Series 2:
Associated Symptoms

MOGbytes™

A snack-sized guide to understanding MOGAD

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The MOG Antibody: A Clue, Not the Whole Story

The MOG antibody is a biomarker found in blood or spinal fluid that is needed for doctors to diagnose MOGAD. Discovering the MOG antibody has helped doctors better understand and identify MOGAD.

False positives can happen; a positive MOG antibody test alone does not confirm MOGAD.

Doctors also look at symptoms, exam findings, and MRI results

Other conditions that can look like MOGAD, such as MS and NMOSD, must be ruled out

MOG, myelin oligodendrocyte glycoprotein; MOGAD, myelin oligodendrocyte glycoprotein antibody-associated disease; MRI, magnetic resonance imaging; MS, multiple sclerosis; NMOSD, neuromyelitis optica spectrum disorder

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Will an Attack Happen Again?

MOGAD can follow two different patterns:

Monophasic

- One attack only, known as a single demyelinating event
- About half of all people with MOGAD may be monophasic

Doctors sometimes observe this pattern in people who:

- Had ADEM symptoms during their first attack
- May have MOG antibody levels that decrease over time

Relapsing

- More than one attack, known as multiple demyelinating events

Doctors sometimes observe this pattern in people who:

- First develop symptoms in adulthood
- Had symptoms other than ADEM during their first attack
- Continue to have positive MOG antibody tests

Currently, there is no reliable test to predict who will relapse.

ADEM, acute disseminated encephalomyelitis; MOG, myelin oligodendrocyte glycoprotein; MOGAD, myelin oligodendrocyte glycoprotein antibody-associated disease

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Where Does MOGAD Affect the Body?

MOGAD can affect different parts of the central nervous system, such as:

Optic Nerve

Spinal Cord

Brian/Brainstem

These areas may be affected all at once or at different times.

MOGAD, myelin oligodendrocyte glycoprotein antibody-associated disease

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How Does MOGAD Show Up in the Eye?

Inflammation of the Optic Nerve

The optic nerve is behind the eye. This is known as optic neuritis (ON) and can lead to:

Changes in vision, such as blurry vision, vision loss, or blindness

Eye Pain

Headache

MOGAD, myelin oligodendrocyte glycoprotein antibody-associated disease

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How Does MOGAD Show Up in the Spinal Cord?

Inflammation of the Spinal Cord

This is known as myelitis or transverse myelitis (TM) and can lead to:

Muscle numbness, weakness, pain, and spasms

Paralysis below the point of damage in the spinal cord

MOGAD, myelin oligodendrocyte glycoprotein antibody-associated disease

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How Does MOGAD Show Up in the Brain?

Inflammation of the Brain, Brainstem, and/or Meninges
The meninges are the covering of the brain and spinal cord.
This can lead to:

Autoimmune Encephalitis (AE)

Acute Disseminated Encephalomyelitis (ADEM)

Cerebral Cortical Encephalitis (CCE)

Brainstem Encephalitis

Meningitis

Symptoms of the above may include headaches, fever, confusion, seizures, loss of coordination and/or balance, loss of consciousness, brain fog, difficulty swallowing, and behavioral changes.

MOGAD, myelin oligodendrocyte glycoprotein antibody-associated disease

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How Can MOGAD Differ by Age?

Some presentations are more common in MOGAD depending on age.

Children

- The most common presentation in children is ADEM
- Around 50% of patients with ADEM test positive for MOG antibodies
- In one study, MOG antibodies were the most commonly identified antibody in children with autoimmune encephalitis

Adults

- The most common presentation in adults is ON
- ON is also the most common initial symptom of MOGAD, seen in about 30–60% of adult patients

Because MOGAD can look different in each person, new or worsening symptoms may signal a relapse and should be discussed with a healthcare provider.

ADEM, acute disseminated encephalomyelitis; MOG, myelin oligodendrocyte glycoprotein; MOGAD, myelin oligodendrocyte glycoprotein antibody-associated disease; ON, optic neuritis

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What Happens After an Attack?

After recovering from the first attack, doctors may **monitor closely** before starting long-term treatment.

After relapse attacks, doctors may **change the treatment plan.**

Every situation is different. Treatment decisions are personalized and should be made together with the patient and healthcare provider.

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Understanding Relapses in MOGAD

Around half of all patients will experience a relapse.

Relapses are hard to predict, and they can affect the same or different areas.

ON is common in relapses, especially for those who have already experienced it.

Many people can recover from MOGAD relapses. However, repeated relapses can sometimes lead to lasting disability.

MOGAD, myelin oligodendrocyte glycoprotein antibody-associated disease;
ON, optic neuritis

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Looking Ahead

Researchers are still studying this disease as MOGAD was recognized as a distinct disease relatively recently.

Doctors are learning more every year to improve diagnosis, treatment, and long-term care.

Awareness is growing, and it is up to us advocate for ourselves and loved ones to receive a quicker and more accurate diagnosis.

Disclaimer:

If you are experiencing any of these neurological symptoms, ask your doctor whether you should be tested for the MOG antibody through a live cell-based assay MOG antibody test.

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Driven by **science.**

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