Clinical Study Results

Research Sponsor: Eisai Co., Ltd.
Drug Studied: Lemborexant, also known as E2006
Short Study Title: A study to learn how lemborexant acts in the bodies of South Korean participants with insomnia

Thank you

You took part in this clinical study for the study drug E2006, also known as lemborexant. Everyone who participated helped researchers learn more about lemborexant and how lemborexant may help South Koreans with insomnia. Insomnia is when people have trouble falling asleep, staying asleep, and/or waking up early and not being able to return to sleep.

Eisai, a Japanese pharmaceutical company that was the sponsor of this study, thanks you for your help. Eisai is committed to improving health through continuing research in areas of unmet need and sharing study results with participants.

Eisai has prepared this summary of the study and its results with a medical and regulatory writing organization called Certara Synchrogenix.

If you participated in this study and have questions about the results, please speak with the doctor or staff at your study site.

What has happened since the study started?

It started in November 2022 and ended in May 2024.

The study included 137 participants from 9 sites in South Korea.

Out of 137 participants, 65 took the lemborexant or placebo at least once. A placebo tablet is like a lemborexant tablet but does not have any medicine in it.

The sponsor of the study reviewed the data collected and created a report of the results. This is a summary of that report.

Why was the research needed?

Researchers were looking for a different treatment for South Koreans with insomnia.

Researchers think that lemborexant may help participants with insomnia by blocking the actions of orexin. Orexin is a chemical in the brain that helps people stay awake.

The researchers in this study wanted to find out whether lemborexant works in South Koreans with insomnia. They also wanted to find out if people had any medical problems during the study.

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

- Did lemborexant help participants fall asleep faster than placebo after 1 month of treatment?
- Did lemborexant help participants stay asleep longer than placebo after 1 month of treatment?
- What adverse reactions did participants receiving lemborexant have? An adverse reaction is a medical problem that may be caused by the study drug.

It is important to know that this study was designed to get accurate answers to the questions listed above. There were other questions the researchers wanted to answer to learn more about how lemborexant works, but those were not the main questions the study was designed to answer.

What kind of study was this?

To answer the main questions above, researchers asked for the help of South Koreans who were 19 to 80 years old and diagnosed with insomnia.

Of these participants, 38% were men and 62% were women. The participants in the study were between 23 and 80 years old.

Before the treatment period, all participants took a placebo tablet once per day right before bedtime for about 14 days. All participants then returned to see their doctor at the study sites. The dose of lemborexant was measured in milligrams (or mg).

During the treatment period, a computer program was used to assign participants by chance into 3 groups:

- **Lemborexant 5 mg**: Participants took a lemborexant 5 mg tablet once per day right before bedtime for 1 month.
- **Lemborexant 10 mg**: Participants took a lemborexant 10 mg tablet once per day right before bedtime for 1 month.
- **Placebo**: Participants took a placebo tablet once per day right before bedtime for 1 month.

This study was "double-blind". This means that the participants, the study doctors and staff, and the sponsor did not know whether participants received lemborexant or placebo.

The figure below shows how treatment was given in the study.

What happened during the study?

Before the study treatment started, the study doctors did a full check-up to make sure each participant could join the study.

The study doctors or staff also:

- Confirmed that participants had insomnia
- Took blood and urine samples for tests
- Performed an overnight sleep test to learn about sleep information such as how long it took for participants to fall asleep and how long they stayed asleep
- Asked participants to complete sleep diaries about their insomnia

During the treatment period, the participants took their assigned study treatment for 1 month.

Throughout the study, the study doctors or staff:

- Asked about medical problems participants had experienced and medicines that participants were taking

At the end of the treatment period, all participants returned to the study site.

During this visit, the study doctors or staff:

- Took blood and urine samples for analyses
- Performed an overnight sleep test to check whether sleep measures changed with treatment
- Asked about medical problems participants had experienced and medicines that participants were taking

About 28 days after their last dose, all participants returned to the study site. During this visit, the study doctors or staff asked about medical problems participants had experienced and medicines that participants were taking.

The figure below shows how the study was done.

How did this study work?

Before the treatment period

The study doctors or staff:

- Checked each participant's health to make sure they could join the study
- Confirmed all participants had insomnia
- Took blood and urine samples
- Performed an overnight sleep test

During the treatment period

All 65 participants took their assigned study treatment for **1 month**.

The study doctors or staff asked about medical problems participants were having and medicines that participants were taking.

After the treatment period

The study doctors or staff took blood and urine samples and asked participants about medical problems participants were having and medicines that participants were taking.

All participants returned to the study sites **28 days** after taking their last dose of the study treatment for a health check.

What were the results of the study?

This is a summary of the main results of this study. Each participant's individual results were different and unique to them. Individual results are not given separately in this summary, but all participants' results are summarized together here. A full list of the questions researchers wanted to answer can be found on the websites listed at the end of this summary. If a full report of the study results is available, it can also be found on these websites.

Researchers look at the results of many studies to decide which treatment options may work best and are well tolerated by patients. Other studies may provide new information or different results. Always talk to a doctor before making any treatment decisions.

Did lemborexant help participants fall asleep faster than placebo after 1 month of treatment?

To answer this question, researchers used the results of the sleep test to measure the time it took for participants to fall asleep. The time it takes for a participant to fall asleep is called latency to persistent sleep (or LPS).

Researchers then calculated the change in median LPS before and after 1 month of taking lemborexant 5 mg or 10 mg and compared the results to participants who took placebo.

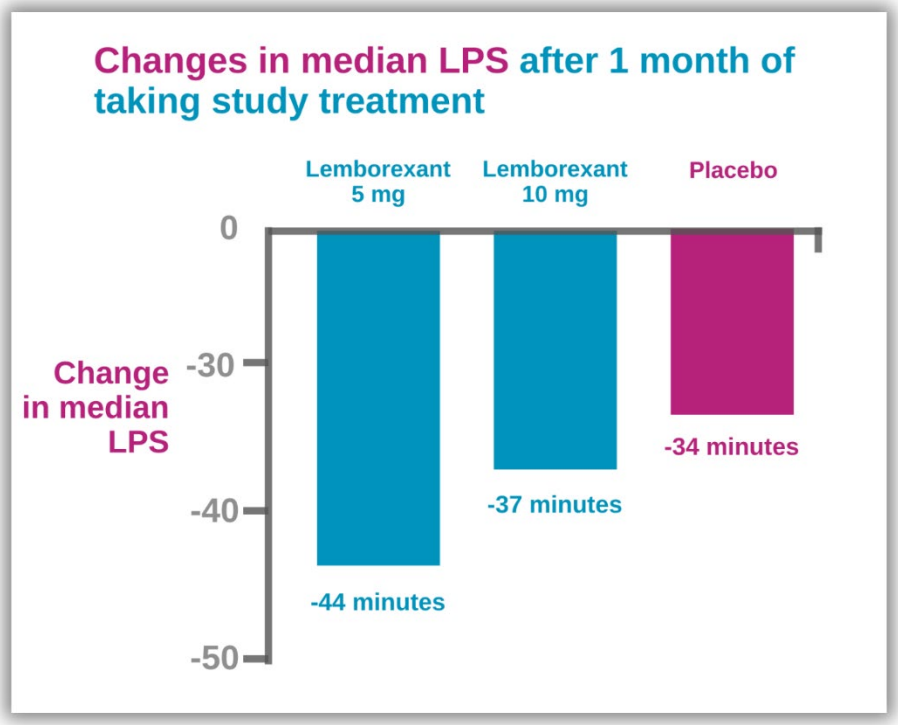
Median LPS means half of the participants had a longer LPS and the other half had a shorter LPS.

- A **decrease** in median LPS after 1 month of treatment means that participants took **less** time to fall asleep.
- An **increase** in median LPS after 1 month of treatment means that participants took **more** time to fall asleep.

Overall, the changes in median LPS for each group are as follows:

- **Decreased by 44 minutes** after 1 month of taking lemborexant 5 mg.
- **Decreased by 37 minutes** after 1 month of taking lemborexant 10 mg.
- **Decreased by 34 minutes** after 1 month of taking placebo.

The chart below shows the changes in median LPS after 1 month of treatment.



Did lemborexant help participants stay asleep longer than placebo after 1 month of treatment?

To answer this question, researchers used the results of the sleep test to measure how much time participants spent sleeping while in bed. This measure is called sleep efficiency (or SE).

Researchers then computed the change in median SE before and after 1 month of taking lemborexant 5 mg or 10 mg and compared the results to participants who took placebo.

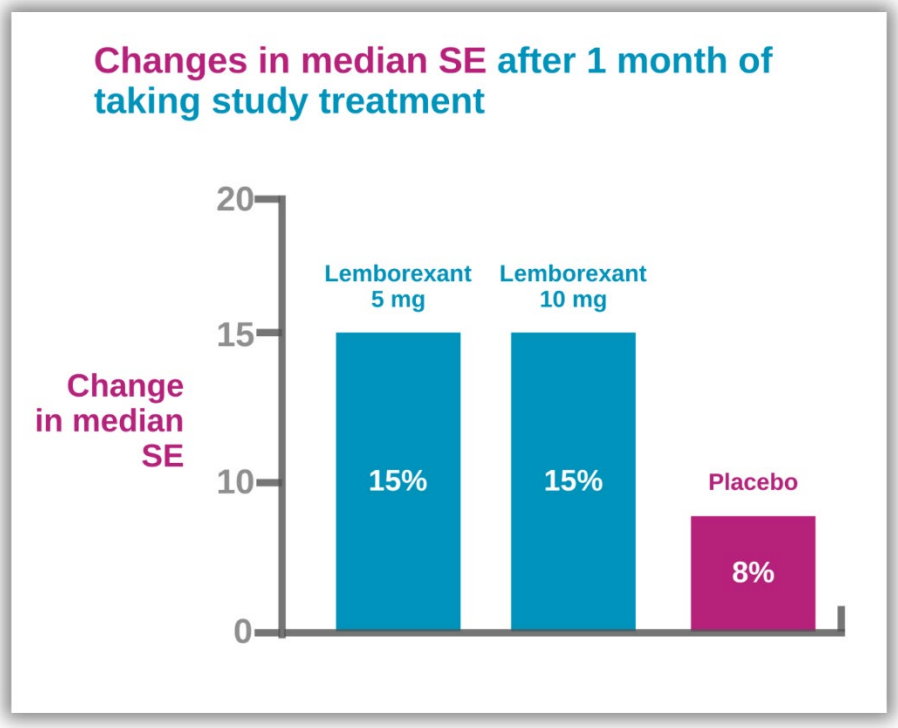
Median SE means half of the participants had a higher SE and the other half had a lower SE.

- A **decrease** in median SE after 1 month of treatment means that participants spent more time awake in bed instead of sleeping.
- An **increase** in median SE after 1 month of treatment means that participants spent more time sleeping while in bed.

Overall, the changes in median SE for each group are as follows:

- **Increased by 15%** after 1 month of taking lemborexant 5 mg.
- **Increased by 15%** after 1 month of taking lemborexant 10 mg.
- **Increased by 8%** after 1 month of taking placebo.

The chart below shows the changes in median SE after 1 month of treatment.



What medical problems did participants have?

Medical problems that happen to participants in clinical studies are called “adverse events”. If the study doctors thought an adverse event was caused by the study drugs, it is called an “adverse reaction”. Adverse events or reactions are considered “serious” if the participant needs to be admitted to a hospital, if they are life-threatening, or if they cause lasting health problems.

This section is a summary of the adverse reactions that happened during this study. The websites listed at the end of this summary may have more information about these. A lot of research is needed to know whether a drug may cause a particular medical problem.

How many participants had adverse reactions?

No participants experienced adverse reactions during the study.

How has this study helped patients and researchers?

In this study, researchers learned more about how lemborexant may have helped South Koreans with insomnia.

Researchers look at the results of many studies to decide which treatment options may work best and are well tolerated. This summary shows only the main results from this one study. Other studies may provide new information or different results.

Further clinical studies with lemborexant are not planned in South Korea.

Where can I learn more about the study?

You can find more information about this study on the websites listed below. If a full report of the study results is available, it can also be found here:

- https://clinicaltrials.gov/ - Once you are on the website, type **NCT05594589** into the search box and click "**Search**".

Full study title: A Multicenter, Double-Blind, Randomized, Placebo-Controlled, Parallel-Group Study to Assess the Pharmacodynamics of Lemborexant in Korean Subjects with Insomnia Disorder

Protocol number: E2006-J082-204

Eisai, the sponsor of this study, has headquarters in Tokyo, Japan, and regional headquarters in Nutley, New Jersey, USA, and Seoul, South Korea. The phone numbers for general information are 1-888-274-2378 (USA) and +82 2 3451 5500 (South Korea).

Thank you

Eisai would like to thank you for your time and interest in participating in this clinical study. Your participation has provided a valuable contribution to research and improvement in health care.

Eisai is a global research and development-based pharmaceutical company headquartered in Japan. We define our corporate mission as "to give first thought to patients and the people in the daily living domain, and increase the benefits that health care provides to them as well as meet diverse healthcare needs worldwide", which we call our human health care (*hhc*) philosophy. With over 10,000 employees working across our global network of R&D facilities, manufacturing sites, and marketing subsidiaries, we strive to realize our *hhc* philosophy by delivering innovative products in multiple therapeutic areas with high unmet medical needs, including oncology and neurology. For more information, please visit https://www.eisai.com.

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