



June 10, 2002

**HEALTH**

## Scans Show Effects of Drugs On Depressed Patients' Brains

By **ROBERT MCGOUGH**

Staff Reporter of THE WALL STREET JOURNAL

Researchers using relatively inexpensive electroencephalograms, or EEGs, found they could detect changes in patients' brain activity, weeks before the patients felt better, from antidepressant medications.

The study, published Monday in the journal *Neuropsychopharmacology*, could one day help doctors more quickly determine whether a patient will respond to a particular antidepressant. It also could have a beneficial "impact on the cost and speed of developing new antidepressant medications," said lead researcher Ian Cook, an assistant professor of psychiatry at the UCLA Neuropsychiatric Institute, in Los Angeles.

The study of 51 patients with clinical depression, who weren't on antidepressant medications at the start of the trial, put 25 patients on one of two antidepressants, Prozac or Effexor, and 26 patients on a placebo. The patients were monitored for their brains' electrical activity using quantitative electroencephalography, which uses computers to analyze the frequency spectrum of electrical waves emitted by the brain. The equipment used in EEGs is less expensive and far more widely available than equipment used in some other types of brain mapping, such as PET scans.

At 48 hours and a week after the patients began taking the medication, the researchers detected specific changes in the brains of patients who eventually responded to the medications. But it took about four weeks for the responding patients to actually start feeling better. It's still not known why it takes weeks for patients on antidepressants to improve.

The two antidepressants differ chemically from each other. Prozac affects serotonin levels in the brain, while Effexor affects serotonin and norepinephrine. But there weren't significant differences in response to the two antidepressants in the study. After eight weeks, 52% of the patients on medication had responded, and 38% of the placebo patients got better. The placebo patients, like the medicated patients, got a limited amount of counseling.

In general, about 60% to 70% of patients respond to the first antidepressant medication they take. Dr. Cook said that EEGs might be one day used to more quickly determine what alternative antidepressant would work for patients who don't respond to their first medication. About 10% to 15% of depressed people don't respond to any antidepressant medication, Dr. Cook said.

Prozac is made by **Eli Lilly & Co.**, Indianapolis, and Effexor by **Wyeth**, Madison, N.J. Those companies helped fund the research along with the National Institute of Mental Health and the National Alliance for Research in Schizophrenia and Depression. Dr. Cook said the companies had no influence on the study.

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**COMPANIES**

Dow Jones, Reuters

**Eli Lilly & Co. (LLY)**

PRICE	61.31
CHANGE	0.01
U.S. dollars	4:02 p.m.

**Wyeth (WYE)**

PRICE	54.13
CHANGE	1.11
U.S. dollars	4:00 p.m.

\* At Market Close

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