

Treating the Negative Symptoms of Schizophrenia

Summarized by Thomas T. Thomas

Flat emotions, loss of interest, living without motivation or enjoyment, and a general feeling of “burnout”—these are some of schizophrenia’s negative symptoms. They can be the hardest symptoms for a relative or friend to deal with and the most difficult to change, even with medication.

At the May 22 meeting we explored these symptoms through a videotape prepared by **Nancy Andreasen, MD, PhD**, Director of the Mental Health Clinical Research Center, University of Iowa Hospitals and Clinics. Dr. Andreasen is also the author of *The Broken Brain*. Moderating the session and answering our questions afterwards was **Bruce Africa, MD, PhD**, Associate Clinical Professor of Psychiatry at the University of California, San Francisco.

“Schizophrenia is a tragic illness,” Dr. Andreasen said on the tape. “It commonly affects point-five to one percent of the population, develops early in life, changes that life dramatically, and continues for thirty to forty years.”

It is a complex disease, difficult to describe and understand, because there is no single defining feature. Schizophrenia is a multi-symptom disease covering many psychological domains: cognition, emotion, interpersonal relations. It affects the ability to perceive and understand, to speak fluently, and to organize one’s daily life.

The symptoms can be categorized as either positive and negative. The positive symptoms are mainly:

- Hallucinations—abnormalities of perception.
- Delusions—abnormalities of inferential thinking.
- Disorganized speech and thought.
- Agitated motor control and disorganized behavior.

Negative symptoms include:

- Alogia—poverty of speech.
- Affective blunting—lack of emotional expression.
- Avolition—inability to initiate activities.
- Anhedonia—loss of enjoyment in favored activities.
- Attentional impairment—inability to concentrate.

“Negative symptoms are important because they keep people from carrying on their daily lives, holding a job, relating to their peers, or having a girl- or boyfriend,” Dr. Andreasen said. “The patient experiences a loss. Who they are has gone away from them, and they are a shadow of their former selves. For a parent, it’s like losing a child—except that the child has not died. This is mourning without end.”

What is hard for parents and loved ones to understand is that the patient may be lying in bed, not reading, not watching TV—or not absorbing what’s on the screen—and yet he or she is not bored. In fact, the person’s life has vastly slowed down.

For parents this can be especially frustrating. The son or daughter is not getting better and not doing anything to move forward in his or her life. Yet it is not a case of “if he really tried hard...” The person simply *cannot* try.

In addition, the emotional withdrawal and distancing underlying these symptoms are difficult for families. In the end, loved ones will have to strike a balance between taking responsibility for the patient and urging him or her toward greater independence.

The tape introduced “Dwayne,” a young man who had earned graduate degrees in computer science and held a job as a programmer before the onset of his illness. On camera, his face was passive, almost blank. When asked to give five words starting with the letter *D*, he tried hard but could only come up with three. Dwayne did, however, do much better and faster when asked to name as many vegetables possible.

Such slowed thought processes are a classic negative symptom. Dr. Andreasen noted that, the less concrete the process is, the poorer the patient’s performance will be. A particularly difficult test is to spell a word backward: the patient can’t hold it in mind long enough to do so. Dwayne stumbled and at first dropped the *N* in spelling SOUND backward.

Other negative symptoms include “soft neurological signs,” such as right-left confusion, abnormal gait, and inability to recognize objects by touch and feel. When these signs accompany the negative psychological symptoms described earlier, the patient may be sicker and less amenable to treatment than if suffering the cognitive and emotional symptoms alone.

Physical brain abnormalities are also commonly present early in the disease, often with first-episode patients. These include enlarged ventricles (fluid-filled spaces in the brain), reduced gray-matter volume, changes in the hippocampus (a structure on the inner surface of the temporal lobes, associated with memory), and changes in the frontal lobes (areas of the brain associated with anticipation and problem-solving).

Doctors have been studying this complex disease for a long time. J. Hughlings Jackson in the 1800s called it *dementia praecox* and noted “a diminution of function.” Eugen Bleuler, sometimes known as the founding father of negative symptoms, gave it the name *schizophrenia* and identified its core feature as “loss of capacity to think clearly and relate to others.” In this Bleuler rejected the more common diagnostics based on delusions and hallucinations, because these positive symptoms are shared with other, unrelated diseases such as Alzheimer’s, mania, and syphilis.

Psychiatrists once thought that the more florid, positive symptoms were characteristic of schizophrenia’s onslaught and that blunted, negative symptoms came only after the patient had “burned out.” Now they understand that many young people will first display the negative symptoms, but parents don’t usually send a child to the hospital for listlessness or for sitting on the couch with a vacant

look. The positive symptoms are simply those that attract people's attention and so get treated first.

Dr. Andreasen distinguished between primary and secondary symptoms, the latter usually caused by some external force. Thus, affective blunting can be a side effect of medication. Demoralization and depression can result from bad personal experiences. Chronic institutionalization over several years can make a person apathetic. And a person who hears voices and has difficulty with perceptions may withdraw from society.

"If you remove the external force," she said, "these secondary symptoms will usually go away." Primary symptoms, on the other hand, arise from neural deficits in the brain and will not go away without treatment of the core disorder.

Treatment regimens in the past have focused on an excess of dopamine and used medications to block the D2 receptors in the brain. However, these drugs have many negative side effects—among them, tardive dyskinesia and other disfiguring motor problems—and caused patients to resist medication.

The new model for treatment attempts to adjust levels of serotonin in the brain as well as dopamine. This broader pharmacological profile seems to work better. And even more effective medications are coming, which should help patients stay with treatment.

Dr. Andreasen concluded that "the job is not done when we get schizophrenics to stop hearing voices. We have to bring them back close to the way they were before they became ill."

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In the question-and-answer period after the tape, Dr. Africa generally confirmed much of the information on it, although he did note some exceptions based on his own clinical experience.

First, he said, the video suggests that all schizophrenia has a biological basis, yet he has treated patients whose illness apparently began with a traumatic shock or other difficult life situation. He also rejected the notion that brain abnormality is diagnostic for the disease. Physical differences detected in schizophrenics, such as "enlarged" ventricles, often fall within the normal range of human variation.

Second, he made a distinction between "simple schizophrenics" and "paranoid schizophrenics." The simple type are patients who have always had some deficits—low IQ, developmental difficulties, or emotional problems. In general, these are also the people with the "soft signs" discussed in the tape. Paranoid schizophrenics, on the other hand, usually have a brilliant childhood and promising career, then suffer a crash, become delusional and hallucinatory, and develop negative symptoms.

Third, he pointed out that negative symptoms may become worse over time "because the person is getting a lot of negative stuff back from failures in the life experience." In this, Dr. Africa rejected the hard and fast distinction between primary and secondary symptoms made by Dr. Andreasen.

The videotape *Negative Symptoms of Schizophrenia* is available for loan to members. For a copy, please contact the ASA-AMI office.