

# What is VSS?

## Background

**Visual Snow Syndrome (VSS)** is a neurological condition affecting vision, hearing, cognition, sensory processing, and quality of life. It is characterized by persistent visual disturbances, including constant "visual snow" (static, flickering dots) and flashing lights visible 24/7, with eyes open or closed. Beyond visual symptoms, VSS includes various non-visual symptoms. Classified as a network brain disorder, it disrupts sensory information processing through hyperactivity and reduced connectivity in interconnected brain regions, including those responsible for vision. The impact ranges from mild to debilitating, affecting 2–3% of the global population and can appear at any stage of life.

## Causes

Research shows that hyperactivity in areas like the visual cortex and thalamus, combined with reduced connectivity in regions such as the anterior cingulate cortex, contributes to the condition's complexity. According to patients, potential triggers for the onset of VSS include certain medications (i.e. those with serotonin reuptake inhibiting properties), extreme stress, traumatic brain injuries, migraines, infectious diseases, and surgeries. Recent studies have identified abnormalities in glutamate and serotonin networks as potential biomarkers, with advanced imaging techniques, like 7-Tesla MRI and PET scans, providing insights into these disruptions. Although the exact cause of VSS remains unknown, ongoing research continues to uncover its underlying mechanisms, offering hope for improved diagnosis and additional targeted treatments.

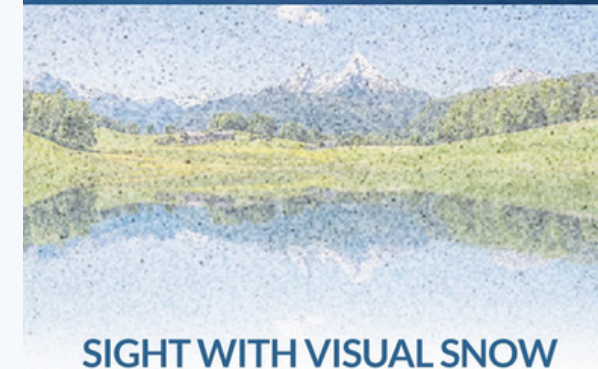
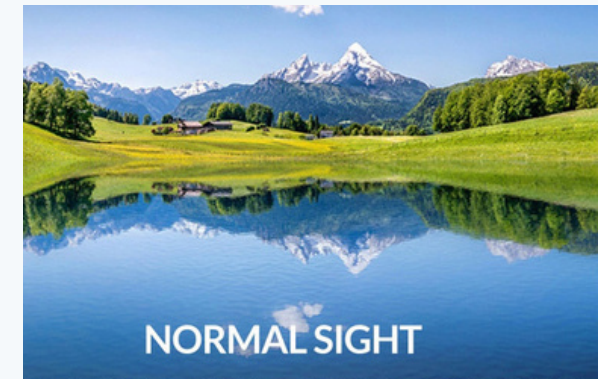
# Management

- ✓ Neuro-Optometric Rehabilitation Therapy (NORT) or neuro-vision therapy for VSS symptoms
- ✓ Mindfulness-Based Cognitive Therapy (MBCT) modified for VSS
- ✓ Tinted lenses/glasses (FL-41 lenses, BPI-Omega lenses, BPI-Mu lenses, Percept lenses, narrow-band lenses, green-tinted lenses, or certain tinted contact lenses)
- ✓ Chromatic Filters
- ✓ Retraining the brain to redirect attention away from visual disturbances
- ✓ Identifying and avoid personal triggers
- ✓ Avoiding or limiting substances that can interact with VSS (stimulants like caffeine and depressants like alcohol)
- ✓ Stress reduction to mitigate flare-ups
- ✓ Managing sensory processing challenges with earplugs, sunglasses, and noise-canceling headphones
- ✓ Creating a VSS-friendly sleep environment with white noise machines or a fan and avoiding blue light before bedtime
- ✓ Light-moderate physical activity for improved brain health, neuroplasticity, and neurotransmitter release
- ✓ Maintaining a brain-healthy diet and staying hydrated
- ✓ Seeking support for emotional well-being (VSI's VSS support group, medical team, friends, and family)
- ✓ Engaging in calming, enjoyable activities that help regulate the nervous system
- ✓ Observing dynamic visual stimuli, such as videos of static noise (temporary effect in some patients)



## Visual Snow Syndrome 101

INFORMATION ABOUT VSS



[www.visualsnowinitiative.org](http://www.visualsnowinitiative.org)

# Symptoms

## Visual Symptoms

- Visual snow (dynamic snow-like dots all over the field of vision)
- Photopsia (flashes of light or small floating objects)
- Photophobia (sensitivity to light)
- Palinopsia (continuing to see an image after it is no longer in the field of vision)
- Entoptic phenomena (seeing images within the eye itself)
- Diplopia (double vision)
- Nyctalopia (impaired night vision)
- Visual distortions
- Other visual effects (starbursts or halos)

## Non-Visual Symptoms

- Tinnitus (ringing, humming, or buzzing sounds)
- Depersonalization
- Anxiety
- Depression
- Frequent migraines
- Brain fog, confusion
- Dizziness
- Nausea
- Insomnia, sleep-related issues
- Paresthesia (tingling “pins-and-needles” sensations)
- Tremors
- Balance issues
- Cutaneous Allodynia (pain sensation on skin/scalp from innocuous (non-painful) stimuli)
- Sensory disturbances (such as “brain zaps”, electric shock sensations)
- Hyperacusis (increased sensitivity to sounds)
- Sensory Hypersensitivity/Hyperesthesia (highly sensitive to stimuli like sights, sounds)
- Susceptibility to sensory overload

# Diagnosis

A thorough clinical evaluation, including medical history and an eye exam to rule out eye-related conditions, is crucial for diagnosing VSS. An MRI or EEG may sometimes be ordered to rule out other neurological conditions as well. Neuro-ophthalmologists, neurologists, and certified neuro-vision therapists are best suited for addressing VSS. The Visual Snow Initiative has created the first Diagnostic Criteria for VSS to aid confirmation. They also provide a global Directory of Physicians for diagnosis and treatment, addressing the challenge of finding knowledgeable medical professionals.

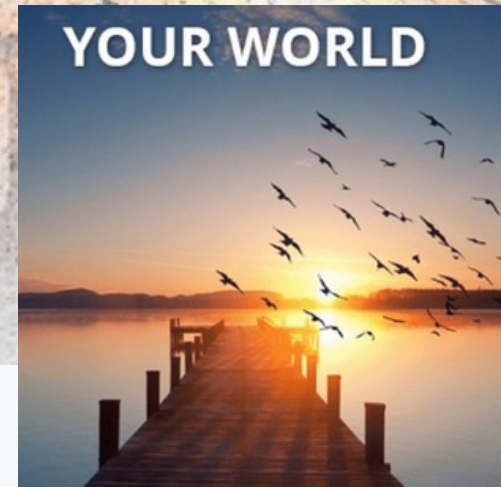


## Not Every Case of VSS is the Same

Living with VSS can be a different experience for everyone due to factors such as which visual or non-visual symptoms the patient experiences (in addition visual snow), as well as differences in the intensity and appearance of these symptoms. Other considerations include when the patient began experiencing symptoms (from birth or sudden onset), medical history, and the overall impact VSS has had on their life. The degree of impact VSS has on a person's life can range from mild to moderate to life-altering.

# OUR WORLD

## YOUR WORLD



**The Visual Snow Initiative** is a nonprofit organization dedicated to global awareness, education, resources, patient advocacy, treatment development, and research for Visual Snow Syndrome.



[www.visualsnowinitiative.org](http://www.visualsnowinitiative.org)

