

MLC/17/38801 PK2930/1
Sapropterin dihydrochloride
KUVAN 100 mg
Pulver zur Herstellung einer
Suspension/dispersible
Lösung zum Einnehmen



Package leaflet: Information for the patient

Kuvan 100 mg powder for oral solution Sapropterin dihydrochloride

Read all of this leaflet carefully before you start taking this medicine because it contains important information for you.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Kuvan is and what it is used for
2. What you need to know before you take Kuvan
3. How to take Kuvan
4. Possible side effects
5. How to store Kuvan
6. Contents of the pack and other information

1. What Kuvan is and what it is used for

Kuvan contains the active substance sapropterin which is a synthetic copy of a body's own substance called tetrahydrobiopterin (BH4). BH4 is required by the body to use an amino acid called phenylalanine in order to build another amino acid called tyrosine.

Kuvan is used to treat hyperphenylalaninaemia (HPA) or phenylketonuria (PKU) in patients of all ages. HPA and PKU are due to abnormally high levels of phenylalanine in the blood which can be harmful. Kuvan reduces these levels in some patients who respond to BH4 and can help increase the amount of phenylalanine that can be included in the diet.

This medicine is also used to treat an inherited disease called BH4 deficiency in patients of all ages, in which the body cannot produce enough BH4. Because of very low BH4 levels phenylalanine is not used properly and its levels rise, resulting in harmful effects. By replacing the BH4 that the body cannot produce, Kuvan reduces the harmful excess of phenylalanine in the blood and increases the dietary tolerance to phenylalanine.

2. What you need to know before you take Kuvan

Do not take Kuvan

- if you are allergic to sapropterin or any of the other ingredients of this medicine (listed in section 6).

Warnings and precautions

Talk to your doctor or pharmacist before taking Kuvan, particularly:

- if you are 65 years of age or older
- if you have problems with your kidney or liver
- if you are ill. Consultation with a physician is recommended during illness as blood phenylalanine levels may increase
- if you have predisposition to convulsions

When you are treated with Kuvan, your doctor will test your blood to verify how much phenylalanine and tyrosine it contains and may decide to adjust the dose of Kuvan or your diet if needed.

You must continue your diet treatment as recommended by your doctor. Do not change your diet without contacting your doctor. Even if you take Kuvan, if your phenylalanine blood levels are not well controlled, you can develop severe neurologic problems. Your doctor should continue to monitor your blood phenylalanine levels often during your treatment with Kuvan, **to make sure that your blood phenylalanine levels are not too high or too low.**

Other medicines and Kuvan

Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines. In particular you should tell your doctor if you are using:

- levodopa (used to treat Parkinson's disease)
- medicines for treatment of cancer (e.g. methotrexate)
- medicines for treatment of bacterial infections (e.g. trimethoprim)
- medicines that cause dilation of blood vessels, (such as glyceryl trinitrate (GTN), isosorbide dinitrate (ISDN), sodium nitroprusside (SNP), molsidomin, minoxidil).

Pregnancy and breast-feeding

If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking this medicine.

If you are pregnant your doctor will tell you how to control phenylalanine levels adequately. If these are not strictly controlled before or when you become pregnant, this could be harmful to you and to your baby. Your doctor will monitor the restriction of dietary phenylalanine intake prior and during pregnancy.

If the strict diet does not adequately reduce phenylalanine amount in your blood your doctor will consider whether you must take this medicine.

You should not take this medicine if you are breast-feeding.

Driving and using machines

Kuvan is not expected to affect the ability to drive and use machines.

Kuvan contains potassium citrate (E332)

This medicine contains 0.3 mmol (12.6 mg) potassium per sachet. To be taken into consideration by patients with reduced kidney function or patients on a controlled potassium diet.

3. How to take Kuvan

Always take this medicine exactly as your doctor has told you. Check with your doctor if you are not sure.

Dosing for PKU

The recommended starting dose of Kuvan in patients with PKU is 10 mg for each kg of body weight. Take Kuvan as a single daily dose with a meal to increase the absorption, and at the same time each day, preferably in the morning. Your doctor may adjust your dose, usually between 5 and 20 mg for each kg of body weight per day, depending on your condition.

Dosing for BH4 deficiency

The recommended starting dose of Kuvan in patients with BH4 deficiency is 2 to 5 mg for each kg of body weight. Take Kuvan with a meal to increase the absorption. Divide the total daily dose into 2 or 3 doses, taken over the day. Your doctor may adjust your dose up to 20 mg for each kg of body weight per day, depending on your condition.

The table below is an example of how an appropriate dose is calculated

Body weight (kg)	Number of 100 mg sachets (dose 10 mg/kg)	Number of 100 mg sachets (dose 20 mg/kg)
10	1	2
20	2	4
30	3	6
40	4	8

Method of administration

For PKU patients, the total daily dose is taken once a day at the same time each day, preferably in the morning.

For BH4 deficiency patients, the total daily dose is divided into 2 or 3 doses over the day.

Use in patients above 20 kg body weight

Be sure that you know what dose of Kuvan powder your doctor prescribed. For higher doses, your doctor may also prescribe Kuvan 500 mg powder for oral solution. Be sure you know whether to use Kuvan 100 mg powder for oral solution, or both medicines to prepare your dose. Open the sachet(s) only when you are ready to use them.

Preparing the sachet(s)

- Open the sachet(s) of Kuvan powder for oral solution by folding and tearing, or cutting at the dotted line in the upper right corner of the sachet.
- Empty the contents of the sachet(s) into 120 ml to 240 ml of water. After dissolving Kuvan powder in water, the solution must be clear, colourless to yellow.

Taking the medicine

- Drink the solution within 30 minutes.

Use in children up to 20 kg body weight

Only use the 100 mg sachets to prepare Kuvan for children weighing up to 20 kg body weight.

The dose is based on body weight. This will change as your child grows. Your doctor will tell you:

- the number of Kuvan 100 mg sachets needed for one dose
- the amount of water needed to mix one dose of Kuvan
- the amount of solution you will need to give your child for their prescribed dose

Your child should drink the solution with a meal.

Give your child the prescribed amount of solution within 30 minutes after dissolving. If you are not able to give your child's dose within 30 minutes after dissolving the powder, you will need to prepare a new solution as the unused solution should not be used beyond 30 minutes.

Supplies needed to prepare and give your child's dose of Kuvan

- The number of Kuvan 100 mg sachets needed for one dose
- A medicine cup with graduation markings at 20, 40, 60 and 80 ml
- A glass or cup
- Small spoon or clean utensil for stirring
- Oral syringe (graduated in 1 ml divisions) (10 ml syringe for administration of volumes of ≤ 10 ml or 20 ml syringe for administration of volumes of > 10 ml)

Ask your doctor for the medicine cup for dissolving the powder and the 10 ml or 20 ml oral syringe if you do not have these supplies.

Steps for preparing and taking your dose:

- Place the prescribed number of Kuvan 100 mg sachets in the medicine cup. Pour the amount of water into the cup, as instructed by your doctor (e.g. your doctor told you to use 20 ml for dissolving one Kuvan sachet). Check to make sure that the amount of liquid lines up with the amount that your doctor tells you. Stir with the small spoon or clean utensil until the powder dissolves. After dissolving the powder in water, the solution must be clear, colourless to yellow.
- If your doctor told you to administer only a portion of the solution, point the tip of the oral syringe into the medicine cup. Slowly pull back the plunger to withdraw the amount as instructed by your doctor.
- Transfer the solution by pushing on the plunger slowly until all of the solution in the oral syringe is transferred to a glass or cup for administration (e.g. if your doctor told you to dissolve two Kuvan 100 mg sachets in 40 ml water and administer 30 ml to your child, you would have to use the 20 ml oral syringe two times to draw up 30 ml (e.g. 20 ml + 10 ml) of the solution and transfer it to a glass or cup for administration). Use a 10 ml oral syringe for administration of volumes ≤ 10 ml or a 20 ml oral syringe for administration of volumes > 10 ml.
- If your baby is too small to drink from a glass or a cup you may administer the solution via the oral syringe. Draw up the prescribed volume from the solution prepared in the medicine cup and place the tip of the oral syringe into your baby's mouth. Point the tip of the oral syringe towards either cheek. Push on the plunger slowly, a small amount at a time, until all of the solution in the oral syringe is given.
- Throw away any remaining solution. Remove the plunger from the barrel of the oral syringe. Wash both parts of the oral syringe and the medicine cup with warm water and air dry. When the oral syringe is dry, put the plunger back into the barrel. Store the oral syringe and the medicine cup for next use.

If you take more Kuvan than you should

If you take more Kuvan than prescribed, you may experience side effects that could include headache and dizziness. Immediately contact your doctor or pharmacist if you take more Kuvan than prescribed.

If you forget to take Kuvan

Do not take a double dose to make up for a forgotten dose. Take the next dose at the usual time.

If you stop taking Kuvan

Do not stop taking Kuvan without prior discussion with your doctor, as phenylalanine levels in your blood may increase.

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Few cases of allergic reactions (such as skin rash and serious reactions) have been reported. Their frequency is not known (frequency cannot be estimated from the available data).

If you have red, itchy, raised areas (hives), runny nose, fast or uneven pulse, swelling of your tongue and throat, sneezing, wheezing, serious difficulty in breathing or dizziness, you may be having a serious allergic reaction to the medicine. If you notice these signs, contact your doctor immediately.

Very common side effects (may affect more than 1 in 10 people)
Headache and runny nose.

Common side effects (may affect up to 1 in 10 people)
Sore throat, nasal congestion or stuffy nose, cough, diarrhoea, vomiting, stomach ache, too low levels of phenylalanine in blood tests, indigestion and feeling sick (nausea) (see section 2: "Warnings and precautions").

Not known side effects (frequency cannot be estimated from the available data)
Gastritis (inflammation of the lining of the stomach), oesophagitis (inflammation of the lining of the gullet).

Reporting of side effects

If you get any side effects, talk to your doctor or pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly (see details below). By reporting side effects you can help provide more information on the safety of this medicine.

Ireland

HPRA Pharmacovigilance
Earlsfort Terrace
IRL - Dublin 2
Tel: +353 1 6764971
Fax: +353 1 6762517
Website: www.hpra.ie
e-mail: medsafety@hpra.ie

Malta

ADR Reporting
Website: www.medicinesauthority.gov.mt/adrportal

5. How to store Kuvan

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the sachet and the carton after "EXP". The expiry date refers to the last day of that month.

Store below 25°C.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What Kuvan contains

- The active substance is sapropterin dihydrochloride. Each sachet contains 100 mg of sapropterin dihydrochloride (equivalent to 77 mg of sapropterin).
- The other ingredients are mannitol (E421), potassium citrate (E332), sucralose (E955), ascorbic acid (E300).

What Kuvan looks like and contents of the pack

The powder for oral solution is clear, off-white to light yellow. The powder is filled in unit dose sachets containing 100 mg sapropterin dihydrochloride.

Each carton contains 30 sachets.

Marketing Authorisation Holder and Manufacturer

BioMarin International Limited
Shanbally, Ringaskiddy
County Cork
Ireland

This leaflet was last revised in 10/2018.

Other sources of information

Detailed information on this medicine is available on the European Medicines Agency web site: <http://www.ema.europa.eu>. There are also links to other websites about rare diseases and treatments.

