

PATIENT INFORMATION LEAFLET

LEV-END® 100 mg/ml oral solution

Administered orally.

- **Active Substance:** Per ml includes 100 mg levetiracetam.
- **Excipients:** Sodium citrate dihydrate, citric acid monohydrate, methyl hydroxybenzoate (E218), propyl hydroxybenzoate (E216), ammonium glycyrrhizinate, acesulfame potassium, glycerol, maltitol solution (E965), tutti frutti flavor, and deionized water.

Read all of this PATIENT INFORMATION LEAFLET carefully before you start using this medicine because it contains important information for you.

- *Keep this **PATIENT INFORMATION LEAFLET**. You may need to read it again.*
- *If you have any additional questions, please contact your physician or pharmacist.*
- *This medicine has been prescribed personally for you. Do not pass it on to others.*
- *When you go to doctor or hospital while using this medicine, tell your doctor that you are using this medicine.*
- *Please completely follow the instructions in this information leaflet. Do not use **higher or lower** doses other than what is recommended to you.*

In these leaflet:

1. **What is LEV-END® and what is it used for?**
2. **What you need to know before you take LEV-END®?**
3. **How to use LEV-END®?**
4. **Possible side effects**
5. **How to store LEV-END®?**

are explained.

1. What is LEV-END® and what is it used for?

LEV-END® is a clear, nearly colorless solution with a characteristic odor. It is provided in a 300 ml solution contained in a single amber glass bottle, packaged with a graduated pipette and usage instructions in cardboard boxes.

LEV-END® is an antiepileptic medication used in the treatment of epilepsy (seizures). It is used alone in patients aged 16 and older for partial-onset seizures, whether secondary generalized or not.

LEV-END® is used in addition to other antiepileptic medications:

- In babies over 1 month old, children, and adults, for partial-onset seizures with or without secondary generalization (partial-onset seizures, whether secondary generalized or not).
- In adolescents over 12 years old and adults, for seizures with a jerking pattern (myoclonic seizures).
- In adolescents over 12 years old and adults, for seizures with primary generalized muscle contractions (primary generalized tonic-clonic seizures).

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2. What you need to know before you take LEV-END®?

DO NOT TAKE LEV-END® in the following condition

- If
- You are allergic to the effective substance or any excipients of LEV-END® (If you are hypersensitive).

TAKE special care with LEV-END® in the following conditions

- If
- You have kidney problems, please follow your doctor's instructions. Your doctor may decide whether it is necessary to adjust your dose.
 - You notice any retardation in your child's growth or unexpected development of puberty in your child, please consult your doctor.
 - In a small number of individuals treated with antiepileptic medications like LEV-END®, there may be thoughts of self-harm or suicide. If you show signs of depression and/or suicidal thoughts, please consult your doctor.
 - You have a family or medical history of irregular heartbeats (which can be seen on an electrocardiogram), a condition that makes you prone to heart rhythm disturbances or electrolyte imbalances, and/or if you are undergoing treatment for such conditions, please consult your doctor.

If any of the following side effects become severe or persist for more than a few days, consult your doctor or pharmacist.

- If you experience abnormal thoughts, feeling irritable, or reacting more aggressively than usual, or if you, your family, or your friends notice significant changes in your mood or behavior
 - Worsening epilepsy

Your seizures may rarely worsen or become more frequent, especially during the first month after starting treatment or increasing the dose. In a very rare form of early-onset epilepsy that causes multiple types of seizures and loss of skills (epilepsy associated with SCN8A mutations), you may notice that your seizures continue or worsen during your treatment.

If you experience any of these new symptoms while taking LEV-END®, consult immediately your doctor.

Please consult your doctor even if these warnings apply to you at any time in the past

Taking LEV-END® with food and drink

You can take LEV-END® with food or without. As a safety precaution, do not take LEV-END® with alcohol.

Pregnancy

Please consult your doctor or pharmacist before using the medicine.

If you are pregnant or think you may be pregnant please contact your doctor. Do not stop your treatment with LEV-END® without consulting your doctor. The birth defect risk of LEV-END® on your unborn child can not be underestimated. LEV-END® has shown adverse effects on fertility in animal studies at dose levels higher than needed to control seizures.

If you notice that you have been pregnant during treatment, consult immediately your doctor.

Breastfeeding

Please consult your doctor or pharmacist before using the medicine.

Breastfeeding is not recommended during treatment.

Driving and using machinery

LEV-END® may make you feel sleepy, which may impair your ability to use any tools or machines. This is most likely at the beginning of treatment or after an increase in dose. Do not operate machinery or drive during treatment with LEV-END® until your doctor has assessed your response to treatment and given you permission.

Important information on some excipients present in LEV-END®

LEV-END® 100 mg/ml Oral Solution contains methyl parahydroxybenzoate (E218) and propyl parahydroxybenzoate (E216) and may cause allergic reactions (possibly delayed).

LEV-END® 100 mg/ml Oral Solution contains maltitol. If your doctor has told you that you are sensitive to certain types of sugar, consult your doctor before using this medicine.

LEV-END® 100 mg/ml oral solution contains less than 1 mmol (23 mg) sodium in each dose and 70.5 mg sodium in the maximal daily dose. This should be considered for patients on a controlled sodium diet.

LEV-END® 100 mg/ml oral solution contains less than 10 g glycerol in a 1 ml dose. No glycerol-related adverse effects are expected due to the dose.

Taking with other medicines

Do not take macrogol (a medicine used as a laxative) one hour before and one hour after taking LEV-END® as this may cause LEV-END® to lose its effect.

Please tell your doctor if you are taking methotrexate (a medicine used for immune system disorders or diseases such as cancer) together with LEV-END®.

If you are taking or have recently taken any other medicines, including medicines without a prescription, tell your doctor or pharmacist.

3. How to use LEV-END®?

- **Instructions for appropriate use and dose/frequency:**

Take the oral solution according to your doctor's instructions. You should take LEV-END® 2 times a day, once in the morning and once in the evening, at approximately the same time every day.

Monotherapy (treatment alone with LEV-END®)

Use in adults and adolescents aged 16 years and older:

- For patients 4 years of age and older, measure the appropriate dosage using the graduated pipette provided in the package.
- Recommended dosage: LEV-END® is taken twice daily in two equal doses. Each dose is measured from 5 ml (500 mg) to 15 ml (1500 mg).
- If you are starting treatment with LEV-END® for the first time, your doctor will prescribe a low dose of LEV-END® for 2 weeks before giving you the lowest daily dose.

For example, if your daily dose is 1000 mg, you should take 500 mg (5 ml) once in the morning and once in the evening.

Adjunctive therapy (Treatment with other antiepileptic drugs)

Use in adults (≥18 years) and adolescents (12-17 years):

- For patients 4 years of age and older, use the measuring pipette provided in the package for appropriate measure the dosage.
- Recommended dosage: LEV-END® is taken twice daily in two equal doses. Each dose is measured from 5 ml (500 mg) to 15 ml (1500 mg).

For example, if your daily dose is 1000 mg, you should take 500 mg (5 ml) once in the morning and once in the evening.

Use in children aged 6 months and over 6 months:

Your doctor will prescribe the most appropriate LEV-END® pharmaceutical form according to age, weight and dose.

- For children 6 months to 4 years of age, use the measuring pipette provided in the package to determine the appropriate dose measure the dosage.
- For children over 4 years of age, use the measuring pipette provided in the package to measure the appropriate dosage measure the dosage.
- Recommended dosage: LEV-END® is taken twice daily in two equal doses. Each dose is measured from 0.1 ml (10 mg) to 0.3 ml (30 mg) per kg of the child's body weight (see table below for dose examples).

For example, for a daily dose of 20 mg/kg, you should give your 15 kg child 150 mg (1.5 ml) once in the morning and once in the evening.

Use in children aged 6 months and over 6 months:

Weight	Starting dose: 0,1 ml/kg twice a day	Maximum dose: 0,3 ml/kg
6 kg	0.6ml twice a day	1,8ml twice a day
8 kg	0,8ml twice a day	2,4ml twice a day
10 kg	1 ml twice a day	3 ml twice a day
15 kg	1,5ml twice a day	4,5ml twice a day
20 kg	2ml twice a day	6 ml twice a day
25 kg	2,5ml twice a day	7,5 ml twice a day
Over 50 kg	5 ml twice a day	15ml twice a day

Use for babies 1 month to under 6 months of age:

For babies 1 month to 6 months of age, use the measuring pipette provided in the package. measure the dosage.

- Recommended dosage: LEV-END® is taken twice daily in two equal doses. Each dose is measured from 0.07 ml (7 mg) to 0.21 ml (21 mg) per kg of the baby's body weight (see table below for dose examples).

For example, if the recommended dose for each day is 14 mg/kg, you should give your 4 kg child 28 mg (equivalent to 0.3 ml) in the morning and evening.

Use in babies aged 1 month to under 6 months of age:

Weight	Starting dose: 0,07 ml/kg	Maksimum doz: 0,21 ml/kg
4 kg	0,3 ml twice a day	0,85 ml twice a day
5 kg	0,35 ml twice a day	1,05 ml twice a day
6 kg	0,45 ml twice a day	1,25 ml twice a day
7 kg	0,5ml twice a day	1,5ml twice a day

• **Administration path and method:**

After measuring the correct dosage with the appropriate syringe, you can dilute it in a glass of water or in your baby's bottle when taking LEV-END® 100 mg/ml oral solution. After oral administration, levetiracetam may leave a bitter taste.

Instructions for use:

- Open the bottle by pressing and twisting the cap (Figure 1).
- Insert the pipette into the bottle to draw the medicine (Figure 2).
- Fill the medicine into the pipette by pulling the plunger as much as the mg amount your physician has prescribed in your prescription. Then remove the pipette from the bottle (Figure 3).
- Close the cap of the medicine bottle.
- The measurement indicated on the plunger indicates the mg of the drug in the pipette. Push the plunger and pour the solution into the glass of water or your baby's bottle (Figure 4).
- Drink all the liquid in the glass or bottle.
- Then rinse the pipette with water to clean it (Figure 5).



(Figure 1)



(Figure 2)



(Figure 3)



(Figure 4)



(Figure 6)

Duration of use

- Treatment with LEV-END® is long-term. You should continue treatment with LEV-END® for as long as your doctor tells you.
- Do not stop treatment without consulting your doctor because your seizures may increase.

Different age groups:

Use in children:

LEV-END® oral solution is used in infants, children and adults from 1 month of age.

Use in elderly patients:

In elderly patients (over 65 years of age), if kidney function is reduced, the dose of LEV-END® will be adjusted by your doctor.

Special conditions of use: Kidney/Liver impairment:

If you have kidney failure, your LEV-END® dose will be adjusted by your doctor according to your kidney function. If you have severe hepatic impairment, your dose will be reduced by your doctor.

If you have the impression that the effect of LEV-END® is too strong or too weak, consult your doctor or pharmacist.

If you have taken more LEV-END® than you should have:

Possible side effects of an overdose of LEV-END® include drowsiness, extreme restlessness, hostile behavior/aggression, confusion, respiratory arrest and coma. Your doctor will prescribe the best possible treatment for overdose.

If you have taken more LEV-END® than you should, consult a doctor or pharmacist.

If you forget to take LEV-END®:

If you have missed one or more doses, consult your doctor.

Do not take a double dose to make up for forgotten doses.

Possible effects when treatment with LEV-END® is stopped:

- LEV-END® is used as chronic (long-term) treatment. You should continue treatment with LEV-END® as long as your doctor tells you to.
- Do not stop treatment without your doctor's advice because this may increase your seizures.
- Your doctor should decide whether to stop LEV-END® treatment. Your doctor will inform you about stopping LEV-END® treatment with a gradual dose reduction.

Ask your doctor or pharmacist if you have any further questions about the use of this medicine.

4. What are the possible side effects?

Like all medicines, LEV-END® may cause side effects in patients sensitive to its ingredients.

If any of the following occurs, call your doctor IMMEDIATELY and refer to the emergency service of the nearest hospital:

- Weakness, dizziness or lightheadedness, or difficulty breathing; these may be signs of a serious allergic (anaphylactic) reaction.
- Swelling of the face, lips, tongue and throat (Quincke's edema)
- Flu-like symptoms and a generalized rash accompanied by a high fever with facial redness, elevated levels of liver enzymes seen in blood tests and an increase in a type of white blood cell (eosinophilia) and enlarged lymph nodes (drug reaction with eosinophilia and systemic symptoms [DRESS])
- Decreased urine volume, fatigue, nausea, vomiting, confusion, swelling of the legs, ankles or feet; these symptoms may indicate a sudden decrease in kidney function.
- Skin rash (multiform erythema) that can form blisters and look like small target boards (dark spots in the center, a lighter area around it and a dark ring on the outside)
- Diffuse rash with blisters and peeling skin, especially around the mouth, nose, eyes and genitals (Stevens Johnson syndrome)
- A more severe type of rash causing skin peeling over more than 30% of the body surface (toxic epidermal necrolysis)
- Serious mental changes or if your relatives notice that you have neurological symptoms such as confusion, somnolence, amnesia, memory loss, memory impairment, abnormal behavior or involuntary or uncontrolled movements. These may be signs of encephalopathy (brain disease, damage or dysfunction).

These are all very serious side effects. If you have any of these, you should seek emergency medical attention you may need intervention or hospitalization.

Side effects are listed as shown in the following categories:

Very common: Occurs in at least 1 in 10 patients.

Common : Less than 1 in 10 patients, but more than 1 in 100 patients.

Uncommon : Less than 1 in 100 patients, but more than 1 in 1000 patients.

Rare: Less than 1 in 1000 patients, but more than 1 in 10,000 patients may be seen.

Very rare: It may occur in less than 1 in 10,000 patients.

Unknown : Cannot be estimated based on available data.

Very common:

- Nasopharyngitis (inflammation of the nose and pharynx)
- Somnolence
- Headache

Common:

- Loss of appetite (anorexia),
- Depression
- Hostile behavior/aggression
- Anxiety
- Insomnia
- Irritability or overreacting to stimuli (Irritability)
- Involuntary muscle contractions (convulsions)
- Balance disorder
- Feeling dizzy
- A state of immobility accompanied by lethargy (lethargy)
- Involuntary tremor (Tremor)
- Dizziness, spinning sensation (Vertigo)
- Cough
- Abdominal pain
- Diarrhea
- Indigestion (Dyspepsia)
- Nausea
- Vomiting
- Rash
- Fatigue (asthenia/weakness)

Uncammon:

- Decrease in the number of cells that provide blood clotting
- Decreased white blood cell count
- Weight gain
- Weight loss
- Suicide attempts and suicidal ideation
- Mental disorder
- Abnormal behavior
- Seeing or hearing things that are not real (hallucinations, delusions)
- Anger
- Confusion (Confusion)
- Panic attack
- Emotional lability/mood swings
- Excessive restlessness (agitation)
- Memory loss (Amnesia)
- Forgetfulness (memory impairment)
- Coordination disorder / maladaptive movement disorder (Ataxia)
- Pins and needles sensation (Paresthesia)
- Distraction (loss of concentration)
- Double vision
- Blurred vision
- Increased/abnormal liver function test values
- Hair loss
- Skin inflammation (eczema)
- Itching
- Muscle weakness
- Muscle pain (myalgia)
- Injuries

Rare

- Infection
- Decrease in the number of all blood cell types
- Severe hypersensitivity reactions (DRESS, anaphylactic reaction [severe and significant allergic reaction], Quincke's edema [swelling of the face, lips, tongue and throat])
- Decrease in blood sodium concentration
- Suicide
- Personality disorders (Conduct disorder)
- Abnormal thinking (slow thinking, inability to concentrate)
- Delirium
- Encephalopathy (For a detailed description of the symptoms, see the subheading “If any of the following occurs, stop taking LEV-END® and tell your doctor immediately”)
- Seizures worsen or occur more frequently
- Uncontrollable muscle contractions affecting the head, trunk and limbs (choreoathetosis)
- Difficulty controlling movements (dyskinesia)
- Hyperactivity
- Change in heart rhythm (electrocardiogram)
- Inflammation of the pancreas (pancreatitis)
- Liver failure
- Inflammation of the liver (hepatitis)
- Sudden decline in kidney function
- Skin rash (Multiform erythema) that can form blisters and looks like small target boards (dark spots in the center, a lighter area around it and a dark ring on the outside)
- Diffuse rash with blisters and peeling skin, especially around the mouth, nose, eyes and genitals (Stevens Johnson syndrome)
- A more severe type that causes skin peeling on more than 30% of the body surface rash (toxic epidermal necrolysis)
- Rhabdomyolysis (deterioration of muscle tissue) and associated increase in creatine phosphokinase in the blood. The incidence is significantly higher in Japanese patients compared to non-Japanese patients.
- Difficulty walking
- A combination of fever, muscle stiffness, unstable blood pressure and heart rate, confusion and low level of consciousness (may be symptoms of a disorder known as neuroleptic malignant syndrome). The incidence is significantly higher in Japanese patients compared to non-Japanese patients.

Very Rare

Repeated unwanted thoughts or sensations or the urge to do something over and over again (Obsessive Compulsive Disorder).

The most commonly reported side effects are nasopharyngitis, somnolence, headache, fatigue and drowsiness. Some side effects such as somnolence, fatigue and drowsiness may occur more frequently at the beginning of treatment or with dose increases. However, these effects should decrease over time.

Tell your doctor or pharmacist if you notice any other effects not listed in this leaflet.

Reporting of side effects

Talk to your doctor, pharmacist or nurse if you experience any side effects listed or not listed in this leaflet. Also reporting suspected adverse reactions after authorization of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product.

Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system

5. Storage of LEV-END®

Store in original packaging and keep out of the reach and sight of children.

Store at room temperature below 25°C.

Keep in original packaging due to light sensitivity.

Use in compliance with the expiry date.

Do not use LEV-END® after the expiry date stated on the package.

Do not use LEV-END® if you notice any defects in the product and/or its packaging.

Do not throw expired or unused medicines in the garbage! Give them to the collection system designated by the Ministry of Environment, Urbanization and Climate Change.

Marketing Authorization Holder:

Santa Farma İlaç Sanayii A.Ş.

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Manufacturer:

Farmamag Ambalaj San. ve Tic. A.Ş.

Bağlar İçi Caddesi No: 14 Kat: 2 Avcılar/İSTANBUL

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