Package leaflet: Information for the patient
Levorol 5 mg/ml Oral Solution

Levomepromazine Hydrochloride

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.
- 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. This includes any possible side effects not listed in this leaflet. See Section 4.

The name of this product is Levorol 5 mg/ml Oral Solution, but it will be referred to as Levorol throughout the leaflet.

What is in this leaflet

1. What Levorol 5 mg/ml Oral Solution is and what it is used for

Levorol is a phenothiazine neuroleptic medicine used in psychiatry with pain-relieving and antiemetic properties.

This medicine is used:
- for reducing psychomotor restlessness and agitation in psychotic disorders
- for acute agitation during manic episodes
- as an additional therapy for the treatment of severe and/or chronic pain
- for treatment of nausea, not associated with chemotherapy, when other medicines have failed to give adequate control

2. What you need to know before you take Levorol 5 mg/ml Oral Solution

Do not take Levorol 5 mg/ml Oral Solution:
- if you are allergic to levomepromazine hydrochloride or thioxanthene and phenothiazine or any of the other ingredients of this medicine (listed in Section 6)
- in acute poisoning with alcohol, sleeping pills, pain relievers or other psychotropic medicines (medicines that affect mood and emotions)
- if you have experienced a circulatory shock or coma
- if you have irregular number of blood cells (bone marrow depression)

Warnings and precautions
Talk to your doctor or pharmacist before taking Levorol:
- if you have liver or kidney damage
- if you have heart disease such as heart failure
- if you have cancer that may be caused by high prolactin levels (such as breast cancer)
- if you have low or high blood pressure or feel dizzy upon sitting up or standing up
- if you ever had brain disease or epileptic seizures (convulsions)
- if you have Parkinson's disease
- if you ever had bleeding in the brain, or your doctor has told you that you are more likely than other people to have a stroke
- if you ever had Malignant Neuroleptic Syndrome (caused by or after taking antipsychotics with symptoms of high fever, unusual stiffness of the muscles)
- if you have increased eye pressure (glaucoma)
- if you have problems emptying your bladder
- if you have narrowing of the stomach (pyloric stenosis)
- if you have an enlarged prostate (prostatic hyperplasia)
- if you have a heart condition called 'prolonged QT interval', or any other heart rhythm problems that show as an abnormal tracing on an ECG (electrocardiogram)
- if you are treated with medicines that cause certain changes in the ECG or can decrease the potassium blood levels (hypokalaemia)

Other warnings
Treatment with Levorol requires medical supervision. Therefore, you should ask your doctor to check your blood count, heart function and liver function regularly.

If you have fever, mouth and gum inflammation, sore throat or inflamed tonsils (purulent angina) and flu-like symptoms especially within the first three months of treatment, **talk to your doctor immediately**. Do not try to treat these symptoms by yourself.

If you experience high fever with muscle rigidity, you **should stop taking Levorol** and see your doctor immediately.

If you are sensitive to light, you should avoid direct sunlight.

Elderly people and people with dementia
A small increase in deaths has been reported for elderly people with dementia who are taking antipsychotic medicines.

Be particularly careful:
- if you have increased risk of stroke or ever had bleeding in the brain
- if you or a relative has already experienced venous thrombosis (blood clots) when taking antipsychotic medicines.

Elderly and patients with impaired liver and kidney function
The dose in elderly and patients with liver and kidney problems should be adjusted and taken with special caution to avoid strong side effects.

Children and adolescents
Children and adolescents under the age of 16 should not be treated with Levorol. This is because it has not been studied adequately in this age group.

Other medicines and Levorol 5 mg/ml Oral Solution

Tell your doctor if you are taking, have recently taken or might take any other medicines; especially:
- medicines that affect the heart rhythm (prolongation of QT interval) (e.g., Class IA or III antiarrhythmics, cisapride, antibiotics, antimalarials, antihistamines, antidepressants) as these should be avoided.
- medicines that reduce the blood potassium levels as these should also be avoided.
- carbamazepine (to treat seizures) and barbiturates (for seizures or insomnia) as these can reduce the blood concentration of levomepromazine.
- medicines used to treat Parkinson's disease (anticholinergic medicines), such as biperiden or other drugs with similar effects, as this combined use can lead to blurred vision, dry mouth, confusion, constipation and urinary retention. The combined use of levomepromazine with certain Parkinson's disease drugs (dopamine agonists, such as levodopa) can also reduce the effects of these drugs.
- some effects of adrenaline can also be reduced when combined with levomepromazine.
- contraceptives as these can increase the effects of levomepromazine.
- painkillers, tranquillisers (for sleep induction), sedatives or central nervous system medications as this can lead to increased fatigue, drowsiness and breathing difficulties.
- risperidone, haloperidol (to treat psychoses), amitriptyline (for depression), captopril (to treat high blood pressure and other heart diseases), ondansetron (to treat nausea and vomiting), codeine (cough suppressant), celecoxib (for rheumatoid arthritis), flecainide (for the treatment of irregular heartbeat) or amphetamine derivatives; as levomepromazine can increase the effects of these drugs.
- phenytoin (to treat seizures) as this can affect how phenytoin works and can result in toxic levels of phenytoin in the blood.
- polypeptide antibiotics such as capreomycin, colistin, polymyxin B (to treat bacterial infections) as levomepromazine can increase the respiratory effects of these medicines.
- antidepressants as this can lead to higher blood concentrations with unpredicted clinical effects. Caution should be taken when levomepromazine is combined with MAO inhibitors (to treat depression).
- medications to reduce blood pressure as their effects can be increased.
- guanethidine, clonidine and alpha methyldopa as their blood pressure lowering effects can be reduced.
- gonadorelin (a hormone with role in the female cycle) can also be reduced.
- use of levomepromazine and propranolol (a beta blocker used to treat heart rhythm disorders or mild high blood pressure) can lead to increased blood concentrations of both drugs.
- piperazine medicines to treat roundworm and pinworm infection and metoclopramide to prevent vomiting as this can increase the risk of difficulties in movements.

Patients taking levomepromazine and undergoing surgery, should be carefully monitored for possible low blood pressure (hypotension). The dose of anaesthetics might need to be reduced.

The absorption of other medications can be inhibited by the peristalsis of the gastrointestinal tract.

Treatment with levomepromazine may result in false phenylketonuria test (false positive result).

Levorol 5 mg/ml Oral Solution with alcohol
Alcohol consumption should be avoided during treatment with Levorol.

Pregnancy and breast-feeding
Pregnancy
If you are pregnant, think you may be pregnant or are planning to have a baby, ask your doctor for advice before taking this medicine. Your doctor may advise you not to take Levorol while you are pregnant. If you would like to become pregnant or think you may be pregnant while being treated with Levorol, talk to your doctor immediately, so that he/she can decide on the necessity of switching to another drug.

Breast-feeding
Talk to your doctor if you are breast-feeding or planning to breast-feed. Levomepromazine, the active ingredient in Levorol, as well as its metabolites can be transferred into breast milk, therefore, the use of Levorol is not recommended during breast-feeding. If your doctor considers that it is absolutely necessary to take Levorol during your breastfeeding period, you should stop breast-feeding if instructed by your doctor to do so.

Driving and using machines
Do not drive or operate machinery if you take Levorol as it might make you feel sleepy, dizzy, confused, or make you feel that you might faint.

Levorol 5 mg/ml Oral Solution contains propylene glycol, sodium, sodium benzoate and benzyl alcohol
This medicine contains 150.95 mg propylene glycol in each 1 ml of oral solution.

If you suffer from a liver or kidney disease, do not take this medicine unless recommended by your doctor. Your doctor may carry out extra checks while you are taking this medicine.

If you are pregnant or breast-feeding, do not take this medicine unless recommended by your doctor. Your doctor may carry out extra checks while you are taking this medicine.

This medicine contains less than 1 mmol sodium (23 mg) per 40 ml oral solution, that is to say essentially "sodium-free".

This medicine contains 0.3 mg sodium benzoate in each 1 ml of oral solution.

This medicine contains 0.03 mg benzyl alcohol in each 1 ml of oral solution.

Benzyl alcohol may cause allergic reactions.

Ask your doctor or pharmacist for advice if you have a liver or kidney disease. Ask your doctor or pharmacist for advice if you are pregnant or breast-feeding. This is because large amounts of benzyl alcohol can build-up in your body and may cause side effects (called "metabolic acidosis").

3. How to take Levorol 5 mg/ml Oral Solution

Always take this medicine exactly as your doctor or pharmacist has told you. Check with your doctor or pharmacist if you are not sure. The daily dose is usually split into three to four individual doses.

Ambulant patients (patients not confined to bed)
The recommended dose is 15-30 mg levomepromazine/day (3-6 ml of Levorol) up to 75-150 mg levomepromazine/day (15-30 ml of Levorol).

Bed patients with psychosis
The total daily oral dosage is 75-100 mg (5 ml, 3 to 4 times), increased to 150 mg/day (10 ml, 3 times) up to 300 mg/day (20 ml, 3 times) and for severe psychoses up to 600 mg levomepromazine/day.

For doses higher than 300 mg levomepromazine should be taken in the form of tablets.

Bed patients with severe pain
The total daily recommended dose for bed patients with severe pain is 25-50-75 mg/day (5-10-15 ml), gradually increased, if necessary, up to 300 mg/day (60 ml).

Bed patients with nausea
The recommended dose is 1.2 ml (6 mg) once daily, taken at bedtime, increased if necessary to 2.5 ml – 5 ml (12.5-25 mg) twice daily.

Use in elderly patients and patients with liver and kidney disease

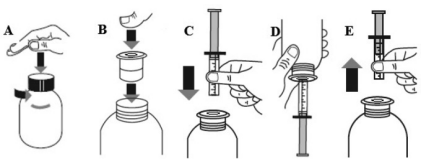
In elderly patients and patients with liver and kidney disease the dose must be adjusted with special caution, as there is an increased risk of side effects.

Use in children and adolescents
This medication is not recommended for children and adolescents under the age of 16.

Method of administration
Levorol is for oral use only.

A 5 ml graduated oral syringe with intermediate graduations of 0.1 ml and a "Press-In" Bottle Adapter (PIBA) are provided with the product.

1. Open the bottle and at first use insert the "Press-In" Bottle Adapter (PIBA) (see pictures A-B).
2. Insert the syringe into the PIBA making sure the plunger is fully down. Turn the bottle with syringe in place, upside down and draw out the required volume from the inverted bottle (see pictures C-D).
3. Remove the filled syringe from the bottle in the upright position (see picture E).
4. Discharge the syringe contents into the mouth. Repeat steps 2 to 4 as needed to achieve the required dose.
5. Rinse the syringe and replace the cap on the bottle (PIBA remains in place).



If you take more Levorol 5 mg/ml Oral Solution than you should
If you take more Levorol than you were told to or if someone else has taken any Levorol, talk to a doctor or go to the nearest hospital casualty department straight away.

Symptoms of overdose include: drowsiness or loss of consciousness (coma), convulsions, confusion, low blood pressure, irregular heartbeats, dry mouth, constipation, urinary retention, hypothermia (abnormally low body temperature) and severe extrapyramidal dyskinesias (involuntary movements).

In case of acute overdose, treatment with Levorol should be interrupted immediately.

Physostigmine can be used as antidote after careful assessment of its risk-benefit.

If you forget to take Levorol 5 mg/ml Oral Solution
If you forget to take a dose, take your next dose as usual. Then keep taking your medicine as your doctor has told you.

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

4. Possible side effects

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

Look out for serious side effects.

Tell your doctor straight away if you notice or suspect any of the following. You may need urgent medical treatment.

If you have fever, mouth and gum inflammation, sore throat or purulent angina and flu-like symptoms especially if these occur within the first three months of treatment.

Do not try to treat these symptoms yourself.

If you experience a high fever with muscle rigidity, see your doctor immediately. Your doctor might stop the treatment with levomepromazine.

Other possible side effects

Tell your doctor or pharmacist if you notice any of the following side effects or any effects not listed in this leaflet.

Very common (may affect more than 1 in 10 people)
- feeling tired
- low or high blood pressure or feeling dizzy upon sitting up or standing up, fast heart rate, alteration of the heart rhythm seen on ECG (electrical activity of the heart).

Common (may affect up to 1 in 10 people)
- weight gain
- problems controlling movements of the body or limbs (extrapyramidal disorder), such as: involuntary muscle movements, Parkinson's disease, inability to sit or keep still
- upward movement of the eyes or fast eye movements that you cannot control, problems with vision, such as blurred vision, increased eye pressure
- stuffy nose
- constipation, nausea, vomiting, diarrhoea, loss of appetite, dry mouth
- urinary problems

Uncommon (may affect up to 1 in 100 people)
- allergic reaction
- feeling restless or difficulty sitting still, increased body movements, feeling agitated, feeling sleepy, depressed mood, sleepiness, feeling dizzy, headache, worsening of psychotic symptoms, confusion, epileptic seizures, high or low body temperature.
- pigmentation inside the eye, liver dysfunction, impaired bile flow, liver problem that causes yellowing of the skin or eyes, skin allergy, increased sensitivity of the skin to sunlight.

Rare (may affect up to 1 in 1,000 people)
- high temperature, sweating or stiff muscles, fast heartbeat, fast breathing and feel confused, drowsy or agitated. These could be signs of a serious but rare side effect called 'Neuroleptic Malignant Syndrome'.
- paralysis of intestinal muscles

Very rare (may affect up to 1 in 10,000 people)
- effects on blood cells – low number of all types of blood cells, including severe decreases in white blood cells and low number of 'platelets' (cells that help blood to clot)
- feeling confused
- abnormal heart rhythm that can lead to sudden cardiac death
- inflammation and ulcers of the colon and rectum
- enlarged breasts in men, changes in menstrual cycle (periods), such as no periods, or long, heavy, painful periods, unexpected production of breast milk, problems having sex

Not Known (frequency cannot be estimated from the available data):
- withdrawal syndrome
- blood clots in the veins, usually in the legs

Reporting of side effects

If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via Yellow Card Scheme at www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store. By reporting side effects, you can help provide more information on the safety of this medicine.

5. How to store Levorol 5 mg/ml Oral Solution

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

This medicine does not require any special temperature storage conditions.

Store in the original package in order to protect from light.

After first opening use within 3 months.

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

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 Levorol 5 mg/ml Oral Solution contains
- The active substance is levomepromazine hydrochloride; each ml of solution contains 5 mg levomepromazine (as hydrochloride).
- The other ingredients are propylene glycol (E1520), glycerol (E422), sodium benzoate (E211), saccharin sodium (E954), orange flavour (including propylene glycol, E1520 and benzyl alcohol, E1519), hydrochloric acid, concentrated (E507) (for pH adjustment) and purified water.

What Levorol 5 mg/ml Oral Solution looks like and contents of the pack
Levorol is a clear, colourless to slightly pinkish-orangish solution with orange odour. It is available in amber glass bottles, safely closed with a child-resistant HDPE screw cap with tamper evident closure. Each bottle contains 100 ml of Levorol.

A 5 ml graduated oral syringe with intermediate graduations of 0.1 ml and a "press-in" syringe/bottle adapter are also provided.

Marketing Authorisation Holder and Manufacturer

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