

**Title: " Treating the Debilitating Depression Precipitated by MS"**

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"You're listening to Brain Talk, from the Johns Hopkins Brain Science Institute."

**Dr. Kaplin:** "What is now coming to be understood is not just that MS causes depression but that the depression worsens the MS... So we now know from a series of studies that those patients who are depressed with MS, have more aggressive disease and more likely to have attacks in their nervous system and have worse outcomes."

**Dale:** "Dr. Adam Kaplin is an assistant professor of psychiatry and neurology at Johns Hopkins University. He says the neurological disorder Multiple Sclerosis—MS—has the highest rate of clinical depression of any medical disease ever investigated."

Today on Brain Talk: treating the debilitating depression precipitated by MS.

Multiple Sclerosis is a chronic and often disabling disease caused by a malfunctioning of the immune system. The disease attacks the central nervous system—the brain, the spinal cord and optic nerves."

**Dr. Kaplin:** "The important thing actually about this illness is, unlike Alzheimer's or Parkinson disease or a number of these other neurological conditions, it tends to attack people in the prime of their life. So 20 - 40 years of age is sort of the middle of the bell shaped curve for when it tends to occur, so it's probably the second most common cause of neurological disabilities in adults, young adults, after traumatic injuries."

**Dale:** "Symptoms can range from numbness of the limbs, to paralysis and loss of vision. The disease can affect the bowels and the reproductive system. 'And another debilitating aspect of the disease', says Dr. Kaplin, 'is the depression it often triggers.'"

**Dr. Kaplin:** "More important than whether your paraplegic and in wheelchair, more important than the fatigue, more important than whether you have pain, whether or not you are depressed predicts more highly whether or not your quality of life is going to be a good one or not."

**Dale:** "Statistics show that 30% of people with MS will contemplate suicide, and 10% will actually attempt to kill themselves."

Dr. Kaplan says, 'it's important that people suffering from MS realize there's a scientific explanation for their depression. It comes from inflammation of the brain, and that inflammation has an effect on the part of the brain that controls mood.'"

**Dr. Kaplin:** "Exactly how that works is a good question: there are a number of theories that include the fact that when there's inflammation the brain stops making new neurons, in particularly the hippocampus, that depression actually turns out to be toxic for the brain. If you study people who are depressed without MS, just depression, after 10 years they lose 20% of volume of the hippocampus in their brain."

**Dale:** "But the good news, says Dr. Kaplin, is that this depression is treatable with anti-depressants. And that makes it the most treatable aspect of MS."

**Dr. Kaplin:** "Meaning, it's very hard to get someone walking after they've had a significant attack and they're in a wheelchair, but the expectation is to get someone all the way well when they're depressed, if they're treated aggressively to get their depression under control."

**Dale:** “Studies show that depression is bad for the nervous system, which makes it a risk factor for anyone with a major illness like MS or even heart disease.

According to Dr. Kaplan, the best way to target depression is with a combination of anti-depressants, talk therapy... and exercise.

**Dr. Kaplin:** “Exercise turns out to be good for the immune system, good for the recovery of the nervous system; it's also a good anti-depressant. It leads to growth hormone release in the brain and we're appreciating more and more the role of exercise in helping people with MS but also helping people with depression in general.”

**Dale:** “To learn more about MS and Depression, log on to [brainscienceinstitute.org](http://brainscienceinstitute.org). I'm Dale Connelly and this is Brain Talk from Johns Hopkins University.

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[Johns Hopkins Mood Disorder Center](#)

They provide a range of specialized clinical services at The Johns Hopkins Hospital and the Johns Hopkins Bayview Medical Center to patients with mood disorders, including depression and bipolar disorder.

[What is Depression? - NIMH Publications](#)

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