



## ALICE IN WONDERLAND SYNDROME

Ms. Umamaheswari N,  
Asso.Professor, T John College of Nursing

---

### ABSTRACT

*Alice in Wonderland syndrome is a disorienting neurological condition that affects human perception to the senses of vision, hearing, touch, sensation, and the phenomenon of time. It is known to occur in conditions including migraine, epilepsy, and certain intoxicants and infectious diseases. There's no treatment for AiWS. The best way to handle the patient with AiWS is to rest and wait for them to pass. It's also important to reassure yourself or your loved one that the symptoms aren't harmful.*

**Keywords :** *Dysmetropsia, Micropsia, Teleopsia, Macropsia, Metamorphopsia*

---

### INTRODUCTION

**Alice in Wonderland Syndrome (AiWS)**, also known as **Todd's syndrome** or **dysmetropsia or Lilliputian hallucinations**, is a disorienting neuropsychological condition that affects visual perception. This altered state can cause objects to appear smaller, bigger, closer, or farther away than they really are. It is believed that at least 10 percent of the population experiences these effects at least once in their lifetime. Alice in Wonderland syndrome (AWS) is a [rare condition](#) that causes temporary episodes of distorted perception and disorientation. AWS mainly occurs in children and, in most cases, goes away over time.

### ETIOLOGY

AiWS can be caused by abnormal amounts of electrical activity resulting in abnormal blood flow in the parts of the brain that process visual perception and texture.

According to the National Centre for Biotechnology Information (NCBI) the following are direct causes of AWS:

### HEADACHES

- Migraine
- Abdominal migraine
- Cluster headache
- Tension type headache
- HANDL: syndrome of transient headache and neurological deficits with cerebrospinal fluid

lymphocytosis

### **EPILEPSY**

- Temporal lobe epilepsy
- Frontal lobe epilepsy

### **INFECTIOUS DISEASES**

- Epstein-Barr virus
- Coxsackie B1 virus
- CytomegalovirusInfluenza A virus
- MycoplasmaVaricella-zoster
- Typhoid encephalopathy
- Lyme neuroborreliosis
- Streptococcus pyogenes (scarlet fever and tonsillopharyngitis)
- Parainfectivevasculitis

### **CEREBROVASCULAR DISEASES**

- Intraparenchymalhemorrhagic stroke
- Ischemic stroke
- Cavernous angioma
- Robin Hood syndrome
- Pituitary infarction

### **OTHER ORGANIC BRAIN DISEASES**

- Acute disseminated encephalomyelitis
- Glioblastoma

### **PSYCHIATRIC DISORDERS**

- Depressive disorder
- Cotard Syndrome
- Capgras Syndrome
- Schizophrenia
- Schizoaffective disorder

### **DRUGS**

1. Dextromethorphan

2. Cough syrup (containing dihydrocodeine and DL-methylephedrine)
3. Montelukast
4. Topiramate
5. LSD
6. Hallucinogen Persisting Perception Disorder (HPPD) after LSD withdrawal
7. Toluene-based solvent

## **SIGNS AND SYMPTOMS**

There are several symptoms of AWS, but none of them occur simultaneously. Each symptom is separate and will only occur for a five-to-20-minute period of time. Unfortunately, each of these symptoms can also be the result of a completely different issue.

## **MIGRAINE**

People who experience AWS are [morelikely](#) to experience migraines. Some researchers and doctors believe AWS is actually an aura. This is an early sensory indication of a migraine..

## **SIZE DISTORTION**

Micropsia is the sensation that your body or objects around you are growing smaller. Macropsia is the sensation that your body or objects around you are growing larger. Both are common experiences during an episode of AWS.

## **PERCEPTUAL DISTORTION**

If you feel that objects near you are growing larger or that they're closer to you than they really are, you're experiencing pelopsia. The opposite of that is teleopsia. It's the sensation that objects are getting smaller or farther away from you than they really are.

## **TIME DISTORTION**

Some people with AWS lose their sense of time. They may feel time is moving faster or slower than it really is.

## **SOUND DISTORTION**

Every sound, even typically quiet sounds, seems loud and intrusive.

## **LOSS OF LIMB CONTROL OR LOSS OF COORDINATION**

This symptom occurs when muscles feel as if they're acting involuntarily. In other words, you may feel as though you're not controlling your limbs. Likewise, the altered sense of reality can affect how you move or walk. You may feel uncoordinated or have difficulty moving about as you normally would.

## **DIAGNOSIS**

To do this, your doctor may perform:

- **MRI scan:**An MRI can produce highly detailed images of your organs and tissues, including the brain.

- **Electroencephalography (EEG):** An EEG can measure the electrical activity of the brain.
- **Blood tests:** To rule out or diagnose viruses or infections that could be causing AWS symptoms, such as EBV.

AWS may be underdiagnosed. This is because the episodes — which often last only a few seconds or minutes — may not rise to a level of concern for people experiencing them. This is especially true with young children.

## TREATMENT

There's no treatment for AWS. If you or your child experiences symptoms, the best way to handle them is to rest and wait for them to pass. It's also important to reassure yourself or your loved one that the symptoms aren't harmful. Treating the underlying cause for AWS episodes may help prevent an episode. For example, if you experience migraines, treating them may prevent future episodes. Likewise, treating an infection could help stop the symptoms. If stress plays a role, you may find that [meditation](#) and relaxation can help reduce symptoms.

## REFERENCE

- [1] Longmore M, Wilkinson I, Turmezei T, Cheung CK (2007). Oxford Handbook of Clinical Medicine. Oxford. p. 686. ISBN 978-0-19-856837-7.
- [2] Cinbis M, Aysun S (May 1992). "Alice in Wonderland syndrome as an initial manifestation of Epstein-Barr virus infection". Br J Ophthalmol. 76 (5): 316. doi:10.1136/bjo.76.5.316. PMC 504267. PMID 1390519.
- [3] Feldman, Caroline (April 7, 2008). "A Not So Pleasant Fairy Tale: Investigating Alice in Wonderland Syndrome". Serendip. Serendip Studio, Bryn Mawr College. Archived from the original on November 9, 2008. Retrieved 25 November 2011.
- [4] Eshel, Lahat (1991). "'Alice in Wonderland' syndrome: a manifestation of infectious mononucleosis in children". Behavioural Neurology. 4 (3): 163–166. doi:10.3233/BEN-1991-4304. PMID 24487499.
- [5] Stapinski H (23 June 2014). "I Had Alice in Wonderland Syndrome". The New York Times. Archived from the original on 6 September 2015.
- [6] O'Toole P, Modestino EJ (June 2017). "Alice in Wonderland Syndrome: A real life version of Lewis Carroll's novel". Brain & Development. 39 (6): 470–474. doi:10.1016/j.braindev.2017.01.004. PMID 28189272.