



## Chronic Inflammatory Levetiracetam Drug Usage for Treatment of Epilepsy

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### ABOUT THE STUDY

Levetiracetam is a drug used to treat epilepsy. Levetiracetam is a general term called Keppra. Keppra is available in many countries, but the name, size, and shape are different. It belongs to a class of medicines known as anticonvulsants. Keppra tablets, oral solutions, and injections all contain the active ingredient Levetiracetam. It works by stabilizing the electrical activity of the brain. The brain and nerves are made up of many nerve cells that communicate with each other *via* electrical signals. These signals need to be carefully regulated for the proper functioning of the brain and nerves. When an abnormally fast and repetitive electrical signal is emitted to the brain, it is overstimulated and disrupts normal functioning. This leads to seizures or fits. Although it is not fully understood how Levetiracetam works to control seizures, its mechanism of action appears to be different from other antiepileptic drugs. Levetiracetam can be used alone or as an additional treatment when seizures cannot be completely controlled with other antiepileptic drugs. If oral administration is not possible, the drug can be given as an intravenous drip (intravenous infusion).

Levetiracetam (Keppra) is partial epilepsy, myoclonic seizures of juvenile myoclonic epilepsy (a type of childhood seizure disorder, primary systemic tonic-clonic seizures of idiopathic (hereditary) generalized epilepsy. The usual dosage depends on age and weight. The dosage level of partial seizures for children less than 1 month to 16 years ranges from 7 mg/kg to 30 mg/kg body weight and is given orally twice daily. For children weighing 20 kg to 40 kg, the usual starting dose range is 250 mg orally twice a day and up to 750 mg twice daily. For children weighing over 40 kg, the usual starting dose range is 500 mg orally twice a daily, up to 1500 mg twice daily. For adults and children 16 years and older, the usual starting dose is 500 mg orally twice daily and the maximum total dose is 3000 mg per day.

People taking antiepileptic drugs such as Levetiracetam may have a slightly increased risk of depression, suicidal ideation, and behavior. For this reason, it is very important to consult a doctor. If anyone suffering from epilepsy, it is important to take the medicine regularly as directed by the doctor, because missing doses can trigger seizures in some people.

As Keppra injections contain sodium, it should be very important to consider for people who are on a low sodium diet. Levetiracetam drug is not recommended for children less than 1 month, as there is insufficient information about its safety and efficacy. Keppra tablets are not suitable for children under 6 months. Intravenous injection of Keppra is not recommended for children under 4 years. Keppra oral solution contains maltitol and is not suitable for patients with rare genetic problems of fructose intolerance. This medicine should not be used if allergic to any of its ingredients. Do not use certain medications during pregnancy or breastfeeding. However, other medications can be safely used during pregnancy and lactation if the benefits to the mother outweigh the risks to the fetus. The safety of this drug for use during pregnancy has not been established. The manufacturer states that it is not recommended to use this drug during pregnancy unless considered essential by the doctor. Discontinuing antiepileptic drug treatment during pregnancy is a risk for the mother to have seizures and can harm both the mother and the fetus. This risk can be higher than continuous dosing. Medicines and their possible side effects can have different effects on each person.

The side effects listed are not meant that everyone taking this drug will experience the side effects. The side effects of using Levetiracetam (Keppra) are sleepiness, feeling weak or fatigued, dizziness or loss of balance, shivering movement and unstable walk, headache, problems with attention or memory, depression, unstable mood, sleep disorders (insomnia), tension, excitement, hostility, irritability, aggression, personality disorder, disturbance of normal blood cell count in blood, inflammation of the liver or pancreas, and hair loss. Unique health conditions will determine how long someone needs to take Levetiracetam (Keppra). If someone has epilepsy, they might need to take antiepileptic's like Levetiracetam (Keppra) for many years or even for the rest of their life. If anyone experiences a seizure after a serious brain injury, they also might need to take antiepileptic medications for a long-time. People taking antiepileptic drugs are advised not to take the herbal remedy St. John's Wort. This is because St. John's wort can affect the level of antiepileptic drugs in the blood and increase the risk of seizures.

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