities, including your ability to think, focus or problem-solve.
- Memory tests. This ensures that the problem with recognizing faces isn't because you have a problem with your memory.
- Face recognition tests. These test your ability to identify, remember and distinguish faces. You may take more than one of these. Healthcare providers might also ask you to look at pictures of famous people. They may also have you identify specific facial expressions if they suspect you have the apperceptive form of this condition.
- Object recognition tests. Prosopagnosia has many similarities with other types of visual agnosia. Object memory tests help ensure that your condition isn't one of these agnosias. These tests can also determine if you have more than one kind of agnosia.

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Management and Treatment

How is prosopagnosia treated, and is there a cure? Prosopagnosia isn't curable directly. However, some of the causes of acquired prosopagnosia are curable. Resolving those problems might help with this condition.

Prosopagnosia is usually permanent, and these recoveries aren't common.

In cases of congenital prosopagnosia or where acquired prosopagnosia is permanent, there are still options to help you compensate and adapt. Ultimately, healthcare providers will show you ways to work around your condition, limiting its impact on your life.

What medications and treatments are used? The treatments and methods depend on what the goal is. The treatments for underlying conditions that cause prosopagnosia are different from treatments that help a person learn to adapt to and live with the condition.

Treatments for conditions that cause prosopagnosia

These treatments address the underlying problem that caused your prosopagnosia. They may or may not help your prosopagnosia itself. The possible treatments include, but aren't limited to, the following:

- Medications. These range from antibiotics for infections to anti-dementia medications.
- Surgery. Prosopagnosia can happen when tumors press on certain areas of your brain. Removing those tumors with surgery, when possible, can alleviate pressure on your brain and hopefully let it function normally.

Treatments to help you adapt to prosopagnosia Even in cases where recovery is possible, healthcare providers may recommend that you participate in therapy and rehabilitation programs that specialize in helping with conditions like prosopagnosia. Those programs aim to help you adapt and compensate for this condition. The ways they teach that include:

- Perceptual training. This method works by teaching you how to look for and remember the features of a person's face. It can also teach you to identify people by certain facial features. This can also help teach you to identify facial expressions and cues if you have apperceptive prosopagnosia.

- Coping strategies. This type of rehabilitation focuses on helping you use hearing and context clues to identify people. Improving your ability to identify people by voice can help you overcome your problems with identifying them visually.

Complications/side effects of the treatment The complications from medications, surgery or other treatments depend strongly on the treatments themselves, as well as the severity of your condition, your overall health and other factors. Your healthcare provider is the best person to tell you what side effects or complications you should watch for or expect.

Conclusion

Prosopagnosia, also known as face blindness, is a condition that makes it difficult or impossible to recognize faces. It can be caused by brain damage (acquired) or be present from birth (congenital). While there is no cure for prosopagnosia itself, there are ways to manage the condition and improve your ability to function in daily life. This includes treating any underlying medical conditions and learning coping strategies, such as focusing on other identifying features or using context clues.

Although prosopagnosia can be frustrating and isolating, there are resources available to help people with the condition live fulfilling lives.