

## Negative Symptoms of Schizophrenia

Schizophrenia is a complex neuropsychiatric syndrome with multiple symptom domains. The most recognizable symptom cluster is psychosis, which is the reason many patients are initially hospitalized. However, most patients with schizophrenia also suffer from 3 other symptom clusters including negative symptoms, cognitive impairments and mood symptoms. In fact, the negative and cognitive symptoms are what causes functional disability, even after the psychotic symptoms subside with antipsychotic medications.

Negative symptoms were not widely recognized until the 1980's. Prior to that, the focus in schizophrenia was on the psychotic symptoms like hallucinations and delusions. The persistence of negative symptoms after the psychosis is controlled led to many studies that characterized the various negative symptoms, which are essentially deficits that impair social and vocational functioning.

**The following are the negative symptoms of schizophrenia, which are usually observed by the family or the psychiatrist, rather than the patients themselves:**

### 1. AFFECT PATHOLOGY

This refers to a flat, blunted or restricted facial expression. In addition, there is poor eye contact, decreased spontaneous movements, a monotone speech (reformed to as aprosody), and failure to recognize the facial expression of other people (such as neutral, angry, sad, disgusted or anxious).

### 2. ALOGIA

Which means a reduction in the quantity of thought, and poverty of speech, speaking in monosyllables rather than sentences. Sometimes, patients may suddenly stop speaking in mid-sentence (called "blocking")



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*Executive Vice-President and Scientific Director, The CURESZ Foundation*

which is an interruption of thought. There is often a prolonged pause before responding to a question.

### 3. ASSOCIALITY

Which is absence or reduction of interest in having social relationships or interacting with others. Patients also are unable to feel intimacy or closeness with others.

### 4. AVOLITION AND APATHY

Which is the loss of the ability to initiate or persist in a goal-directed activity. This includes not bathing, poor grooming, and not doing anything all day, often misconstrued as "laziness."

### 5. ANHEDONIA

Which is the loss or reduction in the capacity to experience pleasure, manifested by lack

of interest in enjoyable activities. This is also a decrease in sexual activity, interest or enjoyment. Unlike the anhedonia of depression, it is not reversible in most patients.

### 6. INATTENTIVENESS

Which is the inability to maintain a task or involvement / engagement for a reasonable period of time. The patient appears engrossed in an internal world to the exclusion of external tasks.

### 7. ANOSOGNOSIA

Also referred to as non-awareness of illness. The patient lacks insight into one's illness or disability. It can also be regarded as a cognitive deficit. This lack of insight prevents patients from seeking treatment or help to alleviate symptoms or to solve personal problems. Anosognosia can be reversible with continuous adherence to antipsychotic therapy.

Researchers sometimes classify the above negative symptoms into 2 major subdivisions:

- 1) Diminished Expression, which includes affective flattening and alogia, and
- 2) Apathy / avolition, which includes lack of motivation and asociality.

In contrast to psychotic symptoms for which dozens of medications are available, there are no treatments yet for negative symptoms. It is a huge unmet need in the field of schizophrenia. Many attempts have been futile so far to develop a pharmacological treatment for negative symptoms. Thus, psychotherapy is the main approach to help patients recognize and overcome their negative symptoms. Occupational and recreational therapies can also be helpful. There are a couple of promising medications on the horizon, but none has been approved by the FDA yet.

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# SCHIZOPHRENIA SURVIVORS



## Leif Gregersen's Story Inching Back to Sane

Mental illness came upon me slowly, from a young age. When I look back at my school photos as early as age 9, I see depression written all over my face. My mom suffered all her life from a severe mental illness, experiencing symptoms of depression and psychosis. When I was 10 years old she attempted suicide, though I was too young to understand what that meant.

At the age of 12, I heard my name called in an empty house where no one was present. This was my first auditory hallucination. I noticed it happened after an exciting weekend with the Air Cadets, where I got very little sleep and friends were often calling my name. Over the next few years, it seemed a healthy eight hours of sleep would cause the voices and other symptoms to disappear, and restore my sanity. I thought getting enough sleep would always solve the problem. However, it wasn't long before I was unable to bounce back.

Soon after the hallucinations started, and as they worsened, I began to experience mood swings. At one point, I felt high, as I imagine I would feel if I had abused drugs, though I never used drugs. I kept talking quickly and irrationally. My parents were alarmed and took me to see my mom's psychiatrist. This doctor suggested I come into the hospital for observation.

I am certain I was diagnosed, but I can't remember if anyone told me what my diagnosis was. My doctor started me on a medication to help me sleep. Upon my release, I was convinced I could do the impossible – use willpower to defeat mental illness. I threw out my medications.

During the next four years, I often experienced periods of deep depression split up with bouts of mania. I drank to excess, and I suspect some of my symptoms may have been brought on by alcohol consumption. After high school, I lived an erratic life, traveling, chasing my lost dreams of becoming a pilot, and moving in and out of psychiatric wards and hospitals. About age 30, I relapsed into a deep psychosis and was sent to a hospital again, for six long months.

It was during this extended hospitalization that I realized I had to change my life, and that it had to be a drastic change. I couldn't go on like this. I became very serious about my medications, went to all of my appointments, and carefully listened to expert advice given to me by my treatment team. I took life skills courses and saw a therapist regularly.

Eventually my hard work and ability to teach and engage in public speaking led to employment as a creative writing teacher. In my spare time I wrote and published my first book, *"Through the Withering Storm"* about my journey. I found even more work through my local Schizophrenia Society, talking about mental health issues to groups such as junior high and high school students, university nursing classes, and even the Edmonton City Police recruit class. After faithfully taking medication and staying in treatment, things kept on getting better.

I now live almost 100% independently. I have three different part-time jobs. Two of them involve teaching creative writing as a wellness skill to people who have psychiatric disabilities. I have also completed another memoir. Currently, I am working on a short story collection that I am hoping will prove I can write fiction with the best of them.

I do not consider schizophrenia to be the end of my life. With medications and treatment, I have academic ambitions again and a real future ahead of me. I would encourage anyone struggling with psychosis to know it can be overcome with patience, effort, medications, as well as group and one-on-one therapy. If you are struggling, reach out to a medical doctor or psychiatrist, be as open as you can about what you are experiencing, and get the treatment you need.

**With proper care, and  
a good treatment team,  
recovery is always possible!**



Leif Gregersen is a writer, speaker and mental health advocate. He has published two books about his recovery from schizophrenia, *"Through the Withering Storm"* and *"Inching Back to Sane."* Today, he teaches creative writing and is involved with the Schizophrenia Society of Alberta as a speaker, presenting his story of full recovery from schizophrenia to diverse audiences.

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# TARDIVE DYSKINESIA

## MORE THAN SKIN DEEP



**Dr. Craig Chepke, Member, Board of Directors, The CURESZ Foundation, Private Practice Psychiatrist, and Adjunct Assistant Professor of Psychiatry, University of North Carolina School of Medicine**

Despite the recent availability of safe and effective treatments for Tardive Dyskinesia, many healthcare providers remain hesitant to use them. They may believe that TD does not bother those who suffer from it or feel that the impact of TD pales in comparison to the primary symptoms they are treating, such as psychosis or mania. My experience is that some clinicians just don't realize that the involuntary movements can cause physical, emotional, and interpersonal problems.

A specific case from my practice is a 61-year-old woman who was seeking treatment for depression, but I also noticed TD. Through our discussion, I found that she had loved to sing at church until her lip movements made the choir director think she was singing at the wrong times, so she quit. She stopped attending services when her hand movements caused her to rustle the church bulletin she was holding, drawing complaints from the congregation. She lives with her daughter and young grandchildren and was devastated when they called her a "monster" because of the facial contortions the dyskinesia caused. She refused to come out of her room, even for meals, and lost 40 pounds over 6 months.

She thought she needed an antidepressant, but a little over a month after I prescribed her a VMAT2 inhibitor, she was back to playing with her grandkids, attending church, and singing in the choir again!

Have you ever told someone they had food visibly stuck in their teeth? Almost everyone has done this, but stop and consider why we do so. The person generally has no idea that it's present, but we thought about how much it would embarrass us if the roles were reversed, and we'd hope someone would intervene for us. When such a minor cosmetic issue is universally recognized as problematic, how can it be denied that the irreversible movements of TD cause stigma?

Furthermore, other disorders in medicine that don't have noticeable symptoms aren't written off so cavalierly. High cholesterol is a finding a clinician can only make when they screen for it. Even though it "doesn't bother anyone," we still encourage treatment because it is a modifiable risk factor for more severe cardiovascular disease. Similarly, healthcare providers should view TD as a potential source of other negative outcomes. People with TD can face social stigma and prejudice. Dyskinesia in the trunk or legs can cause falls, and when it occurs in the muscles of swallowing, it can cause aspiration pneumonia. Just as knowingly not treating asymptomatic illnesses such as high cholesterol would be considered medical malpractice, so should failure to offer treatment for TD because it is a disfiguring and disabling neurological disease that must be treated, and the earlier the better.

There are so many tragic things that clinicians cannot change about their patients' lives, like being homeless, unemployed, or growing up in an abusive family. However, when the movements of TD cause people to face discrimination or withdraw from family or society, there is now something that we can do. With the new VMAT2 inhibitors, this is now an unnecessary burden and a treatable illness. It is up to us to identify TD and educate the people with it on how it can impact them.

**TD is more than skin deep – we can and must give them their functioning and dignity back.**



## Treatment Advances in Schizophrenia

**CAPLYTA®**  
(lumateperone) capsules

by Craig Chepke, MD

Every currently approved antipsychotic is believed to work by modulating dopamine, serotonin, or a combination of the two. However, research has increasingly shown that dysfunction of a different neurotransmitter, glutamate (specifically: hypofunction of the NMDA receptor), may also be implicated in the positive, negative, and cognitive symptoms of schizophrenia. A new medication developed by Intracellular Therapies (lumateperone) not only acts at dopamine and serotonin receptors, but also has activity on the brain's glutamate signaling. Lumateperone has been shown to be effective in 2 clinical trials of schizophrenia and 1 trial of bipolar depression. More studies in bipolar disorder and other conditions are ongoing. What really makes this medication of interest is that the side effect profile was very similar to placebo in clinical trials: the most common were mild somnolence and dry mouth. No significant akathisia, extrapyramidal symptoms, weight gain or cholesterol increases were noted. The FDA approved lumateperone on 12/23/19.

## VIDEO HIGHLIGHTS



### LATEST ADVANCES IN UNDERSTANDING THE CAUSES OF SCHIZOPHRENIA (Part 5 of 6)

Schizophrenia is a neurodevelopmental medical disorder caused by multiple factors, both genetic and environmental. It is actually a syndrome, a collection of hundreds of diseases with a similar clinical presentation such as delusions, hallucinations, cognitive and negative symptoms. Changes in brain development during fetal life will result in the onset of schizophrenia years later when an individual reaches adolescence or young adulthood.

There are three genetic pathways to schizophrenia. One genetic pathway involves inheriting a risk gene. Geneticists have carefully studied the entire human genome and found there to be over 400 genes associated with schizophrenia.

The second genetic pathway is called “*copy number variants*” or CNV. All genes come in pairs (2 alleles). In schizophrenia, some may have a deletion or duplication of those allele resulting in 1 or 3 alleles, which can disrupt brain development.

The third genetic pathway involves spontaneous mutations which can completely disrupt the coding for proteins by one of the 10,000 genes involved in brain development, which will have a ripple effect on the construction of the brain, leading to schizophrenia 2 decades after birth.

Finally, there are numerous environmental causes of schizophrenia, see part 1 of 6.



### SPOTLIGHT ON BETHANY YEISER *My Journey Through Schizophrenia and Homelessness*

Bethany Yeiser is the founding president of the CURESZ Foundation, which she established jointly in 2016 with the psychiatrist who helped her recover completely (with clozapine), Henry A. Nasrallah, MD. She is an author, speaker and mental health advocate. Bethany holds a bachelor's degree, with honors, in molecular biology from the University of Cincinnati, 2011. She published her memoir, *Mind Estranged*, in 2014. Today, Bethany has been in full recovery from schizophrenia for twelve years.

In 1999-2002, Bethany studied molecular biology and biochemistry at the University of Southern California. Her schizophrenia emerged during her senior year in 2002, following a three month trip to Nairobi, Kenya, Africa where she was volunteered at a medical clinic.

Upon her return from Africa, Bethany's high academic performance suddenly deteriorated, and she started getting F's instead of A's. She developed delusions believing that she would become the next Mother Teresa, and a prophet who would no longer need a college degree. Bethany grew increasingly paranoid, dropped out of college and became homeless on the streets of Los Angeles for over 4 years. In 2006, she began hearing voices (command hallucinations) almost continuously.

Bethany was finally picked up by police for screaming back at the voices, admitted to a psychiatric ward, and diagnosed with schizophrenia. She spent twelve months trying five different medications with little success before being referred to Dr. Nasrallah who started her on clozapine, which literally cured all her symptoms. Today, Bethany offers education to patients and families about clozapine and other underutilized and cutting-edge medications through the work of the CURESZ Foundation.

### Please consider making a donation to the CURESZ Foundation online at CURESZ.org

Your contribution will help provide education and referrals to persons with schizophrenia, their families, and those who work with the seriously mentally ill. CURESZ informs the general public to better understand this serious brain disorder, and to provide scientific advances showing that there is hope for recovery, and a return to a fulfilling and normal life. The CURESZ Foundation is a 501(c)(3) nonprofit organization. All contributions are tax deductible.

***“We are committed to helping individuals to cope with and recover from schizophrenia.”***

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