

SSRI and Stimulants: Frying the Brain

Written by Carol Sieverling, our group's facilitator, this information is based on tapes of her October 2000 visit to Dr. Cheney. He gave permission to share this information, but has not reviewed or edited it.

Dr. Cheney recently came across some information regarding the dangers of Selective Serotonin Reuptake Inhibitors (SSRIs), such as Prozac, Zoloft and Paxil, and stimulants like Ritalin and Provigil. During office visits, Dr. Cheney shows patients the book [*Prozac Backlash: Overcoming the Dangers of Prozac, Zoloft, Paxil and Other Antidepressants*](#) by Joseph Glenmullen, M.D., a psychiatrist at Harvard Medical School. It includes endorsements from other Ivy League psychiatrists. Cheney calls the implications of this book "staggering".

When talking with patients, Cheney usually opens the book to a picture of a monkey's brain before and after it received a very potent SSRI. The "before" photo shows a dark background filled with fine white lines and white blobs, healthy neurons. The "after" photo is very dark, only a few white lines and blobs remain. Most of the brain cells had been "fried".

SSRIs and stimulants work by increasing the firing of neurons. While this often has great benefits in the short term, doctors are now realizing that long term use "fries" brain cells. The body views any neuron that fires excessively over time as damaged, and destroys it.

SSRIs and stimulants, taken over a period of 10 years or so, can lead to a loss of brain cells, causing neurodegenerative disorders. Many doctors have recently seen a sudden increase in patients with neurological symptoms, and most have been on Prozac, or a similar drug, for about 10 years. Cheney is seeing this in his own practice.

During office visits, Cheney also shows patients a copy of the May 22, 2000 issue of Newsweek with Michael J. Fox on the cover. It has an excellent article on Parkinson's Disease, a condition that involves a loss of neurons in the area associated with motor control. Parkinson's drugs stimulate the remaining neurons to "perform heroically", firing excessively. However, the article notes that while benefits are seen initially, neurological symptoms get much worse at the three to five-year point. Patients experience wild involuntary movements, etc. These drugs, though helpful in the short term, actually speed up the degenerative process.

What mechanisms are at work causing neurons to be "fried"? SSRIs are often prescribed for depression, which involves a lack of serotonin. Serotonin is a neurotransmitter, a chemical messenger. One neuron releases a burst of it into the intersynaptic cleft, (the gap between neurons). The serotonin is then taken up by special receptors in the adjacent neuron. Thus a message is sent from one neuron to another, with serotonin carrying the message across the gap. Excess serotonin is cleared away before a new message is sent. A "reuptake channel" in one neuron vacuums up the left over serotonin.

SSRIs are designed to address a lack of serotonin by blocking the reuptake channel from vacuuming up excess serotonin. While this allows more serotonin to connect with the

receptors, often too much is left floating in the intersynaptic cleft. The only way the body can get rid of this excess serotonin is to oxidize it. Unfortunately, this turns it into a toxic compound that, over time, kills both the sending and receiving neurons. Cheney stated, "What starts out as an attempt to increase serotonin and reduce symptoms ends up with the destruction of the serotonergic system itself. It takes about a decade, more in some, less in others.

Now when the serotonergic nerves are dead, you start getting these motor neuron problems, which is what we're seeing." Cheney commented, "You know what a lot of doctors (who do not understand CFIDS) are doing? They're saying 'Well, let's just give them an antidepressant'. And they are frying their (patients') brains and they don't even know it. In fact, a CFIDS patient on one of these drugs fries their brain even faster than a non-CFIDS person." (See the article on Klonopin for an explanation.)

Cheney went on to say, "The other way some people with CFIDS are going is stimulating the brain, using drugs like Ritalin or Provigil. They do the same thing - they fry the brain. They cause neurons to fire at lower stimulus by lowering the firing threshold. All stimulants are dangerous, especially over the long haul. I'm not saying that you might not find them useful in the short-term. But over the long term, the physiology demands that neurons that fire excessively be killed."

Cheney strongly urges anyone taking antidepressants or stimulants to read Glenmullen's book. It lists safe alternatives to SSRIs.