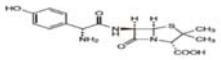
AMOXICILLIN

VAXMAN®
125 mg/ 5 mL Powder for Suspension
ANTIBACTERIAL
(PENICILLIN)

FORMULATION
Each 5 mL of reconstituted suspension contains:
AMOXICILLIN trihydrate equivalent to AMOXICILLIN USP..... 125 mg

PRODUCT DESCRIPTION
Amoxicillin (Powder for Suspension): Prepared by adding water to the powder to give 60 mL flavored and colored suspension containing 125 mg Amoxicillin (as trihydrate) in each 5 mL. It complies with USP specifications for Amoxicillin mixture.

DESCRIPTION
Amoxicillin is a semi-synthetic penicillin a close chemical and a pharmacological relative of Ampicillin. The drug is stable in acid and is designed for oral use. The antimicrobial spectrum of Amoxicillin is essentially identical to that of Ampicillin with the important exception that Amoxicillin appears to be less effective than Ampicillin for Shigellosis. Amoxicillin is more rapidly and completely absorbed from the gastrointestinal tract than Ampicillin which is the major difference between the two. Peak concentration in plasma is 2 to 2 ½ times greater for Amoxicillin than that of Ampicillin after oral administration of the same dose. Food does not interfere with absorption perhaps because of more complete absorption of this congener.



A white, practically odourless crystalline powder. Slightly soluble in water and in methyl alcohol; insoluble in carbon tetrachloride, in chloroform, and in benzene. pH of a 0.2% solution in water is between 3.5 and 6.0.

PHARMACOLOGIC CATEGORY
Pharmacodynamics:
Amoxicillin is a semi-synthetic aminopenicillin of the beta-lactam group of antibiotics. It has a broad spectrum of antibacterial activity against many Gram-positive and Gram-negative micro-organisms, acting through the inhibition of biosynthesis of cell mucopeptide.

It is rapidly bactericidal and possesses the safety profile of penicillin.

Pharmacokinetics
Amoxicillin is well absorbed. Oral administration, usually at convenient three times a day dosage, produces high serum levels independent of the time at which food is taken. Amoxicillin gives good penetration into bronchial secretions and high urinary concentrations of unchanged antibiotic.

Amoxicillin is not highly protein bound; approximately 18% of total plasma drug content is bound to protein. Amoxicillin diffuses readily into most body tissues and fluids, with the exception of the brain and spinal fluid. Inflammation generally increases the permeability of the meninges to penicillins to penicillins and this may apply to Amoxicillin.

The elimination half-life is approximately one hour. The major route of elimination for Amoxicillin is via the kidney. Approximately 60 to 70% of Amoxicillin is excreted unchanged in urine during the first six hours after administration of a standard dose.

Amoxicillin is also partly excreted in the urine as the inactive penicilloic acid in quantities equivalent to 10-25% of the initial dose.

Concurrent administration of probenecid delays Amoxicillin excretion.

INDICATIONS
Amoxicillin is a broad spectrum antibiotic indicated for the treatment of commonly occurring bacterial infections such as:
- Upper respiratory tract infections eg, ear, nose and throat infections, otitis media
- Lower respiratory tract infections eg, acute exacerbations of chronic bronchitis, lobar and bronchopneumonia
- Gastrointestinal tract infections eg, typhoid and paratyphoid fever
- Genito-urinary tract infections eg, cystitis, urethritis, pyelonephritis, bacteriuria in pregnancy, septic abortion, puerperal sepsis
- Skin and soft tissue infections
- Biliary tract infections
- Bone infections
- Pelvic infections
- Gonorrhea (non-penicillinase producing strains)
- Septicaemia
- Endocarditis
- Meningitis
- Peritonitis
- Dental abscess (as an adjunct to surgical management)
- *Helicobacter pylori* eradication in peptic (duodenal and gastric) ulcer disease.

DOSAGE AND ADMINISTRATION
Adults dosage (including elderly patients:
Standard adult dosage: 250 mg 3 times daily, increasing to 500 mg 3 times daily for more severe infections.

Children up to 10 years old:
Oral dose of 125 mg to 250 mg every 8 hours. For dose under 40 kg, a dose of 20 to 40 mg/kg daily in divided doses every 8 hours, or 25 to 45 mg/kg daily in divided doses every 12 hours, may be used: in infants less than 3 months old, the maximum should be 30 mg/kg daily in divided doses every 12 hours.

High dosage therapy (maximum recommended oral dosage 6 g daily in divided doses): A dosage of 3g twice daily is recommended in appropriate cases for the treatment of severe or recurrent purulent infection of the respiratory tract.

Short course therapy: Simple acute urinary tract infection: two 3g doses with 10 to 12 hours between the doses. *Dental abscess*: two 3g doses with 8 hours between the doses. *Gonorrhoea:* single 3g dose.

*Helicobacter eradication in peptic (duodenal and gastric) ulcer disease:*Amoxicillin is recommended at a dose of twice daily in association with a proton pump inhibitor and antimicrobial agents as detailed below: Omeprazole 40mg daily, Amoxicillin 1g twice a day, Clarithromycin 500mg twice a day for 7 days.
Omeprazole 40mg daily, Amoxicillin 750mg to 1g twice a day, Metronidazole 400mg three times a day for 7 days.

Patients with renal impairment:
In renal impairment the excretion of the antibiotic will be delayed and depending on the degree of impairment, it may be necessary to reduce the total daily dosage according to the following scheme:

Adults and Children over 40 kg:
Mild Impairment [creatinine clearance greater than 30 mL/min)]-No change in dosage.
Moderate Impairment (creatinine clearance 10 to 30 mL/min)-500 mg twice a day maximum.
Severe Impairment (creatinine clearance less than 10 mL/min)-500 mg/day maximum.

Children under 40 kg:
Mild Impairment [creatinine clearance greater than 30 mL/min)]-No change in dosage.
Moderate Impairment (creatinine clearance 10 to 30 mL/min)-15 mg/kg twice a day (maximum 500 mg/twice daily).
Severe Impairment (creatinine clearance less than 10 mL/min)-15 mg/kg once day (maximum 500 mg).

Patients receiving peritoneal dialysis: Dosing as for patients with severe renal impairment (creatinine clearance less than 10 mL/min). Amoxicillin is not removed by peritoneal dialysis.

Patients receiving hemodialysis: Dosing as for patients with severe renal impairment (creatinine clearance less than 10 mL/min).

Amoxicillin is removed from the circulation by haemodialysis. Therefore, 1 additional dose (500 mg for adults or 15 mg/kg for children under 40 kg) may be administered during dialysis and at the end of each dialysis.
The majority of the side-effects listed below are not unique to Amoxicillin and may occur when using other penicillins. Unless otherwise stated, the frequency of adverse events (AEs) has been derived from more than 30 years of post-marketing reports.

Blood and lymphatic system disorders
Very Rare: Reversible leukopenia (including severe neutropenia or agranulocytosis), reversible thrombocytopenia and hemolytic anemia; Prolongation of bleeding time and prothrombin time.
Immune system disorders
Very Rare: As with other antibiotics, severe allergic reactions, including angioneurotic oedema, anaphylaxis (see Warnings and Precautions), serum sickness and hypersensitivity vasculitis.
If a hypersensitivity reaction is reported, the treatment must be discontinued (see also Skin and subcutaneous tissue disorders.
Nervous system disorders
Very Rare: Hyperkinesia, dizziness and convulsions. Convulsions may occur in patients with impaired renal function or in those receiving high doses.
Infections and Infestations
Very Rare: Mucocutaneous candidiasis.
Gastrointestinal disorders
#Common: Diarrhea and nausea.
#Uncommon: Vomiting.
Very Rare: Antibiotic associated colitis (including pseudomembranous and haemorrhagic colitis); Black hairy tongue.
Superficial tooth discoloration has been reported in children. Good oral hygiene may help prevent tooth discoloration as it can usually be removed by brushing (***for suspension formulations only***).

DIRECTIONS FOR RECONSTITUTION
Shake the bottle to loosen the powder. To make a 60 mL reconstituted suspension, mix thoroughly the contents with 41 mL water and shake well until the powder is evenly suspended. The reconstituted suspension is stable for 7 days at temperatures not exceeding 30ºC and 14 days when refrigerated (2ºC-8ºC).
SHAKE WELL BEFORE USE

CONTRAINDICATIONS
Amoxicillin is penicillin and should not be given to patients with a history of hypersensitivity to beta-lactam antibiotics (eg.penicillins, cephalosporins).

WARNING AND PRECAUTIONS
Before initiating therapy with Amoxicillin, careful enquiry should be made concerning previous hypersensitivity reactions to penicillins or cephalosporins. Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. These reactions are more likely to occur in individuals with a history of hypersensitivity to beta lactam antibiotics.

Amoxicillin should be avoided if infectious mononucleosis is suspected since the occurrence of a morbilliform rash has been associated with his condition following the use of Amoxicillin.

Prolonged use may also occasionally result in overgrowth of non-susceptible organisms.

Dosage should be adjusted in patients with renal impairment.

In patients with reduced urine output, crystalluria has been observed very rarely, predominantly with parenteral therapy. During the administration of high doses of Amoxicillin, it is advisable to maintain adequate fluid intake and urinary output in order to reduce the possibility of Amoxicillin crystalluria.

Abnormal prolongation of prothrombin time [increased international normalized ratio (INR)] has been reported rarely in patients receiving Amoxicillin and oral anticoagulants. Appropriate monitoring should be undertaken when anticoagulants are prescribed concurrently. Adjustments in the dose of oral anticoagulants may be necessary to maintain the desired level of anticoagulation.

Effects on Ability to Drive and Use Machines: Adverse effects on the ability to drive or operate machinery have not been observed.

DRUG INTERACTIONS
Probenecid decreases the renal tubular secretion of Amoxicillin. Concomitant use with Amoxicillin may result in increased and prolonged blood levels of Amoxicillin.

In common with other antibiotics, Amoxicillin may affect the gut flora, leading to lower estrogen reabsorption and reduced efficacy of combined oral contraceptives.

Concurrent administration of allopurinol during treatment with Amoxicillin can increase the likelihood of allergic skin reactions. It is recommended that when testing for the presence of glucose in urine during Amoxicillin treatment, enzymatic glucose oxidase methods should be used. Due to the high urinary concentrations of Amoxicillin, false-positive readings are common with chemical methods.

In the literature, there are rare cases of increased international normalized ratio in patients maintained on acenocoumarol or warfarin and prescribed a course of Amoxicillin. If co-administration is necessary, the prothrombin time or INR should be carefully monitored with the addition or withdrawal of Amoxicillin.

PREGNANCY and LACTATION
The safety of Amoxicillin for use in human pregnancy has not been established by well controlled studies in pregnant women. Reproduction studies have been performed in mice and rats at doses up to 10 times the human dose and these studies have revealed no evidence of impaired fertility or harm to the fetus due to Amoxicillin. Amoxicillin may be used in pregnancy when the potential benefits outweigh the potential risks associated with treatment.
Amoxicillin may be given during lactation. With the exception of the risk of sensitization associated with the excretion of trace quantities of Amoxicillin in breast milk, there are no known detrimental effects for the breast-fed infant.

ADVERSE EFFECTS
The following convention has been utilized for the classification of undesirable effects: Very common (>1/10); common (>1/100 to <1/10); uncommon (>1/1,000 to <1/100); rare (>1/10,000 to <1/1,000); very rare (<1/10,000).

The majority of the adverse effects listed as follows is not unique to amoxicillin and may occur when using other penicillins. Unless otherwise stated, the frequency of adverse events (AEs) has been derived from more than 30 years of post-marketing reports.

Infections such as septicemia, endocarditis and meningitis due to susceptible organisms should be treated initially with high doses of a parenteral therapy and, where appropriate, in combination with another antibiotic.

Prophylaxis of *endocarditis*: Amoxicillin may be used for the prevention of bacteraemia associated with procedures such as dental extraction, in patients at risk of developing endocarditis.

Strains of the following organisms are generally sensitive to the bactericidal action of Amoxicillin in vitro:

Gram-positive:
Aerobes: *Enterococcus faecalis*, *Streptoccus pneumonia*, *Streptococcus pyogenes*, *Streptococcus viridians*, penicillin-sensitive, *Staphyloccus aureus*, *Corynebacterium* species, *Bacillus anthracis*, *Listeria monocytogenes*.
Anaerobes: *Clostridium* species

Gram-negative:
Aerobes: *Haemophilus influenza*, *Escherichia coli*, *Proteus mirabilis*, *Salmonella* species, *Shigella* species, *Bordetella pertussis*, *Brucella* species, *Neisseria gonorrhea*, *Neisseria meningitides*, *Pasteurella septica*, *Vibrio cholerae*, *Helicobacter pylori*.

Amoxicillin is susceptible to degradation by beta-lactamases and therefore the spectrum of activity of Amoxicillin does not include organisms which produce these enzymes, including resistant staphylococci and all strains of *Pseudomonas*, *Klebsiella* and *Enterobacter*.

OVERDOSAGE AND TREATMENT
Problems of overdosage with Amoxicillin are unlikely to occur. If ecountered, gastrointestinal effects such as nausea, vomiting and diarrhea may be evident and should be treated symptomatically with attention to the water/electrolyte balance. Amoxicillin crystalluria, in some cases leading to renal failure, has been observed. Amoxicillin can be removed from the circulation by haemodialysis.

CAUTION
Foods, Drugs, Devices and Cosmetics Act prohibits dispensing without prescription.

ADR REPORTING STATEMENT
"For suspected adverse drug reaction, report to the FDA: www.fda.gov.ph"
Seek medical attention immediately at the first sign of any adverse drug reaction.

STORAGE CONDITION
Store at temperatures not exceeding 30ºC.

AVAILABILITY
Amber Glass Bottle with Silver cap x 60 mL (Box of 1's)

REGISTRATION NUMBER
DRP-10661

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November 03, 2021

DATE OF REVISION
January 2022

Manufactured by:
JM TOLMANN LABORATORIES, INC.
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