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Study links Pesticide to Parkinson's Disease ENVIRONMENT SUSPECTED AFTER RATS GET ILLNESS

BY JOSEPH B. VERRENGIA
Associated Press
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New research using rats suggests that long-term exposure to a widely used pesticide kills brain cells and triggers debilitating physical symptoms associated with Parkinson's disease.

Scientists say the experiment's results strongly indicate what scientists have suspected for several years -- that the most common form of Parkinson's disease might result from toxins in the environment.

"..the most common form of Parkinson's Disease may result from toxins in the environment."

Nature Neuroscience, Nov 2000

The new study, published in the December issue of Nature Neuroscience, does not prove that the pesticide used in the test, rotenone, causes Parkinson's in humans.

But scientists who reviewed the experiment said the results are powerful and should reinvigorate the search for environmental toxins that may contribute to Parkinson's, the most common neurological disorder after Alzheimer's.

"This is more evidence that a class of compounds may increase the risk of developing Parkinson's," said J. William Langston, director of the Parkinson's Institute in Sunnyvale, who was not involved in the study. "It is not direct evidence that rotenone causes Parkinson's. The whole puzzle hasn't come together."

More than one million Americans suffer from Parkinson's.

Muscle control ebbs as brain cells in a region called the substantia nigra produce less dopamine, a hormone vital to normal nerve function. The illness is marked by small tremors, such as facial tics and shaking hands. Advanced symptoms include a shuffling gait, speech difficulties and muscle weakness.

There is no cure, and current drug and surgical therapies tends to lose effectiveness over time.

New therapies involving transplants of stem cells, the body's master cells from which all tissues grow, have been slowed by federal funding restrictions on experiments using embryonic tissues.

In about 10 percent of patients, Parkinson's strikes before age 50. However, most patients show their first Parkinson's symptoms after age 60. Researchers believe older patients may have suffered brain damage from chronic exposure to unspecified toxins. Among the suspects: pesticides, industrial chemicals and tobacco smoke.