PACKAGE LEAFLET: INFORMATION FOR THE USER

Co-amoxiclav 500mg/100mg & 1000mg/200mg
Powder for solution for injection or infusion
Amoxicillin/clavulanic acid

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, 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 Co-amoxiclav is and what it is used for

Co-amoxiclav is an antibiotic and works by killing bacteria that cause infections. It contains two different medicines called amoxicillin and clavulanic acid. Amoxicillin belongs to a group of medicines called "penicillins" that can sometimes be stopped from working (made inactive). The other active component (clavulanic acid) stops this from happening.

Co-amoxiclav is used in adults and children to treat the following infections:
- severe ear, nose and throat infections
- respiratory tract infections
- urinary tract infections
- skin and soft tissue infections including dental infections
- bone and joint infections
- intra-abdominal infections
- genital organ infections in women.

Co-amoxiclav is also used in adults and children to prevent infections associated with major surgical procedures.

2. What you need to know before you are given Co-amoxiclav

You should not be given Co-amoxiclav:
- if you are allergic to amoxicillin, clavulanic acid or penicillin
- if you have ever had a severe allergic reaction to any other antibiotic. This can include a skin rash or swelling of the face or throat
- if you have ever had liver problems or jaundice (yellowing of the skin) when taking an antibiotic.

You should not be given Co-amoxiclav if any of the above apply to you.
If you are not sure, talk to your doctor, pharmacist or nurse before you are given Co-amoxiclav.

Warning and precautions
Talk to your doctor, pharmacist or nurse before you are given this medicine if you:
- have glandular fever
- are being treated for liver or kidney problems
- are not passing water regularly.

If you are not sure if any of the above apply to you, talk to your doctor, pharmacist or nurse before you are given Co-amoxiclav.

In some cases, your doctor may investigate the type of bacteria that is causing your infection. Depending on the results, you may be given a different strength of Co-amoxiclav or a different medicine.

Conditions you need to look out for
Co-amoxiclav can make some existing conditions worse or cause serious side effects. These include allergic reactions, serious skin reactions, convulsions (fits) and inflammation of the large intestine. You must look out for certain symptoms while you are taking Co-amoxiclav, to reduce the risk of any problems. See **Section 4**.

Blood and urine tests
If you are having blood tests (such as red blood cell status tests or liver function tests) or urine tests (for glucose), let the doctor or nurse know that you are taking Co-amoxiclav. This is because Co-amoxiclav can affect the results of these types of tests.

Other medicines and Co-amoxiclav
Tell your doctor, pharmacist or nurse if you are using, have recently used or might use any other medicines.

- If you are taking allopurinol (for gout) with Co-amoxiclav, it may be more likely that you'll have an allergic skin reaction
- If you are taking probenecid (for gout), your doctor may decide to adjust your dose of Co-amoxiclav
- If medicines to help stop blood clots (such as warfarin) are taken with Co-amoxiclav then extra blood tests may be needed
- Co-amoxiclav can affect how methotrexate works (a medicine used to treat cancer or rheumatic diseases)
- Co-amoxiclav can affect how mycophenolate mofetil works (a medicine used to prevent the rejection of transplanted organs)

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, pharmacist or nurse for advice before taking this medicine.

Driving and using machines
Co-amoxiclav can have side effects and the symptoms may make you unfit to drive.
Do not drive or operate machinery unless you are feeling well.

Co-amoxiclav contains sodium and potassium
- Co-amoxiclav 500 mg/100 mg contains approximately 31.5 mg (1.4 mmol) sodium (main component of cooking/table salt) in each vial. This is equivalent to 1.6% of the recommended maximum daily dietary intake of sodium for an adult.
- Co-amoxiclav 500 mg/100 mg contains approximately 19.6 mg (0.5 mmol) of potassium per vial, which at less than 39 mg (1 mmol) is considered essentially 'potassium-free'.

- Co-amoxiclav 1000 mg/200 mg contains approximately 62.9 mg (2.7 mmol) sodium (main component of cooking/table salt) in each vial. This is equivalent to 3.2% of the recommended maximum daily dietary intake of sodium for an adult.
- Co-amoxiclav 1000 mg/200 mg contains approximately 39.3 mg (1.0 mmol) of potassium per vial. This should be considered by patients with kidney problems or patients on a controlled potassium diet.

3. How Co-amoxiclav is given

You will never give yourself this medicine. A qualified person, like a doctor or a nurse, will give you this medicine.

The recommended doses are:

Adults and children weighing 40 kg and over

Standard dose	1000 mg/200 mg every 8 hours
To stop infections during and after surgery	1000 mg/200 mg before the surgery when you are given your anaesthetic. The dose can differ depending on the type of operation you are having. Your doctor may repeat the dose if your surgery takes longer than 1 hour.

Children weighing less than 40 kg
All doses are worked out depending on the child's bodyweight in kilograms.

Children aged 3 months and over	25 mg/5 mg for each kilogram of bodyweight every 8 hours
Children aged less than 3 months or weighing less than 4 kg	25 mg/5 mg for each kilogram of bodyweight every 12 hours

Patients with kidney and liver problems
- If you have kidney problems you may be given a different dose. A different strength or a different medicine may be chosen by your doctor
- If you have liver problems your doctor will keep a close check on you and you may have more regular liver function tests

How Co-amoxiclav will be given to you
- Co-amoxiclav will be given as an injection into a vein or by intravenous infusion
- Make sure you drink plenty of fluids while being treated with Co-amoxiclav
- You will not normally be given Co-amoxiclav for longer than 2 weeks without the doctor reviewing your treatment

If more Co-amoxiclav is given to you than recommended
It is unlikely you will be given too much, but if you think you have been given too much Co-amoxiclav, tell your doctor, pharmacist or nurse immediately. Signs may be an upset stomach (feeling sick, being sick or diarrhoea) or convulsions (fits).

If you have any further questions about how this medicine is given, 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 side effects below may happen with this medicine.

Tell your doctor or nurse if you experience any of the following serious side effects

Allergic reactions
- skin rash
- inflammation of blood vessels (*vasculitis*) which may be visible as red or purple raised spots on the skin, but can affect other parts of the body
- fever, joint pain, swollen glands in the neck, armpit or groin
- swelling, sometimes of the face or throat (*angioedema*), causing difficulty in breathing
- collapse.

Inflammation of the large intestine
- This causes watery diarrhoea usually with blood and mucous, stomach pain and/or fever.

Serious skin reactions
- skin rash which may blister and looks like small targets (central dark spots surrounded by a paler area, with a dark ring around the edge (*erythema multiforme*)
- a widespread rash with blisters and peeling skin, particularly around the mouth, nose, eyes and genitals (*Stevens-Johnson syndrome*), and a more severe form, causing extensive peeling of the skin (more than 30% of the body surface – *toxic epidermal necrolysis*)
- widespread red skin rash with small pus-containing blisters (*bullous exfoliative dermatitis*)
- a red, scaly rash with bumps under the skin and blisters (*exanthemous pustulosis*)
- flu-like symptoms with a rash, fever, swollen glands, and abnormal blood test results (including increased white blood cells (*eosinophilia*) and liver enzymes) (Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)).

Convulsions (fits)
- in people taking high doses of Co-amoxiclav or who have kidney problems.

The following side effects may also occur. Tell your doctor or nurse if any become severe or troublesome.

Common side effects (these may affect up to 1 in 10 people)
- thrush (*candida* - a yeast infection of the vagina, mouth or skin folds)
- diarrhoea

Uncommon side effects (these may affect up to 1 in 100 people)
- skin rash, itching
- raised itchy rash (*hives*)
- feeling sick (*nausea*), especially when taking high doses
- vomiting
- indigestion
- dizziness
- headache

Uncommon side effects that may show up in your blood tests
- increase in some substances (*enzymes*) produced by the liver

Rare side effects (these may affect up to 1 in 1,000 people)
- swelling and redness along a vein which is extremely tender when touched

Rare side effects that may show up in your blood tests
- low number of cells involved in blood clotting

- low number of white blood cells

Frequency not known (frequency cannot be estimated from the available data)
- Inflammation of the protective membrane surrounding the brain (*aseptic meningitis*)
- inflammation of the liver (*hepatitis*)
- jaundice caused by increases in the blood of bilirubin (a substance produced in the liver) which may make your skin and whites of the eyes appear yellow
- inflammation of tubes in the kidney
- blood takes longer to clot.

Side effects that may show up in your blood or urine tests:
- severe reduction in the number of white blood cells
- low number of red blood cells (*haemolytic anaemia*)
- crystals in urine.

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 the 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 Co-amoxiclav

Co-amoxiclav is for use in hospital only and the expiry date and storage instructions stated on the label are for the doctor, nurse or pharmacist's information. The doctor, pharmacist or nurse will make up your medicine. It should be used within 20 minutes of reconstitution.
Do not store above 25°C.
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 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 Co-amoxiclav contains
The active substances are amoxicillin and clavulanic acid.
Co-amoxiclav 1000mg/200mg - Each vial contains 1000mg amoxicillin (as amoxicillin sodium) and 200mg clavulanic acid (as clavulanate potassium).
Co-amoxiclav 500mg/100mg - Each vial contains 500mg amoxicillin (as amoxicillin sodium) and 100mg clavulanic acid (as clavulanate potassium).
The vials contain no other ingredients. However, see section 2 for further important information about sodium and potassium in Co-amoxiclav.

The doctor, nurse or pharmacist will make up the injection before use using an appropriate fluid (such as Water for Injections or an injection/infusion fluid).

What Co-amoxiclav looks like and contents of the pack
Co-amoxiclav is a white powder in a glass vial.
Each carton contains 1, 5, 10, 20 or 50 vials.
Not all pack sizes may be marketed.

Marketing Authorisation Holder

Ibigen S.r.l. Via Fossignano, 2 - Aprilia (LT), Italy.

Manufacturer
Istituto Biochimico Italiano Giovanni Lorenzini S.p.A.
Via Fossignano, 2 - Aprilia (LT), Italy.

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INFORMATION FOR THE HEALTHCARE PROFESSIONAL

The following information is intended for medical or healthcare professionals only.
Please refer to the Summary of Product Characteristics for further information.

Administration
Co-amoxiclav may be administered either by slow intravenous injection over a period of 3 to 4 minutes directly into a vein or via a drip tube or by infusion over 30 to 40 minutes. It is not suitable for intramuscular administration.

Reconstitution with Water for Injection BP

Co-amoxiclav	Amount of WFI to be added	Final volume
500mg/100mg	10 ml	10.4 ml
1000mg/200mg	20 ml	20.7 ml

A transient pink colouration may or may not develop during reconstitution.
Reconstituted solutions are normally colourless or a pale straw colour.
Administer by i.v. injection within 20 minutes of reconstitution.

Dilution for infusion
The reconstituted solution should be added without delay to either 50 ml (Co-amoxiclav 500/100mg) or 100ml (Co-amoxiclav 1000/200mg) of infusion fluid using a minibag or in-line burette.

Stability of prepared solutions
Chemical and physical in-use stability has been demonstrated as shown in the table below. From a microbiological point of view, the reconstituted and diluted solution should be used immediately.

Intravenous infusions of amoxicillin/clavulanic acid may be given in a range of different intravenous fluids. Satisfactory antibiotic concentrations are retained at 5 °C and at room temperature (25°C) in the recommended volumes of the following infusion fluids. If reconstituted and maintained at room temperature (25°C), infusions should be completed within the times stated in the following table.

Infusion Fluid	Stability (hours)	
	5° C	25° C
Water for Injection Ph Eur	8	4
0.9% w/v Sodium Chloride Intravenous Infusion (9 mg/ml)	8	4
Compound Sodium Chloride Injection 1959 (Ringer's)	-	3
Compound Sodium Lactate Intravenous Infusion (Ringer-Lactate: Hartmann's)	-	3
0.3% w/v Potassium Chloride and 0.9% w/v Sodium Chloride Intravenous Infusion (3 mg/ml and 9 mg/ml)	-	3

For storage at 5°C, reconstituted solutions of Co-amoxiclav may be added to pre-refrigerated infusion bags containing either Water for Injection Ph. Eur. or Sodium Chloride BP (0.9% w/v), which may be

stored for up to 8 hours. Thereafter, the infusion should be administered immediately after reaching room temperature.

The stability of Co-amoxiclav solutions is concentration dependent. In the event that the use of more concentrated solutions is required, the stability period should be adjusted accordingly.

Co-amoxiclav is less stable in infusions containing glucose, dextran or bicarbonate. Reconstituted solutions of amoxicillin/clavulanic acid may be injected into the drip tubing over a period of 3 to 4 min.

Any residual antibiotic solution should be discarded.

Dosage

Adults and children ≥ 40 kg

For treatment of infections - Co-amoxiclav 1000/200 mg every 8 hours.

For surgical prophylaxis - For procedures less than 1 hour in duration, the recommended dose of Co-amoxiclav is 1000/200mg to 2000/200 mg given at induction of anaesthesia. (Doses of 2000/200mg can be achieved by using an alternative intravenous formulation of Co-amoxiclav). For procedures greater than 1 hour in duration, the recommended dose is 1000/200 mg to 2000/200mg given at induction of anaesthesia, with up to 3 doses of 1000/200 mg in 24 hours. Clear clinical signs of infection at operation will require a normal course of intravenous or oral therapy post-operatively.

Children < 40 kg

Children aged 3 months and over: 25 mg/5 mg per kg every 8 hours

Children aged less than 3 months or weighing less than 4 kg: 25 mg/5 mg per kg every 12 hours.

Elderly - No dose adjustment is considered necessary.

Renal impairment

Adults and children ≥ 40 kg

CrCl: 10-30 ml/min	Initial dose of 1000 mg/200 mg and then 500 mg/100 mg given twice daily
CrCl < 10 ml /min	Initial dose of 1000 mg/200 mg and then 500 mg/100 mg given every 24 hours
Haemodialysis	Initial dose of 1000 mg/200 mg and then followed by 500 mg/100 mg every 24 hours, plus a dose of 500 mg/100 mg at the end of dialysis

Children < 40 kg

CrCl: 10 to 30 ml/min	25 mg/5 mg per kg given every 12 hours
CrCl < 10 ml /min	25 mg/5 mg per kg given every 24 hours
Haemodialysis	25 mg/5 mg per kg given every 24 hours, plus a dose of 12.5 mg/2.5 mg per kg at the end of dialysis

No dose adjustment is required in patients with creatinine clearance (CrCl) greater than 30 ml/min.

Hepatic impairment

Dose with caution and monitor hepatic function at regular intervals.