Read all of this leaflet carefully before you start using this medicine.
- 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 symptoms are the same as yours.
- If you get any of the side effects, talk your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. See section 4.

In this leaflet:
1. What Ropivacaine is and what it is used for
2. What you need to know before you use Ropivacaine
3. How to use Ropivacaine
4. Possible side effects
5. How to store Ropivacaine
6. Contents of the pack and other information

This product will be referred to as Ropivacaine from here on.

1. WHAT ROPIVACAINE IS AND WHAT IT IS USED FOR

Ropivacaine contains the active substance ropivacaine hydrochloride which is a type of medicine called local anaesthetic.

Ropivacaine 7.5 mg/ml solution for injection is used in adults and children above 12 years to numb (anaesthetise) parts of the body. It is used to stop pain happening or 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.

2. WHAT YOU NEED TO KNOW BEFORE YOU USE ROPIVACAINE

Do not use Ropivacaine
- if you are allergic (hypersensitive) to ropivacaine hydrochloride, other so called local anaesthetics of the amide type or any of the other ingredients of Ropivacaine (listed in section 6).
- if you have a decrease in blood volume (hypovolaemia). This is measured by healthcare personnel.
- for injection into a blood vessel to numb a specific area of your body,
- for injection into the neck of the womb to relieve pain during childbirth.

Warnings and precautions
Talk to your doctor or pharmacist before using Ropivacaine
In children up to and including 12 years. Other strengths (2mg/ml, 5 mg/ml) may be more appropriate.
Special care should be taken to avoid any injection of Ropivacaine directly into a blood vessel to prevent any immediate toxic effects. Injection should not be performed in inflamed areas.

Please tell your doctor:
- if you are in a poor general condition due to your age or other factors.
- if you have heart problems (partial or complete heart conduction block)
- if you have advanced liver problems
- if you have severe kidney problems.
Tell your doctor if you have any of these problems because your doctor may need to adjust the dose of Ropivacaine.

Please tell your doctor:
- if you suffer from acute porphyria (problems with building up red blood pigment, sometimes resulting in neurological symptoms).
Tell your doctor if you or somebody in your family have porphyria because your doctor may need to use another anaesthetic.

Other medicines and Ropivacaine
Please tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines.

Caution should be exercised if you are receiving:
- Other local anaesthetics (e.g. lidocaine) or agents structurally related to amide-type local anaesthetics, e.g. certain medicines used to treat an irregular heart beat (arrhythmia), such as mexiletine or amiodarone
- General anaesthetics or opioids, such as morphine or codeine
- Medicines used to treat depression (e.g. fluvoxamine)
- Certain antibiotics (e.g. enoxacin)

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. It is not known if ropivacaine hydrochloride affects pregnancy or passes into breast milk.

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

Discuss with your doctor or pharmacist if you are unsure about anything.

Important information about some of the ingredients of Ropivacaine
This medicine contains 3 mg sodium (main component of cooking/table salt) in each ml. This is equivalent to 0.15% of the recommended maximum daily dietary intake of sodium for an adult.

3. HOW TO USE ROPIVACAINE

Method of administration
Your doctor will administer Ropivacaine to you. It is administered by injection.

Dosage
The recommended dose will depend on what it is being used for and also on your health, age and weight. The smallest dose that can produce effective numbing (anaesthesia) of the required area should be used.
The usual dose
- for **adults and adolescents older than 12 years of age** is between 2 mg and 300 mg of ropivacaine hydrochloride.
- in **infants and children (0 up to and including 12 years of age)** is 1-3 mg for each kilogram of body weight.

**Duration of treatment**
Administration of ropivacaine hydrochloride usually takes **between 2 to 10 hours** in case of **anaesthesia** prior to certain surgeries and can take **up to 72 hours** in case of **pain relief** during or after surgery.

**If you are given more Ropivacaine than you should be**
The first symptoms of being given too much ropivacaine hydrochloride are usually problems with
- hearing and sight,
- numbness around the mouth,
- dizziness or light-headedness,
- tingling,
- speech disorder characterised by poor articulation (dysarthria),
- muscular stiffness, muscular twitching, fits (convulsions),
- low blood pressure,
- slow or irregular heart beat.
These symptoms may precede to cardiac arrest, breathing arrest or severe fits.
**If you experience any of these symptoms or think you may have received too much Ropivacaine, tell your doctor or healthcare personnel immediately.**

In case of acute toxicity, appropriate corrective actions will be taken immediately by the healthcare personnel.

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

**4. POSSIBLE SIDE EFFECTS**

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

**Important side effects to look out for:**
Sudden **life-threatening allergic reactions** (such as anaphylaxis, angioneurotic oedema and urticaria) are rare. 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 Ropivacaine is causing an allergic reaction, tell your doctor or healthcare personnel immediately.**

**Other possible side effects:**

**Very common may affect more than 1 in 10 people**
- Low blood pressure (hypotension). This might make you feel dizzy or light-headed.
- Feeling sick (nausea)

**Common may affect up to 1 in 10 people**
- Headache, pins and needles (paraesthesia), feeling dizzy
- Slow or fast heart beat (bradycardia, tachycardia)
- High blood pressure (hypertension)
- Being sick (vomiting)
- Difficulty in passing urine (urinary retention)
- Back pain, increased temperature, muscular stiffness (rigor)

**Uncommon may affect up to 1 in 100 people**
- Anxiety
- Some symptoms can happen if the injection was given into a blood vessel by mistake, or if you have been given too much Ropivacaine (see also section 3 “If you are given more Ropivacaine than you should be” above). These include fits (convulsions, 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 (dysarthria), muscular twitching and trembling, reduced sense of touch (hypoesthesia)
- Fainting (syncope)
- Difficulty breathing (dyspnoea)
- Low body temperature

**Rare may affect up to 1 in 1000 people**
- Cardiac arrest, irregular heart beat (cardiac arrhythmias)

**Possible side effects seen with other local anaesthetics which might also be caused by Ropivacaine include:**
- Numbness, due to nerve irritation caused by the needle or the injection. This does not usually last for long.
- Damaged nerves. Rarely, this may cause permanent problems.
- If too much Ropivacaine 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 less than 1 in 10 children) and being sick which happens more often in children (affecting more than 1 in 10 children).

If any of the side effects get serious, or if you notice any side effects not listed in this leaflet, please tell your doctor or pharmacist.

**Reporting of side effects**
If you get any side effects, talk your doctor or pharmacist. 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. By reporting side effects you can help provide more information on the safety of this medicine.

5. **HOW TO STORE ROPIVACAINE**

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

Do not use Ropivacaine after the expiry date which is stated on the ampoule or carton box. The expiry date refers to the last day of that month.

Do not freeze.

Do not use Ropivacaine if you notice any precipitation in the solution for injection.
Your doctor or the hospital will normally store Ropivacaine and they are responsible for the quality of the product when it has been opened if it is not used immediately. They are also responsible for disposing of any unused Ropivacaine correctly.

Medicines should not be disposed of via wastewater or household waste. Your doctor, nurse or pharmacist will dispose of medicines no longer required. These measures will help to protect the environment.

6. CONTENTS OF THE PACK AND OTHER INFORMATION

What Ropivacaine contains

- The active substance is ropivacaine hydrochloride 7.5 mg/ml. Each 10 ml polypropylene ampoule contains 75 mg ropivacaine (as hydrochloride).
  Each 20 ml polypropylene ampoule contains 150 mg ropivacaine, (as hydrochloride).
- The other ingredients are sodium chloride, sodium hydroxide (for pH adjustment) and water for injections.

What Ropivacaine looks like and contents of the pack

Ropivacaine solution for injection is a clear, colourless, sterile, isotonic, isobaric aqueous solution for injection.
Ropivacaine 7.5 mg/ml solution for injection is available in 10 ml and 20 ml transparent polypropylene ampoules.

Pack sizes:
10 sterile ampoules in plastic blister.

Marketing Authorisation Holder and Manufacturer

Marketing Authorisation Holder

Sintetica Limited,
30th Floor,
40 Bank Street,
Canary Wharf,
London,
E14 5NR,
United Kingdom

Manufactured by:

Sintetica GmbH
Albersloher Weg 11
48155 Münster
Germany

This leaflet was last revised in 10/2018

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

Handling
Ropivacaine should only be used by, or under the supervision of, clinicians experienced in regional anaesthesia (see section 3).

1. Hold ampoule upright and flick the neck to remove any solution.
   Open by sharply twisting the top of the ampoule.
2. The ampoule can then be attached directly to the syringe as shown.
   The ampoule fits both Luerfit and LuerLock syringes.
3. Hold the syringe with ampoule uppermost. Without squeezing the ampoule, withdraw
   the solution. Maintain downward pressure on the syringe piston after the solution has
   been withdrawn until the empty ampoule has been removed.

Shelf life
Shelf-life before opening
3 years

Shelf-life after 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 to 8 °C.

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

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.

The intact container must not be re-autoclaved.

Posology
Adults and children above 12 years of age
The following table is a guide to dosage for the more commonly used blocks in adults. 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.

<table>
<thead>
<tr>
<th></th>
<th>Concentration mg/ml</th>
<th>Volume ml</th>
<th>Dose mg</th>
<th>Onset minutes</th>
<th>Duration hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURGICAL ANAESTHESIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumbar Epidural Administration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgery</td>
<td>7.5</td>
<td>15-25</td>
<td>113-188</td>
<td>10-20</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>10.0</td>
<td>15-20</td>
<td>150-200</td>
<td>10-20</td>
<td>4-6</td>
</tr>
</tbody>
</table>
Caesarean section 7.5 15-20 113-150\(^1\) 10-20 3-5

**Thoracic Epidural Administration**

To establish block for post-operative pain relief 7.5 5-15 (dependent on the level of injection) 38-113 10-20 -

**Major Nerve Block**

Brachial plexus block 7.5 30-40 225-300\(^2\) 10-25 6-10

**Field Block**

(e.g. minor nerve blocks and infiltration) 7.5 1-30 7.5-225 1-15 2-6

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, only for brachial plexus block a dose recommendation can be given. 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 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.

\(^2\) 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.

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

**Method of administration**

Perineural and epidural administration by injection.

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 2% (lignocaine) with adrenaline (epinephrine) 1:200,000 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.

In epidural block for surgery, single doses of up to 250 mg ropivacaine hydrochloride have been used and well tolerated.
In brachial plexus block a single dose of 300 mg has been used in a limited number of patients and was well tolerated.

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 hydrochloride 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 Ropivacaine 7.5 mg/ml is induced via an epidural catheter. Analgesia is maintained with Ropivacaine 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.

In clinical studies an epidural infusion of ropivacaine hydrochloride 2 mg/ml alone or mixed with fentanyl 1-4 μg/ml has been given for postoperative pain management for up to 72 hours. The combination of ropivacaine hydrochloride and fentanyl provided improved pain relief but caused opioid side effects. The combination of ropivacaine hydrochloride and fentanyl has been investigated only for ropivacaine hydrochloride 2 mg/ml.

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. In clinical studies, femoral nerve block was established with 300 mg ropivacaine hydrochloride 7.5 mg/ml and interscalene block with 225 mg ropivacaine hydrochloride 7.5 mg/ml, respectively, before surgery. Analgesia was then maintained with ropivacaine hydrochloride 2 mg/ml. Infusion rates or intermittent injections of 10-20 mg per hour for 48 hours provided adequate analgesia and were well tolerated.

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

**Paediatric population up to and including 12 years** The use of Ropivacaine 7.5 mg/ml may be associated with systemic and central toxic events in children. Lower strengths (2mg/ml, 5mg/ml) are more appropriate for administration to this population.

The use of ropivacaine hydrochloride in preterm newborn infants has not been studied, whatever route of administration.

**Method of administration**
Epidural administration by injection.

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.
A single caudal epidural injection of ropivacaine hydrochloride 2 mg/ml produces adequate postoperative analgesia below T12 in the majority of patients when a dose of 2 mg/kg is used in a volume of 1 ml/kg. The volume of the caudal epidural injection may be adjusted to achieve a different distribution of sensory block, as recommended in standard textbooks. In children above 4 years of age, doses up to 3 mg/kg of a concentration of ropivacaine hydrochloride 3 mg/ml have been studied. However, this concentration is associated with a higher incidence of motor block.

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

In case infusion of ropivacaine hydrochloride is recommended, Ropivacaine solution for infusion can be used.

**Incompatibilities**
In the absence of compatibility studies, this medicinal product must not be mixed with other medicinal products.
In alkaline solutions precipitation may occur as ropivacaine hydrochloride shows poor solubility at pH > 6.0.

**Disposal**
Any unused product or waste material should be disposed of in accordance with local requirements.