



Package leaflet: Information for the user

Avelox 400 mg/250 ml solution for infusion

For use in adults.

Moxifloxacin

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, pharmacist or nurse.
- If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

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

1. What Avelox is and what it is used for

Avelox contains the active substance moxifloxacin which belongs to a group of antibiotics called fluoroquinolones. Avelox works by killing bacteria that cause infections if they are caused by bacteria that are susceptible to moxifloxacin.

Avelox is used in adults for treating the following bacterial infections:

- Infection of the lungs (pneumonia) acquired outside the hospital
- Infections of the skin and soft tissue

2. What you need to know before you are administered Avelox

Contact your doctor if you are not sure if you belong to a patient group described below.

Do not use Avelox

- If you are allergic to the active substance moxifloxacin, any other quinolone antibiotics or any of the other ingredients of this medicine (listed in section 6).
- If you are pregnant or breast-feeding.
- If you are under 18 years of age.
- If you have a history of tendon disease or disorder which was related to treatment with quinolone antibiotics (see sections *Warnings and precautions* and *4. Possible side effects*).
- If you were born with or have had any condition with abnormal heart rhythm (seen on ECG, electrical recording of the heart), have salt imbalance in the blood (especially low level of potassium or magnesium in the blood), have a very slow heart rhythm (called 'bradycardia'), have a weak heart (heart failure), have a history of abnormal heart rhythms, or you are taking other medicines that result in abnormal ECG changes (see section *Other medicines and Avelox*). This is because Avelox can cause changes on the ECG, that is a prolongation of the QT-interval i.e. delayed conduction of electrical signals.



- If you have a severe liver disease or liver enzymes (transaminases) that are higher than 5 times the upper normal limit.

Warnings and precautions

Before taking this medicine

You should not take fluoroquinolone/quinolone antibacterial medicines, including Avelox, if you have experienced any serious adverse reaction in the past when taking a quinolone or fluoroquinolone. In this situation, you should inform your doctor as soon as possible.

Talk to your doctor before Avelox is administered for the first time

- Avelox can **change your heart's ECG**, especially if you are female, or if you are elderly. If you are currently taking any **medicine that decreases your blood potassium levels**, consult your doctor before Avelox is administered (see also sections *Do not use Avelox* and *Other medicines and Avelox*).
- If you have ever developed a **severe skin rash or skin peeling, blistering and/or mouth sores** after taking moxifloxacin.
- If you suffer from **epilepsy** or a condition which makes you likely to have **convulsions**, tell your doctor before Avelox is administered.
- If you have or have ever had any **mental health problems**, consult your doctor before Avelox is administered.
- If you suffer from **myasthenia gravis** using Avelox may worsen the symptoms of your disease. If you think you are affected consult your doctor immediately.
- If you have been diagnosed with an **enlargement or "bulge" of a large blood vessel** (aortic aneurysm or large vessel peripheral aneurysm).
- If you have experienced a previous episode of **aortic dissection** (a tear in the aorta wall).
- If you have a family history of **aortic aneurysm or aortic dissection** or other risk factors or predisposing conditions (e.g. connective tissue disorders such as Marfan syndrome, or vascular Ehlers-Danlos syndrome, or vascular disorders such as Takayasu arteritis, giant cell arteritis, Behcet's disease, high blood pressure, or known atherosclerosis).
- If you are **diabetic** because you may experience a risk of **change in blood sugar levels** with moxifloxacin.
- If you or any member of your family have **glucose-6-phosphate dehydrogenase deficiency** (a rare hereditary disease), inform your doctor, who will advise whether Avelox is suitable for you.
- Avelox should be given intravenously (in the vein) only, and should not be administered into an artery.

When using Avelox

- If you experience **palpitations or irregular heart beat** during the period of treatment, you should inform your doctor immediately. He/she may wish to perform an ECG to measure your heart rhythm.



- The **risk of heart problems** may increase with increase of the dose and the speed of the perfusion into your vein.
- There is a rare chance that you may experience a **severe, sudden allergic reaction** (an anaphylactic reaction/shock) even with the first dose, with symptoms that may include tightness in the chest, feeling dizzy, feeling sick or faint, or experience dizziness on standing. **If this happens, treatment with Avelox solution for infusion has to be discontinued immediately.**
- Avelox may cause a **rapid and severe inflammation of the liver** which could lead to life-threatening liver failure (including fatal cases, see section 4. *Possible side effects*). Please contact your doctor before you continue the treatment if you suddenly start to feel unwell or notice yellowing of the whites of the eyes, dark urine, itching of the skin, a tendency to bleed or disturbances of thought or wakefulness.
- **Serious skin reactions**
Serious skin reactions including Stevens-Johnson syndrome, toxic epidermal necrolysis, and acute generalised exanthematous pustulosis (AGEP) have been reported with the use of moxifloxacin.
 - SJS/TEN can appear initially as reddish target-like spots or circular patches often with central blisters on the trunk. Also, ulcers of mouth, throat, nose, genitals and eyes (red and swollen eyes) can occur. These serious skin rashes are often preceded by fever and/or flu-like symptoms. The rashes may progress to widespread peeling of the skin and life-threatening complications or be fatal.
 - AGEP appears at the initiation of treatment as a red, scaly widespread rash with bumps under the skin and blisters accompanied by fever. The most common location: mainly localized on the skin folds, trunk, and upper extremities.
- If you develop a serious rash or another of these skin symptoms, stop taking moxifloxacin and contact your doctor or seek medical attention immediately.
- Quinolone antibiotics, including Avelox, may cause **convulsions**. If this happens, treatment with Avelox has to be discontinued.
- **Prolonged, disabling and potentially irreversible serious side effects.**
Fluoroquinolone/quinolone antibacterial medicines, including Avelox, have been associated with very rare but serious side effects, some of them being long lasting (continuing months or years), disabling or potentially irreversible. This includes tendon, muscle and joint pain of the upper and lower limbs, difficulty in walking, abnormal sensations such as pins and needles, tingling, tickling, numbness or burning (paraesthesia), sensory disorders including impairment of vision, taste and smell, and hearing, depression, memory impairment, severe fatigue, and severe sleep disorders.
If you experience any of these side effects after taking Avelox, contact your doctor immediately prior to continuing treatment. You and your doctor will decide on continuing the treatment considering also an antibiotic from another class.
- You may rarely experience **symptoms of nerve damage (neuropathy)** such as pain, burning, tingling, numbness and/or weakness especially in the feet and legs or hands and arms. If this happens, stop taking Avelox and inform your doctor immediately in order to prevent the development of potentially irreversible condition.
- You may experience **mental health problems** even when taking quinolone antibiotics, including Avelox, for the first time. In very rare cases depression or mental health problems have led to suicidal thoughts and self-injurious behaviour such as suicide attempts (see section



4. *Possible side effects*). If you develop such reactions, treatment with Avelox has to be discontinued.

- You may develop **diarrhoea** whilst taking, or after taking, antibiotics including Avelox. If this becomes severe or persistent or you notice that your stool contains blood or mucus you should stop using Avelox immediately and consult your doctor. In this situation, you should not take medicines that stop or slow down bowel movement.
- **Pain and swelling in the joints and inflammation or rupture of tendons** may occur rarely (see sections *Do not use Avelox* and 4. *Possible side effects*). Your risk is increased if you are elderly (above 60 years of age), have received an organ transplant, have kidney problems or if you are being treated with corticosteroids. Inflammation and ruptures of tendons may occur within the first 48 hours of treatment and even up to several months after stopping of Avelox therapy. At the first sign of pain or inflammation of a tendon (for example in your ankle, wrist, elbow, shoulder or knee), stop taking Avelox, contact your doctor and rest the painful area. Avoid any unnecessary exercise, as this might increase the risk of a tendon rupture.
- If you feel **sudden, severe pain in your abdomen, chest or back**, go immediately to an emergency room.
- If you are elderly with existing **kidney problems** take care that your fluid intake is sufficient because dehydration may increase the risk of kidney failure.
- If your **eyesight becomes impaired** or if your eyes seem to be otherwise affected, consult an eye specialist immediately (see sections *Driving and using machines* and 4. *Possible side effects*).
- Fluoroquinolone antibiotics may cause an **increase of your blood sugar levels** above normal levels (hyperglycemia), or **lowering of your blood sugar levels** below normal levels (hypoglycaemia), potentially leading to loss of consciousness (hypoglycaemic coma) in severe cases (see section 4. *Possible side effects*). If you suffer from diabetes, your blood sugar should be carefully monitored.
- Quinolone antibiotics may make your **skin** become more **sensitive to sunlight or UV light**. You should avoid prolonged exposure to sunlight or strong sunlight and should not use a sunbed or any other UV lamp while using Avelox.
- There is limited experience on use of sequential intravenous/oral Avelox for the treatment of infection of the lungs (pneumonia) acquired outside the hospital.
- The efficacy of Avelox in the treatment of severe burns, infections of deep tissue and diabetic foot infections with osteomyelitis (infections of the bone marrow) has not been established.

Children and adolescents

This medicine must not be administered to children and adolescents under the age of 18 because efficacy and safety have not been established for this age group (see section *Do not use Avelox*).

Other medicines and Avelox

Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines besides Avelox.

For Avelox, be aware of the following:



- If you are using Avelox and other medicines that affect your heart there is an increased risk for altering your heart rhythm. Therefore, do not use Avelox together with the following medicines: Medicines that belong to the group of anti-arrhythmics (e.g. quinidine, hydroquinidine, disopyramide, amiodarone, sotalol, dofetilide, ibutilide), antipsychotics (e.g. phenothiazines, pimozide, sertindole, haloperidol, sultopride), tricyclic antidepressants, some antimicrobials (e.g. saquinavir, sparfloxacin, intravenous erythromycin, pentamidine, antimalarials particularly halofantrine), some antihistamines (e.g. terfenadine, astemizole, mizolastine), and other medicines (e.g. cisapride, intravenous vincamine, bepridil and diphemanil).
- You must tell your doctor if you are taking other medicines that can lower your blood potassium levels (e.g. some diuretics, some laxatives and enemas [large doses] or corticosteroids [anti-inflammatory drugs], amphotericin B) or cause a slow heart rate because these can also increase the risk of serious heart rhythm disturbances while using Avelox.
- If you are currently taking oral anti-coagulants (e.g. warfarin), it may be necessary for your doctor to monitor your blood clotting times.

Avelox with food and drink

The effect of Avelox is not influenced by food including dairy products.

Pregnancy, breast-feeding and fertility

Do not use Avelox if you are pregnant or 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 using this medicine.

Animal studies do not indicate that your fertility will be impaired by using this medicine.

Driving and using machines

Avelox may make you feel dizzy or light-headed, you may experience a sudden, transient loss of vision, or you might faint for a short period. If you are affected in this way do not drive or operate machinery.

Avelox contains sodium

This medicine contains 787 milligrams (approximately 34 millimoles) sodium (main component of cooking/table salt) in each bottle with 250 milliliter solution for infusion. This is equivalent to 39.35% of the recommended maximum daily dietary intake of sodium for an adult.

3. How to use Avelox

Avelox will always be given to you by a doctor or healthcare professional.

The recommended dose for adults is one bottle once daily.

Avelox is for intravenous use. Your doctor should ensure that the infusion is given at a constant flow over 60 minutes.

No adjustment of the dose is required in elderly patients, patients with a low bodyweight or in patients with kidney problems.

Your doctor will decide on the duration of your treatment with Avelox. In some cases your doctor may start your treatment with Avelox solution for infusion and then continue your treatment with Avelox tablets.

The duration of treatment depends upon the type of infection, and how well you respond to treatment but the recommended durations of use are:



- Infection of the lungs (pneumonia) acquired outside the hospital 7 - 14 days
Most patients with pneumonia were switched to oral treatment with Avelox tablets within 4 days.

- Infections of the skin and soft tissue 7 - 21 days
For patients with complicated skin and skin structure infections the mean duration of intravenous treatment was approximately 6 days and the average overall duration of treatment (infusion followed by tablets) was 13 days.

It is important that you complete the course of treatment, even if you begin to feel better after a few days. If you stop using this medicine too soon your infection may not be completely cured, the infection may return or your condition may get worse, and you may also create a bacterial resistance to the antibiotic.

The recommended dose and duration of treatment should not be exceeded (see section 2. *What you need to know before you are administered Avelox, Warnings and precautions*).

If you receive more Avelox than you should

If you are concerned that you may have received too much Avelox, contact your doctor immediately.

If you miss a dose of Avelox

If you are concerned that you may have missed a dose of Avelox, contact your doctor immediately.

If you stop using Avelox

If the treatment with this medicine is stopped too soon your infection may not be completely cured. Consult your doctor if you wish to stop the treatment with Avelox solution for infusion or Avelox tablets before the end of the course of treatment.

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

4. Possible side effects

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

The **most serious side effects** observed during the treatment with Avelox are listed below:

If you notice

- an abnormal fast heart rhythm (rare side effect)
- that you suddenly start feeling unwell or notice yellowing of the whites of the eyes, dark urine, itching of the skin, a tendency to bleed or disturbances of thought or wakefulness (these can be signs and symptoms of fulminant inflammation of the liver potentially leading to life-threatening liver failure (very rare side effect, fatal cases have been observed))
- serious skin rashes including Stevens-Johnson syndrome and toxic epidermal necrolysis. These can appear as reddish target-like macules or circular patches often with central blisters on the trunk, skin peeling, ulcers of mouth, throat, nose, genitals and eyes and can be preceded by fever and flu-like symptoms (very rare side effects, potentially life-threatening).
- a red, scaly widespread rash with bumps under the skin and blisters accompanied by fever at the initiation of treatment (acute generalised exanthematous pustulosis) (frequency of this side effect is “not known”)
- syndrome associated with impaired water excretion and low levels of sodium (SIADH) (very rare side effect)



- loss of consciousness due to severe decrease in blood sugar levels (hypoglycaemic coma) (very rare side effect)
- inflammation of blood vessels (signs could be red spots on your skin, usually on your lower legs or effects like joint pain) (very rare side effect)
- a severe, sudden generalised allergic reaction incl. very rarely a life-threatening shock (e.g. difficulty in breathing, drop of blood pressure, fast pulse) (rare side effect)
- swelling incl. swelling of the airway (rare side effect, potentially life-threatening)
- convulsions (rare side effect)
- troubles associated with the nervous system such as pain, burning, tingling, numbness and/or weakness in extremities (rare side effect)
- depression (in very rare cases leading to self-harm, such as suicidal ideations/thoughts, or suicide attempts) (rare side effect)
- insanity (potentially leading to self-harm, such as suicidal ideations/thoughts, or suicide attempts) (very rare side effect)
- severe diarrhoea containing blood and/or mucus (antibiotic associated colitis incl. pseudomembranous colitis), which in very rare circumstances, may develop into complications that are life-threatening (rare side effects)
- pain and swelling of the tendons (tendonitis) (rare side effect) or a tendon rupture (very rare side effect)
- muscle weakness, tenderness or pain and particularly, if at the same time, you feel unwell, have a high temperature or have dark urine. They may be caused by an abnormal muscle breakdown which can be life threatening and lead to kidney problems (a condition called rhabdomyolysis) (frequency of this side effect is “not known”).

stop taking Avelox and tell your doctor immediately as you may need urgent medical advice.

In addition, if you notice

- transient loss of vision (very rare side effect),
- discomfort or pain to the eyes, especially due to light exposure (very rare to rare side effect)

contact an eye specialist immediately.

If you have experienced life-threatening irregular heart beat (Torsade de Pointes) or stopping of heart beat while taking Avelox (very rare side effects), **tell your treating doctor immediately that you have taken Avelox and do not restart the treatment.**

A worsening of the symptoms of myasthenia gravis has been observed in very rare cases. If this happens, **consult your doctor immediately.**

If you suffer from diabetes and you notice that your blood sugar is increased or decreased (rare or very rare side effect), **inform your doctor immediately.**

If you are elderly with existing kidney problems and you notice decrease in urine output, swelling in your legs, ankles or feet, fatigue, nausea, drowsiness, shortness of breath or confusion (these can be signs and symptoms of kidney failure, a rare side effect), **consult your doctor immediately.**

Other side effects which have been observed during treatment with Avelox are listed below by how likely they are:

Common (may affect up to 1 in 10 people)

- nausea
- diarrhoea



- dizziness
- stomach and abdominal ache
- vomiting
- headache
- increase of a special liver enzyme in the blood (transaminases)
- infections caused by resistant bacteria or fungi e.g. oral and vaginal infections caused by Candida
- pain or inflammation at injection site
- change of the heart rhythm (ECG) in patients with low blood potassium level

Uncommon (may affect up to 1 in 100 people)

- rash
- stomach upset (indigestion/heartburn)
- changes in taste (in very rare cases loss of taste)
- sleep problems (predominantly sleeplessness)
- increase of a special liver enzyme in the blood (gamma-glutamyl-transferase and/or alkaline phosphatase)
- low number of special white blood cells (leukocytes, neutrophils)
- constipation
- itching
- sensation of dizziness (spinning or falling over)
- sleepiness
- wind
- change of the heart rhythm (ECG)
- impaired liver function (incl. increase of a special liver enzyme in the blood (LDH))
- decreased appetite and food intake
- low white blood cells count
- aches and pains such as back, chest, pelvic and extremities pains
- increase of special blood cells necessary for blood clotting
- sweating
- increased specialised white blood cells (eosinophils)
- anxiety
- feeling unwell (predominantly weakness or tiredness)
- shaking
- joint pain
- palpitations
- irregular and fast heart beat
- difficulty in breathing incl. asthmatic conditions
- increase of a special digestive enzyme in the blood (amylase)
- restlessness / agitation
- tingling sensation (pins and needles) and/or numbness
- skin hives
- widening of blood vessels
- confusion and disorientation
- decrease of special blood cells necessary for blood clotting
- visual disturbances incl. double and blurred vision
- decreased blood clotting
- increased blood lipids (fats)
- low red blood cell count
- muscle pain



- allergic reaction
- increase of bilirubin in the blood
- inflammation of a vein
- inflammation of the stomach
- dehydration
- severe heart rhythm abnormalities
- dry skin
- angina pectoris

Rare (may affect up to 1 in 1,000 people)

- muscle twitching
- muscle cramp
- hallucination
- high blood pressure
- swelling (of the hands, feet, ankles, lips, mouth, throat)
- low blood pressure
- kidney impairment (incl. increase in special kidney laboratory test results like urea and creatinine)
- inflammation of the liver
- inflammation of the mouth
- ringing/noise in the ears
- jaundice (yellowing of the whites of the eyes or skin)
- impairment of skin sensation
- abnormal dreams
- disturbed concentration
- difficulty in swallowing
- changes in smell (incl. loss of smell)
- balance disorder and poor co-ordination (due to dizziness)
- partial or total loss of memory
- hearing impairment including deafness (usually reversible)
- increased blood uric acid
- emotional instability
- impaired speech
- fainting
- muscle weakness

Very rare (may affect up to 1 in 10,000 people)

- a drop in the number of red and white blood cells and platelets (pancytopenia)
- inflammation of joints
- abnormal heart rhythms
- increase of skin sensitivity
- a feeling of self-detachment (not being yourself)
- increased blood clotting
- muscle rigidity
- significant decrease of special white blood cells (agranulocytosis)

Very rare cases of long lasting (up to months or years) or permanent adverse drug reactions, such as tendon inflammations, tendon rupture, joint pain, pain in the limbs, difficulty in walking, abnormal sensations such as pins and needles, tingling, tickling, burning, numbness or pain (neuropathy), depression, fatigue, sleep disorders, memory impairment, as well as impairment of hearing, vision, and



taste and smell have been associated with administration of quinolone and fluoroquinolone antibiotics, in some cases irrespective of pre-existing risk factors.

The following symptoms have been observed more frequently in patients treated intravenously:

Common (may affect up to 1 in 10 people)

- Increase of a special liver enzyme in the blood (gamma-glutamyl-transferase)

Uncommon (may affect up to 1 in 100 people)

- severe diarrhoea containing blood and/or mucus (antibiotic associated colitis) which in very rare circumstances, may develop into complications that are life-threatening
- abnormal fast heart rhythm
- hallucination
- low blood pressure
- kidney impairment (incl. increase in special kidney laboratory test results like urea and creatinine)
- kidney failure
- swelling (of the hands, feet, ankles, lips, mouth, throat)
- convulsions

Furthermore, there have been very rare cases of the following side effects reported following treatment with other quinolone antibiotics, which might possibly also occur during treatment with Avelox: raised pressure in the skull (symptoms include headache, visual problems including blurred vision, “blind” spots, double vision, loss of vision), increased blood sodium levels, increased blood calcium levels, a special type of reduced red blood cell count (haemolytic anaemia), increased sensitivity of the skin to sunlight or UV light.

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:

Ireland

HPRA Pharmacovigilance

Website: www.hpra.ie.

Malta

ADR Reporting

Website: www.medicinesauthority.gov.mt/adrportal

By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Avelox

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 label of the bottle and on the carton. The expiry date refers to the last day of that month.

Do not store below 15°C.

Use immediately after first opening and/or dilution.



This product is for single use only. Any unused solution should be discarded.
At cool storage temperatures precipitation may occur, which will re-dissolve at room temperature.
Do not use this medicine if you notice any visible particulate matter or if the solution is cloudy.

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 Avelox contains

- The active substance is moxifloxacin. Each bottle contains 400 milligram moxifloxacin (as hydrochloride). 1 milliliter contains 1.6 milligram moxifloxacin (as hydrochloride).
- The other ingredients are sodium chloride, hydrochloric acid 1 N (for pH-adjustment), sodium hydroxide solution 2 N (for pH-adjustment) and water for injections (see section *Avelox contains sodium*).

What Avelox looks like and contents of the pack

Avelox is a clear, yellow solution for infusion.

Avelox is packaged in cartons containing a 250 milliliter glass bottle with a chlorobutyl or bromobutyl rubber stopper. Avelox is available in packs containing 1 bottle and in multipacks comprising 5 packs, each containing 1 bottle.

Not all pack sizes may be marketed.

Marketing Authorisation Holder and Manufacturer

Marketing Authorisation holder:

Bayer Limited,
The Atrium,
Blackthorn Road,
Dublin 18

Manufacturer:

Bayer AG
D-51368 Leverkusen
Germany

This medicinal product is authorised in the Member States of the EEA under the following names:

Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, Greece, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Slovak Republic, Slovenia, Sweden: **Avelox**
France: **Izilox**
Germany, Italy: **Avalox**
Spain: Actira

This leaflet was last revised in April 2020



Product Authorisation Number: 1410/27/3

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The following information is intended for healthcare professionals only:

Avelox can be administered via a T-tube together with the following solutions:

Water for injections, sodium chloride 0.9%, sodium chloride 1 molar, glucose 5%/10%/40%, Xylitol 20%, Ringer's solution, compound sodium lactate solution (Hartmann's solution, Ringer-lactate solution).

Avelox should not be co-infused with other drugs.

The following solutions were incompatible with Avelox:

Sodium chloride 10% and 20% solutions,

Sodium bicarbonate 4.2% and 8.4% solutions