Clinical Study Results

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Study Sponsor:	UCB Pharma S.A.
Treatment Studied:	Brivaracetam
Protocol Number:	N01266
Short Study Title:	A study to learn how brivaracetam works and about its long-term safety in children and adolescents with epilepsy

Thank you

UCB thanks all the participants of this study and their caregivers. All the participants and caregivers helped the researchers learn more about using brivaracetam in children and adolescents with epilepsy.

This is a summary of the main results of this study. An independent, non-profit organization helped prepare this summary of the study results, which included feedback from patients.

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

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

Overview of this study

Why was the research needed?

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Researchers are looking for a way to treat epilepsy in children and adolescents. Before a treatment is available for all patients, researchers do clinical studies to find out how the treatment works and how safe it is.

What treatment did the participants take?

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The participants in this study took brivaracetam.

What were the results of the study?

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

- **What medical problems did the participants have during the study?**
  There were 93.4% of participants who had medical problems during the study. This was 240 out of 257 participants.

- **What medical problems did the doctors report as related to the study treatment?**
  There were 30.7% of participants who had medical problems that the study doctors reported as **possibly related to the study treatment**. This was 79 out of 257 participants.

More details about the results of this study are included later in this summary.

Where can I learn more about this study?

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You can find more information about this study on the websites listed on the last page. If the study results are available, they can also be found on those websites.

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 if brivaracetam worked and about its safety in a large number of children and adolescents living with epilepsy. They also wanted to learn if the participants had any medical problems during the study.

Epilepsy is a brain condition that causes seizures. There are several types of seizures a person with epilepsy can have. A “partial-onset seizure” happens when unusual electrical activity starts in the brain. A person experiencing a partial-onset seizure may not lose consciousness, but they may have muscle jerking and a loss of awareness of their surroundings. This can impact a person’s daily life, safety, and wellbeing. A partial-onset seizure can also change into a type of seizure called a “generalized seizure”. A generalized seizure can cause a loss of consciousness.

Someone with epilepsy may take daily medicine to control and stop most or even all of their seizures. There are several epilepsy medicines that help control seizures, but they do not always work well in all patients. In some patients, these medicines also cause too many side effects.

Brivaracetam is a drug that is designed to stop the unusual electrical activity in the brain that causes partial-onset seizures. It was already tested and confirmed that the drug works in adults. Researchers wanted to find out how well brivaracetam works and how safe it is for children and adolescents with epilepsy to take.

What were the main questions studied?

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

- What medical problems did the participants have during the study?
- What medical problems did the study doctors report as related to the study treatment?

Who participated in the study?

There were 257 boys and girls with epilepsy who participated in this study. They were 3 months to 16 years old when they joined.

The study included participants in 9 countries: Belgium, Czech Republic, Germany, Hungary, Italy, Mexico, Poland, Spain, and the United States.

Country	Participants
Belgium	12
Czech Republic	12
Germany	2
Hungary	30
Italy	4

Country	Participants
Mexico	61
Poland	56
Spain	25
United States	55

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

- Had recently had a partial-onset seizure
- Had already tried at least 1 treatment to control their epilepsy, but the treatment had not worked well enough to stop their seizures
- Were taking at least 1 medicine to control their epilepsy
- Did not have any medical conditions that could make it difficult or dangerous to participate in this study

Each participant was planned to be in the study for at least 3 years, but the whole study lasted for about 11 years. The study started in August 2011 and ended in February 2022.

What treatment did the participants take?

The participants in this study took brivaracetam as a pill or as a liquid by mouth twice a day. The doses of brivaracetam were measured in milligrams, also called “mg”.

The participants and their caregivers, study doctors, study staff, and UCB staff knew that all the participants in this study were taking brivaracetam.

	Brivaracetam
	257 participants
	Brivaracetam as a pill or liquid by mouth
	Brivaracetam was taken twice a day
	Participants stayed in the study for at least 3 years

What happened during the study?

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

Before taking study treatment, about half of the participants visited their clinic at least once. Each participant’s parent or caregiver learned about the study and decided to let the participant join the study. This is called “informed consent”. Then, the study doctors and study staff asked about the participants’ medical history and checked their health to make sure they could join the study. This part lasted for up to 1 month. The study doctors asked about how many seizures the participants had in the 3 weeks before they started taking brivaracetam.

The rest of the participants joined this study after taking part in a similar study. This earlier study learned about brivaracetam for epilepsy in children and adolescents. The participants were still taking brivaracetam and their health continued to be checked by study doctors. This is called “long-term follow-up”. The “long-term follow-up” participants had already had this first clinic visit.

At these visits, the study doctors:

Asked the participants, or their parent or caregiver, about any medical problems they were having and the medicines they were taking

Took blood and urine samples

Checked the participants' heart health using an electrocardiogram, also called an ECG

Checked the brain health of some of the participants using an electroencephalogram, also called an EEG

Asked the participants, or their parent or caregiver, questions to learn about the participants' mental health and wellbeing

After the informed consent process and checking the participants' health, the study doctors gave the participants a low dose of brivaracetam. This was to find out what dose best controlled the participants' epilepsy without having too many medical problems. During this part, the dose of brivaracetam was slowly increased until the full dose the researchers wanted to study was reached. The dose was different for each participant, depending on their age and weight. It also depended on how much brivaracetam was needed to control the participant's seizures. The medical problems with different doses were also considered.

While taking study treatment, the participants visited the clinic every 3 months. At some of these visits, the study doctors did some of the tests and measurements that were done at the first visit. The study doctors kept track of any medical problems reported by the participants or observed by the doctors or study staff.

After taking study treatment, the participants visited the clinic at least twice. During this part, the dose of brivaracetam was slowly decreased until the participants stopped taking it. The study doctors checked the participants' health and asked about any medical problems they were having.

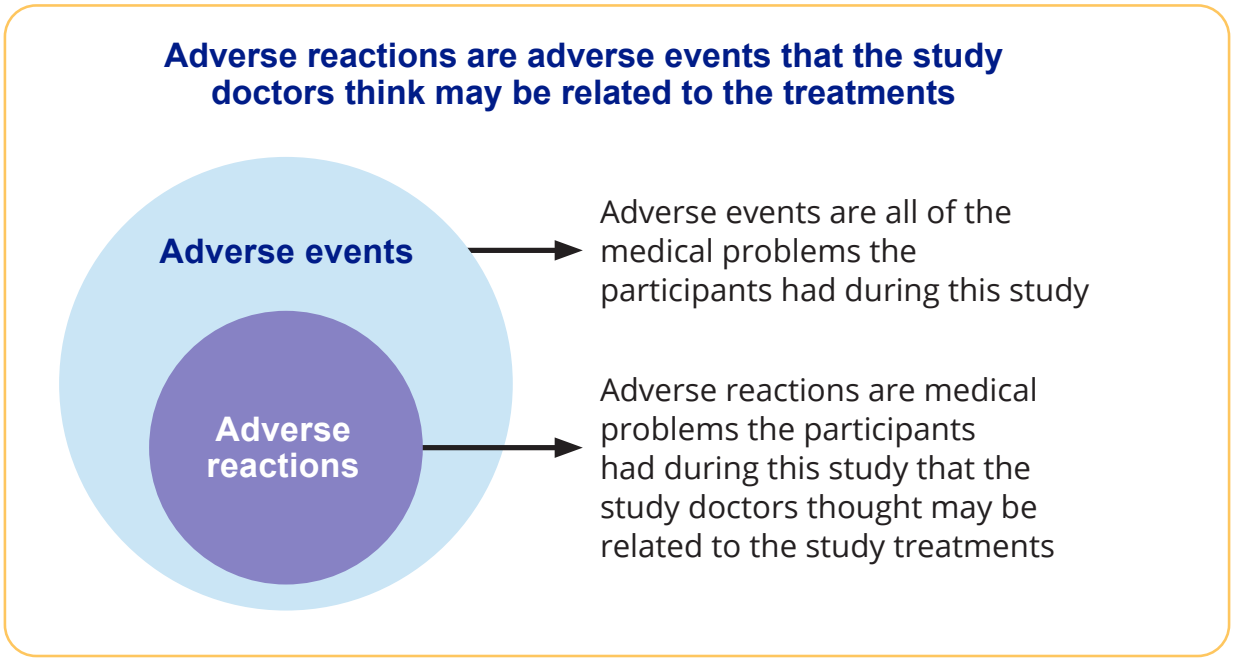
What were the results of the study?

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.

What medical problems did the participants have during this study?

In this summary, there is information about 2 different types of medical problems that the participants had during the study. An **adverse event** is **any** medical problem that a participant has during a study. Doctors keep track of all adverse events that happen in studies, whether or not these may be related to the study treatments. An **adverse reaction** is different from an adverse event because it is reported by the doctor as **possibly related** to the study treatments. An adverse event or adverse reaction is considered "serious" when it is life-threatening, causes lasting problems, or requires hospital care.



The information below is a summary of the **adverse events** that happened in this study. These results are separated by the participants' age group.

Adverse events in this study by age group

	Under 2 years old (36 participants)	2 to 3 years old (15 participants)	4 to 11 years old (141 participants)	12 to 17 years old (65 participants)
How many participants had serious adverse events?	38.9% (14 participants)	53.3% (8 participants)	29.8% (42 participants)	29.2% (19 participants)
How many participants had adverse events?	94.4% (34 participants)	93.3% (14 participants)	93.6% (132 participants)	92.3% (60 participants)
How many participants left the study due to adverse events?	11.1% (4 participants)	33.3% (5 participants)	10.6% (15 participants)	10.8% (7 participants)

The most common serious adverse events were:

- Seizure
- Having more than 1 seizure in a short amount of time
- Lung infection
- Fever

The most common adverse events were:

- Inflammation of the nose and throat
- Fever
- Sore throat
- Vomiting
- Infection of the upper airways
- Seizure
- Headache

What medical problems did the study doctors report as related to the study treatment?

This section is a summary of the medical problems that the participants had during the study that the doctors reported as **possibly related** to the study treatment. These medical problems are called **"adverse reactions"**.

This summary also includes information about serious adverse reactions. An adverse reaction is considered "serious" when it is life-threatening, causes lasting problems, or requires hospital care.

Other studies may or may not show that these medical problems were related to the study treatment. The results from several studies are often needed to decide if a treatment causes an adverse reaction. Always talk to a doctor before making any treatment decisions.

Some participants had more than 1 adverse reaction. Some of the adverse reactions listed below may also be listed in the adverse events section earlier in this summary.

Did any adverse reactions happen during this study?

The table below shows how many participants had adverse reactions during the study. These are separated by the participants' age group.

Adverse reactions in this study by age group

	Under 2 years old (36 participants)	**2 to 3 years old** (15 participants)	**4 to 11 years old** (141 participants)	**12 to 17 years old** (65 participants)
How many participants had serious adverse reactions?	2.8% (1 participant)	None	2.1% (3 participants)	1.5% (1 participant)
How many participants had adverse reactions?	19.4% (7 participants)	46.7% (7 participants)	32.6% (46 participants)	29.2% (19 participants)
How many participants left the study due to adverse reactions?	5.6% (2 participants)	13.3% (2 participants)	2.8% (4 participants)	3.1% (2 participants)

What serious adverse reactions did the participants have?

The table below shows the serious adverse reactions that happened during the study.

Serious adverse reactions in this study by age group

	Under 2 years old (36 participants)	2 to 3 years old (15 participants)	4 to 11 years old (141 participants)	12 to 17 years old (65 participants)
Weight loss	2.8% (1 participant)	None	None	None
Epilepsy symptoms	None	None	0.7% (1 participant)	None
Seizures	None	None	0.7% (1 participant)	None
Having more than 1 seizure in a short amount of time	None	None	0.7% (1 participant)	None
Thoughts of violence towards someone else	None	None	None	1.5% (1 participant)

What adverse reactions did the participants have?

The table below shows the adverse reactions that happened in 6 or more participants. There were other adverse reactions, but these happened in fewer participants.

Adverse reactions affecting 6 or more participants overall

Adverse reactions in this study by age group

	Under 2 years old (36 participants)	2 to 3 years old (15 participants)	4 to 11 years old (141 participants)	12 to 17 years old (65 participants)
Sleepiness	None	6.7% (1 participant)	5.7% (8 participants)	4.6% (3 participants)
Lower appetite	None	6.7% (1 participant)	5.0% (7 participants)	4.6% (3 participants)
Feeling aggressive	None	13.3% (2 participants)	5.0% (7 participants)	1.5% (1 participant)
Tiredness	None	13.3% (2 participants)	2.8% (4 participants)	4.6% (3 participants)
Seizure	2.8% (1 participant)	None	1.4% (2 participants)	4.6% (3 participants)

What did the researchers learn from this study?

The results of this study have helped researchers learn more about using brivaracetam in children and adolescents living with epilepsy.

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 or your child's health or situation, please contact your doctor.

When this document was approved, further clinical studies with brivaracetam were ongoing.

Where can I learn more about this study?

You can find more information about this study at the websites listed below:

- www.clinicaltrials.gov/ct2/show/NCT01364597
- www.clinicaltrialsregister.eu/ctr-search/search?query=2011-000374-60

If you have questions about this study, UCB contact information is available at https://www.ucb.com/UCBCares.

Study Information

Protocol Number: N01266

Study Sponsor: UCB Pharma SA sponsored this study. It is referred to as UCB in this summary.

Full Study Title: Open-label, single-arm, multicenter, long-term study to evaluate safety and efficacy of brivaracetam used as adjunctive treatment in pediatric subjects with epilepsy

National Clinical Study Number: NCT01364597

EudraCT Number: 2011-000374-60

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.

CISCRP REVIEW PANEL

This summary was last updated on 08 July 2022.
The final clinical study report is dated 31 May 2022.

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