Package leaflet: Information for the user

Naropin® 2 mg/ml, 7.5 mg/ml, 10 mg/ml solution for injection
Naropin® 2 mg/ml solution for infusion
Ropivacaine hydrochloride

Read all of this leaflet carefully before you start using 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 nurse.
- 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 nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet:

1. What Naropin is and what it is used for

The name of your medicine is "Naropin solution for injection" or "Naropin solution for infusion".
- It contains a medicine called ropivacaine hydrochloride.
- It belongs to a group of medicines called local anaesthetics
- It will be given to you either as an injection or as an infusion, depending on what it is being used for.

Naropin 7.5 and 10 mg/ml is used in adults and children above 12 years of age to numb (anaesthetise) parts of the body. It is used to stop pain happening or to provide pain relief. It can be used to:
- Numb parts of the body during surgery, including having a baby by Caesarean section.
- Relieve pain during childbirth, after surgery, or after an accident.

Naropin 2 mg/ml is used in adults and children of all ages for acute pain management. It numbs (anaesthetises) parts of the body e.g. after surgery.

2. What you need to know before you take Naropin

Do not take Naropin:
- If you are allergic (hypersensitive) to ropivacaine hydrochloride or any of the other ingredients of Naropin (see Section 6: Further information).
- If you are allergic to any other local anaesthetics of the same class (such as lidocaine or bupivacaine).
- If you have been told that you have decreased volume of blood (hypovolaemia).
- Into a blood vessel to numb a specific area of your body, or into the neck of the womb to relieve pain during childbirth.

If you are not sure if any of the above apply to you, talk to your doctor before you are given Naropin.

Warnings and precautions
Talk to your doctor or pharmacist before taking Naropin:
- if you have heart, liver or kidney problems. Your doctor may need to adjust the dose of Naropin.

- if you have ever been told that you or anyone in your family has a rare disease of the blood pigment called "porphyria". Your doctor may need to give you a different anaesthetic medicine.
- about any diseases or medical conditions that you have.

Special care should be given:
- in newborn children as they are more susceptible to Naropin.
- in children up to and including 12 years as some injections to numb parts of the body are not established in younger children.
- in children up to and including 12 years as the use of Naropin 7.5 mg and 10 mg/ml injections to numb parts of the body is not established. The strengths of Naropin 2mg/ml and 5 mg/ml may be more appropriate

Other medicines and Naropin
Tell your doctor if you are taking, have recently taken, or might take any other medicines. This includes medicines that you buy without a prescription and herbal medicines. This is because Naropin can affect the way some medicines work and some medicines can have an effect on Naropin.

In particular, tell your doctor if you are taking any of the following medicines:
- Other local anaesthetics.
- Strong pain killers, such as morphine or codeine.
- Drugs used to treat an uneven heart beat (arrhythmia), such as lidocaine and mexiletine.

Your doctor needs to know about these medicines to be able to work out the correct dose of Naropin for you.

Also tell your doctor if you are taking any of the following medicines:
- Medicines for depression (such as fluvoxamine)
- Antibiotics to treat infections caused by bacteria (such as enoxacin).

This is because your body takes longer to get rid of Naropin if you are taking these medicines. If you are taking either of these medicines, prolonged use of Naropin should be avoided.

Pregnancy, breast-feeding and fertility
If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor for advice before you are given this medicine. It is not known if ropivacaine hydrochloride affects pregnancy or passes into breast milk.

Driving and using machines
Naropin may make you feel sleepy and affect the speed of your reactions. After you have been given Naropin, you should not drive or use tools or machines until the next day.

Naropin contains
up to 3.7 milligrams (mg) of sodium in each millilitre (ml) of solution. If you are on a sodium controlled diet you will need to take this into account.

3. How to take Naropin

Naropin will be given to you by a doctor. The dose that your doctor gives you will depend on the type of pain relief that you need. It will also depend on your body size, age, and physical condition.

Naropin will be given to you as an injection or as an infusion. The part of the body where it will be used will depend on why you are being given Naropin. Your doctor will give you Naropin in one of the following places:
- The part of the body that needs to be numbed.
- Near to the part of the body that needs to be numbed.

- In an area away from the part of the body that needs to be numbed. This is the case if you are given an epidural injection or infusion (into the area around the spinal cord).

When Naropin is used in one of these ways, it stops the nerves from being able to pass pain messages to the brain. It will stop you feeling pain, heat or cold in where it is used however you may still have other feelings like pressure or touch.

Your doctor will know the correct way to give you this medicine.

If you have been given too much Naropin
Serious side effects from getting too much Naropin need special treatment and the doctor treating you is trained to deal with these situations. The first signs of being given too much Naropin are usually as follows:

- Feeling dizzy or light-headed.
- Numbness of the lips and around the mouth.
- Numbness of the tongue.
- Hearing problems.
- Problems with your sight (vision).

To reduce the risk of serious side effects, your doctor will stop giving you Naropin as soon as these signs appear. This means that if any of these happen to you, or you think you have received too much Naropin, **tell your doctor immediately**.

More serious side effects from being given too much Naropin include problems with your speech, twitching of your muscles, tremors, trembling, fits (seizures), and loss of consciousness.

4. Possible side effects

Like all medicines, Naropin may cause side effects although not everybody gets them.

Important side effects to look out for:
Sudden life-threatening allergic reactions (such as anaphylaxis) are rare, affecting 1 to 10 users in 10,000. Possible symptoms include sudden onset of rash, itching or lumpy rash (hives); swelling of the face, lips, tongue or other parts of the body; and shortness of breath, wheezing or difficulty breathing. **If you think that Naropin is causing an allergic reaction, tell your doctor immediately.**

Other possible side effects:

Very common (affects more than 1 user in 10)

- Low blood pressure (hypotension). This might make you feel dizzy or light-headed.
- Feeling sick (nausea).

Common (affects 1 to 10 users in 100)

- Pins and needles.
- Feeling dizzy.
- Headache.
- Slow or fast heart beat (bradycardia, tachycardia).
- High blood pressure (hypertension).
- Being sick (vomiting).
- Difficulty in passing urine.
- High temperature (fever) or shivering (chills).
- Back pain.

Uncommon (affects 1 to 10 users in 1,000)

- Anxiety.
- Decreased sensitivity or feeling in the skin.
- Fainting.
- Difficulty breathing.

- Low body temperature (hypothermia).
- Some symptoms can happen if the injection was given into a blood vessel by mistake, or if you have been given too much Naropin (see also "If you have been given too much Naropin" above). These include fits (seizures), feeling dizzy or light-headed, numbness of the lips and around the mouth, numbness of the tongue, hearing problems, problems with your sight (vision), problems with your speech, stiff muscles, and trembling.

Rare (affects 1 to 10 users in 10,000)
- Heart attack (cardiac arrest).
- Uneven heart beat (arrhythmias).

Other possible side effects include:
- Numbness, due to nerve irritation caused by the needle or the injection. This does not usually last for long.
- Involuntary muscle movements (dyskinesia).

Possible side effects seen with other local anaesthetics which might also be caused by Naropin include:
- Damaged nerves. Rarely (affecting 1 to 10 users in 10,000), this may cause permanent problems.
- If too much Naropin is given into the spinal fluid, the whole body may become numbed (anaesthetised).

Additional side effects in children
In children, the side effects are the same as in adults except for low blood pressure which happens less often in children (affecting 1 to 10 children in 100) and being sick which happens more often in children (affecting more than 1 in 10 children).

Reporting of side effects
If you get any side effects, talk to your doctor or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via Yellow Card Scheme, Website: 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 Naropin

- Keep out of the sight and reach of children.
- Do not use this medicine after the expiry date which is stated on the carton after EXP. The expiry date refers to the last day of that month.
- Do not store above 30ºC. Do not freeze.
- Your doctor or the hospital will normally store Naropin and they are responsible for the quality of the product when it has been opened if it is not used immediately. The medicinal product should be visually inspected prior to use. The solution should only be used if it is clear, practically free from particles and if the container is undamaged.
- They are also responsible for disposing of any unused Naropin correctly.

6. Contents of the pack and other information

What Naropin contains
The active ingredient is ropivacaine hydrochloride. Naropin comes in the following strengths: 2 mg, 7.5 mg or 10 mg of ropivacaine hydrochloride per ml of solution.

The other ingredients are sodium chloride, hydrochloric acid and/or sodium hydroxide, and water for injections.

What Naropin looks like and contents of the pack
Naropin is a clear, colourless solution for injection or infusion.

Naropin solution for injection 2 mg/ml, 7.5 mg/ml and 10 mg/ml is available as follows:

- 10 ml polypropylene ampoules (Polyamp) in packs of 5 or 10.
- 20 ml polypropylene ampoules (Polyamp) in packs of 5 or 10.

Naropin solution for infusion 2 mg/ml is available as follows:

- 100 ml polypropylene bags (Polybag) in packs of 5.
- 200 ml polypropylene bags (Polybag) in packs of 5.

Not all pack sizes may be marketed.

Marketing Authorisation Holder and Manufacturer
The Marketing Authorisations for Naropin are held by Aspen Pharma Trading Limited, 3016 Lake Drive, Citywest Business Campus, Dublin 24, Ireland
Tel: +44 (0)1 748 828 391

The manufacturers responsible for batch release are:

AstraZeneca AB, S-151 85 Södertälje, Sweden

and

AstraZeneca GmbH, Tinsdaler Weg 183, D-22880 WEDEL, Germany.

To listen to or request a copy of this leaflet in Braille, large print or audio please call, free of charge:

0800 198 5000 (UK only)

Please be ready to give the following information:

Product name	Naropin 2 mg/ml infusion & 2, 7.5, 10 mg/ml injection
Reference number	PL 39699/0081, 0082, 0083, 0080

This is a service provided by the Royal National Institute of Blind People

This leaflet was last revised in June 2021.

Medical Information Leaflet

The following information is intended for medical or healthcare professionals only.

This leaflet is an abbreviated form of the Summary of Product Characteristics. Information is strictly limited to that required at the point of administration for correct preparation and handling of the product, and is not adequate for the purposes of making a prescribing decision. Please consult the SmPC for further information.

1. Product

Naropin® 2, 7.5 or 10 mg/ml solution for injection
Naropin® 2 mg/ml solution for infusion

2. Preparation

In alkaline solutions precipitation may occur as ropivacaine shows poor solubility at pH>6.

This medicinal product contains maximum 3.7 mg sodium per ml. To be taken into consideration by patients on a controlled sodium diet.

Naropin 2 mg/ml solution for infusion in plastic infusion bags (Polybag) is chemically and physically compatible with the following drugs. Compatibilities with other solutions than those mentioned below have not been investigated:

Concentration of Naropin: 1-2 mg/ml	
Additive	**Concentration***
Fentanyl citrate	1.0 - 10.0 microgram/ml
Sufentanil citrate	0.4 – 4.0 microgram/ml
Morphine sulphate	20.0 - 100.0 microgram/ml
Clonidine hydrochloride	5.0 - 50.0 microgram/ml

* The concentration ranges stated in the table are wider than those used in clinical practice. Epidural infusions of Naropin/sufentanil citrate, Naropin/morphine sulphate and Naropin/clonidine hydrochloride have not been evaluated in clinical studies.

3. Instructions for use, handling and disposal

Naropin should only be used by, or under the supervision of, clinicians experienced in regional anaesthesia.

Naropin products are preservative free and are intended for single use only. Discard any unused solution.

The intact container must not be re-autoclaved. A blistered container should be chosen when a sterile outside is required.

Shelf life after first opening
From a microbiological point of view, the product should be used immediately. If not used immediately, in-use storage times and conditions prior to use are the responsibility of the

user and would normally not be longer than 24 hours at 2–8°C. The mixtures for infusion are chemically and physically stable for 30 days at 20 to 30°C.

Posology - adults and adolescents above 12 years of age
The following table is a guide to dosage for the more commonly used blocks. The smallest dose required to produce an effective block should be used. The clinician's experience and knowledge of the patient's physical status are of importance when deciding the dose.

	Conc.	Volume	Dose	Onset	Duration
	mg/ml	ml	mg	minutes	hours
SURGICAL ANAESTHESIA					
Lumbar Epidural Administration					
Surgery	7.5	15–25	113–188	10–20	3–5
	10	15–20	150–200	10–20	4–6
Caesarean section	7.5	15–20	113–150[(1)]	10–20	3–5
Thoracic Epidural Administration					
To establish block for postoperative pain relief	7.5	5–15 (depending on the level of injection)	38–113	10–20	n/a[(2)]
Major Nerve Block*					
Brachial plexus block	7.5	30–40	225–300[(3)]	10–25	6–10
Field Block (e.g. minor nerve blocks and infiltration)	7.5	1–30	7.5–225	1–15	2–6
ACUTE PAIN MANAGEMENT					
Lumbar Epidural Administration					
Bolus	2	10–20	20–40	10–15	0.5–1.5
Intermittent injections (top up) (e.g. labour pain management)	2	10–15 (minimum interval 30 minutes)	20–30		
Continuous infusion e.g.					
Labour pain	2	6–10 ml/h	12–20 mg/h	n/a[(2)]	n/a[(2)]
Postoperative pain management	2	6–14 ml/h	12–28 mg/h	n/a[(2)]	n/a[(2)]
Thoracic Epidural Administration					
Continuous infusion (postoperative pain management)	2	6–14 ml/h	12–28 mg/h	n/a[(2)]	n/a[(2)]
Field Block					
(e.g. minor nerve blocks and infiltration)	2	1–100	2–200	1–5	2–6
Peripheral nerve block					
(Femoral or interscalene block)					
Continuous infusion or intermittent injections	2	5–10 ml/h	10–20 mg/h	n/a	n/a
(e.g. postoperative pain management)					

The doses in the table are those considered to be necessary to produce a successful block and should be regarded as guidelines for use in adults. Individual variations in onset and duration occur. The figures in the column 'Dose' reflect the expected average dose range needed. Standard textbooks should be consulted for both factors affecting specific block techniques and individual patient requirements.

* With regard to major nerve block, a dose recommendation can only be given for brachial plexus block. For other major nerve blocks lower doses may be required. However, there is presently no experience of specific dose recommendations for other blocks.

(1) Incremental dosing should be applied, the starting dose of about 100 mg (97.5 mg = 13 ml; 105 mg = 14 ml) to be given over 3–5 minutes. Two extra doses, in total an additional 50mg, may be administered as needed.

(2) n/a = not applicable

(3) The dose for a major nerve block must be adjusted according to site of administration and patient status. Interscalene and supraclavicular brachial plexus blocks may be associated with a higher frequency of serious adverse reactions, regardless of the local anaesthetic used, (see section 4.4. Special warnings and special precautions for use).

In general, surgical anaesthesia (e.g. epidural administration) requires the use of the higher concentrations and doses. The Naropin 10 mg/ml formulation is recommended for epidural anaesthesia in which a complete motor block is essential for surgery. For analgesia (e.g. epidural administration for acute pain management) the lower concentrations and doses are recommended.

Method of administration - adults and adolescents above 12 years of age
Careful aspiration before and during injection is recommended to prevent intravascular injection. When a large dose is to be injected, a test dose of 3–5 ml lidocaine (lignocaine) with adrenaline (epinephrine) is recommended. An inadvertent intravascular injection may be recognised by a temporary increase in heart rate and an accidental intrathecal injection by signs of a spinal block.

Aspiration should be performed prior to and during administration of the main dose, which should be injected slowly or in incremental doses, at a rate of 25–50 mg/min, while closely observing the patient's vital functions and maintaining verbal contact. If toxic symptoms occur, the injection should be stopped immediately.

When prolonged blocks are used, either through continuous infusion or through repeated bolus administration, the risks of reaching a toxic plasma concentration or inducing local neural injury must be considered. Cumulative doses up to 675 mg ropivacaine for surgery and postoperative analgesia administered over 24 hours were well tolerated in adults, as were postoperative continuous epidural infusions at rates up to 28 mg/hour for 72 hours. In a limited number of patients, higher doses of up to 800 mg/day have been administered with relatively few adverse reactions.

For treatment of postoperative pain, the following technique can be recommended: Unless preoperatively instituted, an epidural block with Naropin 7.5 mg/ml is induced via an epidural catheter. Analgesia is maintained with Naropin 2 mg/ml infusion. Infusion rates of 6–14 ml (12–28 mg) per hour provide adequate analgesia with only slight and non-progressive motor block in most cases of moderate to severe postoperative pain. The maximum duration of epidural block is 3 days. However, close monitoring of analgesic effect should be performed in order to remove the catheter as soon as the pain condition allows it. With this technique a significant reduction in the need for opioids has been observed.

When prolonged peripheral nerve blocks are applied, either through continuous infusion or through repeated injections, the risks of reaching a toxic plasma concentration or inducing local neural injury must be considered.

Concentrations above 7.5 mg/ml Naropin have not been documented for Caesarean section.

Paediatric population

Posology – Epidural block: Paediatric patients 0 (term neonates) up to and including 12 years of age

	Conc.	Volume	Dose
	mg/ml	ml/kg	mg/kg
ACUTE PAIN MANAGEMENT			
(per and postoperative)			
Single Caudal Epidural Block	2	1	2
Blocks below T12, in children with a body weight up to 25 kg			
Continuous Epidural Infusion			
In children with a body weight up to 25 kg			
0 up to 6 months			
Bolus dose[a]	2	0.5–1	1–2
Infusion up to 72 hours	2	0.1 mL/kg/h	0.2 mg/kg/h
6 up to 12 months			
Bolus dose[a]	2	0.5–1	1–2
Infusion up to 72 hours	2	0.2 mL/kg/h	0.4 mg/kg/h
1 to 12 years			
Bolus dose[b]	2	1	2
Infusion up to 72 hours	2	0.2 mL/kg/h	0.4 mg/kg/h

The dose in the table should be regarded as guidelines for use in paediatrics. Individual variations occur. In children with a high body weight, a gradual reduction of the dosage is often necessary and should be based on the ideal body weight. The volume for single caudal epidural block and the volume for epidural bolus doses should not exceed 25 mL in any patient. Standard textbooks should be consulted for factors affecting specific block techniques and for individual patient requirements.

a. Doses in the low end of the dose interval are recommended for thoracic epidural blocks while doses in the high end are recommended for lumbar or caudal epidural blocks.

b. Recommended for lumbar epidural blocks. It is good practice to reduce the bolus dose for thoracic epidural analgesia.

Peripheral nerve blocks: Infants and children aged 1-12 years

	Conc.	Volume	Dose
	mg/ml	ml/kg	mg/kg
ACUTE PAIN MANAGEMENT			
(per- and postoperative)			
Single injections for peripheral nerve block (e.g. ilioinguinal nerve block, brachial plexus block, fascia iliaca compartment block)	2.0	0.5-0.75	1.0-1.5
Multiple blocks	2.0	0.5-1.5	1.0-3.0
Continuous infusion for peripheral nerve block in children 1 to 12 years.	2.0	0.1-0.3 ml/kg/h	0.2-0.6 mg/kg/h
Infusion up to 72 hours			

The dose in the table should be regarded as guidelines for use in paediatrics. Individual variations occur. In children with a high body weight a gradual reduction of the dosage is often necessary and should be based on the ideal body weight. Standard textbooks should be consulted for factors affecting specific block techniques and for individual patient requirements.

Method of Administration - paediatric patients 0 up to and including 12 years of age:
Careful aspiration before and during injection is recommended to prevent intravascular injection. The patient's vital functions should be observed closely during the injection. If toxic symptoms occur, the injection should be stopped immediately.

Fractionation of the calculated local anaesthetic dose is recommended, whatever the route of administration.

The use of ropivacaine 7.5 and 10 mg/ml may be associated with systemic and central toxic events in children. Lower strengths (2 mg/ml) are more appropriate for administration in this population.

The doses for peripheral block in infants and children provide guidance for use in children without severe disease. More conservative doses and close monitoring are recommended for children with severe diseases.

Single injections for peripheral nerve block (e.g. ilioinguinal nerve block, brachial plexus block) should not exceed 2.5-3.0 mg/kg.

The use of ropivacaine in premature children has not been documented.

4. Marketing Authorisation holder

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This leaflet was last revised in June 2021.