

# How is the stress response different in a person with catatonia?

**Dr. Fricchione:**

Stress is filtered through many different prisms. We all have an individual sort of prism through which that stress is being filtered.

I just did this paper with this brilliant guy who's a mathematician from Columbia, and that's exactly what he was saying about certain conditions like patients with schizophreniform, severe mental illness, or severe bipolar or schizoaffective disorders. They're going to respond to much less stress or idiosyncratic things that are stressful for them. And it really is going to shift that curve.

So if you think about stress, arousal, and health and performance, and most of us are maybe over here — we can tolerate a lot of stress through our own personal prism. But theirs, they're over here. And things that normally wouldn't be felt as being terribly stressful may be so disabling for them. For example, if you're a person suffering with schizophrenia, auditory processing problems, it's not only auditory for patients with schizophrenia — their thalamus, where these signals are being transmitted through to the cortex, have abnormal filters.

There's a wonderful research paradigm called prepulse inhibition. So, if you take a person who does not have a severe mental illness, whether it's auditory or visual, whatever, and you kind of shock them with an acute stimulus — “Oh!” There's a startle with the person without this kind of thalamic filter problem. They acclimate to the stimulus and it dampens. And it's not like they go like this each time.

But unfortunately, these poor people do. They have a reduction in prepulse inhibition, which is telling us that there's a problem with the thalamic filter, and too much sensory information is, in a disorganizing way, getting to their processing centers in the medial prefrontal cortex, the prefrontal cortex. And it is promoting disorganization and the inability to make decisions — these kinds of things that we see in patients with severe mental illnesses.

So I think that that's part of the pathophysiology of catatonia.