Clinical Study Results

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Study Sponsor: UCB Biopharma SRL

Treatment Studied: Levetiracetam

Protocol Number: N132

Short Study Title: A study to learn if levetiracetam works in participants with epilepsy who are taking their usual anti-seizure medicines

Thank you!

The study sponsor, UCB, thanks all the participants of this study. All the participants helped the researchers learn more about using levetiracetam in people with epilepsy.

This is a summary of the main results of this study. An independent, non-profit organization called CISCRP helped prepare this summary of the study results.

We think it is important to share the results with the participants and the public. We hope this summary helps the participants understand and feel proud of their important role in medical research.

The purpose of this summary is only to share information. If you need medical advice, please contact your doctor. If you participated in this study and have questions about the results, please speak with your study doctor or the study staff.

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Why was the research needed?

Before a treatment is available to all patients, researchers do clinical studies to get information about how well the treatment works and about how safe it is.

The researchers in this study wanted to learn how levetiracetam worked in a large number of people with epilepsy. The participants were already taking 1 or 2 anti-seizure medicines and kept taking them during the study. The researchers also wanted to learn if the participants had any medical problems during the study.

People with epilepsy have seizures that happen again and again. Seizures are caused by uncontrolled electrical activity in the brain. Some seizures start in just 1 part of the brain. These are called focal seizures, also called partial onset seizures. The term focal seizures is used throughout this summary. When the participants joined the study, they were taking anti-seizure medicines but were still having focal seizures.

Levetiracetam helps to reduce uncontrolled electrical activity in the brain that causes seizures.

At the start of this study, levetiracetam was not available in the United States as a treatment for people with epilepsy. In this study, the researchers wanted to learn if levetiracetam worked in adults in the United States with epilepsy. At the time of this study, levetiracetam was called ucb L059.

What were the main questions studied?

The main questions the researchers wanted to answer in this study were:

- Did the participants who took levetiracetam have fewer seizures?
- What medical problems did the participants have during the study?

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Who participated in the study?

There were 385 male and female participants in the United States who joined this study.

In this study, the researchers planned to include participants who:

- Had focal seizures for at least 2 years before joining the study
- Had at least 12 focal seizures in the 3 months before joining the study
- Had at least 2 focal seizures each month in the 3 months before joining the study
- Took steady doses of no more than 2 anti-seizure medicines for at least 1 month before joining the study

There were 294 participants who continued in the study after the first 12 weeks. These participants were 16 to 70 years of age.

Each participant was in the study for up to 42 weeks, but the whole study lasted for about 1.5 years. The study started in September 1994 and ended in March 1996.

What treatments did the participants take?

The participants in this study took levetiracetam and a placebo as pills. The placebo pills looked like the levetiracetam pills, but they did not have any levetiracetam in them. The researchers used the placebo to help make sure the effects of levetiracetam they found in the study were actually caused by levetiracetam. The doses of levetiracetam were measured in milligrams, also called mg.

All the participants took their usual 1 or 2 anti-seizure medicines during the entire study. During the first 12 weeks of the study, the participants also took the placebo each day. None of the participants knew that they were taking the placebo during the first 12 weeks of the study. But, the study doctors, other study staff, and UCB knew.

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After the first 12 weeks of the study, 294 participants stayed in the study. The researchers used a computer program to randomly choose which study treatment each of these participants took. This helped make sure the treatments were chosen fairly and comparing the results of the treatments was as accurate as possible. After the first 12 weeks of the study:

- 95 participants took the placebo each day
- 199 participants took levetiracetam each day

After the first 12 weeks of the study, none of the participants, study doctors, or other study staff knew what study treatment each participant was taking. UCB also did not know. This was done because knowing what treatment the participants are taking can affect the results of the study. After the study was completed, UCB learned what treatment each participant took so they could create a report of the results.

The chart below shows the treatments planned for this study:

For the first 12 weeks	After the first 12 weeks
The participants took the placebo	The participants took either: • The placebo each day • Up to 3,000 mg of levetiracetam each day
The participants took the placebo twice each day	The participants took their study treatment twice each day for up to 24 weeks

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What happened during the study?

This section shows how the study was planned to be done.

Before the study started, all the participants first learned about the study and then decided to join. This is called “informed consent.” The study doctors and study staff then asked about their medical history and checked their health to make sure they could join the study. This part lasted up to 4 weeks.

During the study:


The participants kept track of their seizures every day using diaries.


The participants visited the clinic up to 12 times.


The study doctors kept track of any medical problems reported by the participants or observed by the study doctors or study staff.


The participants gave blood and urine samples at some clinic visits.


The participants had electrocardiograms, also called ECGs. These are tests that record the electrical activity in the heart.


The participants took their usual 1 or 2 anti-seizure medicines during the entire study.

The study had 3 main parts.

Part 1 lasted 12 weeks. During Part 1, all the participants took the placebo every day.

The participants could join Part 2 of the study if during Part 1 they:

- Had at least 12 focal seizures
- Had seizures at least twice every 4 weeks
- Did not change their usual 1 to 2 anti-seizure medicines

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Part 2 lasted 4 weeks. During Part 2, there were 3 treatment groups. The participants took either the placebo or levetiracetam based on which group they were in. For the participants taking levetiracetam, the dose was slowly increased to reach either:

- 1,000 mg of levetiracetam each day
- 3,000 mg of levetiracetam each day

Part 3 lasted 14 weeks. During Part 3, the participants stayed in the same treatment groups they were in during Part 2. They took the following treatments:

- The placebo each day
- 1,000 mg of levetiracetam each day
- 3,000 mg of levetiracetam each day

After Part 3, some participants joined another study where they took levetiracetam, and the rest did not. The participants could choose to join the other study if they had completed Part 3 of this study.

The participants who joined the other study entered that study right away.

The participants who did not join the other study took the placebo or took lower and lower doses of levetiracetam over 6 weeks until they were not taking any. They had a clinic visit 2 weeks after they stopped taking levetiracetam or the placebo. Then they left the study.

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What were the results of the study?

This is a summary of the main results from this study. These are the results from all the participants combined. The individual results of each participant might be different and are not in this summary.

Deciding which treatments work best usually takes results from several studies. Other studies may provide new information or different results. Always talk to a doctor before making any treatment decisions.

In this section, the results are shown based on the study treatments that participants took during Part 3.

The results below include 285 of the 294 participants who took at least 1 dose of study treatment after Part 1. The researchers included only the participants who continued into Part 3. They included:

- 93 of the 95 participants who took the placebo each day
- 94 of the 98 participants who took 1,000 mg of levetiracetam each day
- 98 of the 101 participants who took 3,000 mg of levetiracetam each day

The results below do not include Part 2. This is because during Part 2 some of the participants were slowly increasing the levetiracetam doses.

Did the participants who took levetiracetam have fewer seizures?

Yes. In this study, the average decreases were bigger for both of the levetiracetam groups compared with the placebo group.

To find this answer, the researchers counted the number of seizures in Part 1 and Part 3 for the participants in each treatment group. Seizures during the final 2 weeks of Part 2 were included in the number of seizures for Part 3.

The researchers found that the average number of seizures each day decreased from Part 1 to Part 3 for all 3 treatment groups. Compared with the placebo group, the average decreases were bigger for both of the levetiracetam groups. The decreases were:

- 20.9% bigger for the participants who took 1,000 mg of levetiracetam each day
- 27.7% bigger for the participants who took 3,000 mg of levetiracetam each day

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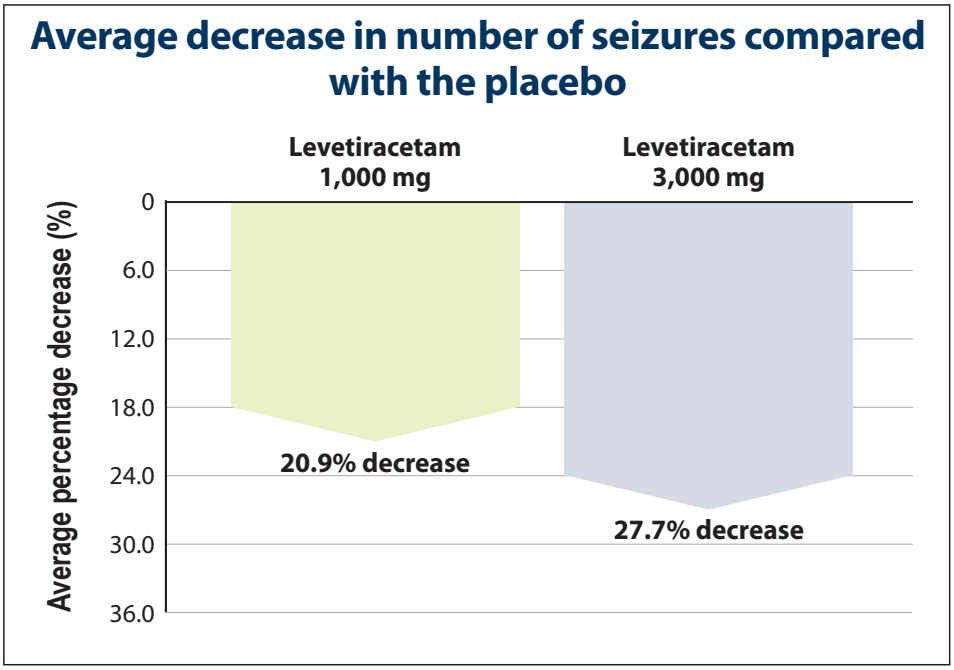
The graph below shows the results. The participants took their usual 1 to 2 anti-seizure medicines while they were taking the study treatments.



What medical problems did the participants have?

This section is a summary of the medical problems the participants had during the study that the study doctors thought might be related to the treatments. These medical problems are called “adverse reactions”. Some participants had more than 1 adverse reaction.

An adverse reaction is considered “serious” when it puts the participant’s life at risk, requires hospitalization, causes disability, causes a baby being born with medical problems, or may have turned into 1 of these problems if not treated.

These adverse reactions may or may not be caused by the treatments in the study. The results from several studies are needed to decide if a treatment causes an adverse reaction.

The results below include all 294 participants. The results are shown based on the study treatments that participants took after they joined Part 2.

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The results below do not include Part 1. This is because all the participants took the placebo in Part 1. The results also do not include any medical problems that started more than 2 days after the participants stopped taking study treatments.

How many of the participants had serious adverse reactions?

Serious adverse reactions happened in:

- 1.1% of the participants who took the placebo each day. This was 1 out of 95 participants.
- 2.0% of the participants who took 1,000 mg of levetiracetam each day. This was 2 out of 98 participants.
- None of the participants who took 3,000 mg of levetiracetam each day. This was 0 out of 101 participants.

None of the participants died due to serious adverse reactions during this study.

What serious adverse reactions did the participants have?

The serious adverse reactions were:

- Depression. This happened in 1 participant who took the placebo each day.
- Heavy bleeding in the gastrointestinal tract. This happened in 1 participant who took 1,000 mg of levetiracetam each day.
- Accidental overdose. This happened in 1 participant who took 1,000 mg of levetiracetam each day.

There were no other serious adverse reactions.

How many of the participants had any adverse reactions?

Adverse reactions that were either serious or not serious happened in:

- 49.5% of the participants who took the placebo each day. This was 47 out of 95 participants.
- 51.0% of the participants who took 1,000 mg of levetiracetam each day. This was 50 out of 98 participants.
- 58.4% of the participants who took 3,000 mg of levetiracetam each day. This was 59 out of 101 participants.

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What adverse reactions did the participants have?

The most common adverse reactions in the participants who took levetiracetam at either the 1,000 mg dose each day or the 3,000 mg dose each day were sleepiness and dizziness. The most common adverse reactions in participants who took the placebo each day were sleepiness and weakness or lack of energy.

The table below shows the adverse reactions that happened in 5% or more of the participants in any of the treatment groups. This means that they happened in at least 1 out of every 20 participants in any group. There were other adverse reactions, but they happened in fewer participants.

Adverse reactions in 5% or more of the participants in any treatment group

	Placebo each day (out of 95 participants)	Levetiracetam 1,000 mg each day (out of 98 participants)	Levetiracetam 3,000 mg each day (out of 101 participants)
Sleepiness	10.5% (10)	17.3% (17)	17.8% (18)
Dizziness	4.2% (4)	10.2% (10)	17.8% (18)
Weakness or lack of energy	10.5% (10)	8.2% (8)	7.9% (8)
Headache	5.3% (5)	4.1% (4)	6.9% (7)
Nervousness	2.1% (2)	3.1% (3)	5.0% (5)
Nausea	5.3% (5)	1.0% (1)	3.0% (3)

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How has this study helped patients and researchers?

The results of this study have helped researchers learn more about using levetiracetam in people who have epilepsy with focal seizures. The results of this study may be used in other studies to compare this drug with other treatments for people who have a similar condition.

The results of this study are based only on the participants included in the study.

Deciding which treatments work best for patients almost always takes results from several studies. This summary shows only the main results from this one study. Other studies may provide new information or different results.

The purpose of this summary is only to share information. If you need medical advice about your health or situation, please contact your physician.

At the time this study ended, further clinical studies with levetiracetam were planned.

Where can I learn more about this study?

If you have questions about this study, you can contact UCB by email at datasharing@ucb.com.

For general information about clinical trials, you can go to:

- https://www.clinicaltrials.gov/ct2/about-studies/learn
- https://www.fda.gov/drugs/drug-information-consumers/fdas-drug-review-process-ensuring-drugs-are-safe-and-effective

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Study Information

Protocol Number: N132

Study Sponsor: UCB Biopharma SRL sponsored this study. It was previously called UCB S.A. Pharma Sector and is referred to as UCB in this summary.

Full Study Title: Evaluation of the efficacy and tolerability of ucb L059 (500 and 1500 mg bid, tablets) add-on treatment in epileptic patients with partial onset seizures: a 38 week, double blind, placebo controlled, parallel group multicenter trial

Thank you!

Participants in clinical studies belong to a large community of people who take part in clinical research around the world. They help researchers answer important health questions and find medical treatments for patients.

Glossary

Heavy bleeding in the gastrointestinal tract:	The gastrointestinal tract is the tube that carries food from the mouth to out of the body. Heavy bleeding anywhere along the tube is called “gastrointestinal haemorrhage.”
Sleepiness:	Also called “somnolence.”
Weakness or lack of energy:	Also called “asthenia.”

This summary was last updated on 13 January 2020.
The final clinical study report is dated 19 November 1998.

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