

| ANTIBIOTICS BY CLASS                                  | CATEGORY (US FDA)      | CONSIDERATION AND TERATOGENECITY   |
|---|------------------------|--|
| <b>PENICILLINS</b>                                    |                        |  |
| Amoxicillin   | B                      | Should be avoided in women at risk of preterm delivery due to increased risk of neonatal necrotizing enterocolitis.  |
| Amoxicillin + Clavulanic Acid                         | B                      |  |
| Ampicillin  | B                      |  |
| Ampicillin + Sulbactam                                | B                      |  |
| Benzathine Benzylpenicillin (Benzathine Penicillin G) | B                      |  |
| Benzylpenicillin (Penicillin G)                       | B <sup>2</sup>         | Has been taken by a large number of pregnant women and women of childbearing age without an increase in malformations or other direct or indirect harmful effects on the foetus having been observed.                    |
| Cloxacillin   | B                      |  |
| Phenoxyethyl Penicillin (Penicillin V)                | B <sup>2</sup>         | Animal studies with phenoxyethylpenicillin have shown no teratogenic effects.  |
| Piperacillin + Tazobactam                             | B <sup>2</sup>         | Cross the placenta. Should only be used during pregnancy if clearly indicated, i.e. only if the expected benefit > risks to the pregnant woman and foetus.   |
| <b>CEPHALOSPORINS</b>                                 |                        |  |
| Cefepime (4 <sup>th</sup> gen)                        | B                      |  |
| Cefoperazone (3 <sup>rd</sup> gen)                    | B <sup>1</sup>         | Can derange liver enzymes and can interfere with hemostasis by having similar effect as that of ceftriaxone.   |
| Cefoperazone + sulbactam (Sulperazon)                 | -                      | Crosses placenta. No adequate study in pregnancy. Use only when clearly needed.  |
| Cefotaxime (3 <sup>rd</sup> gen)                      | B                      |  |
| Ceftazidime (3 <sup>rd</sup> gen)                     | B                      |  |
| Ceftriaxone (3 <sup>rd</sup> gen)                     | B <sup>1</sup>         | Can interfere with hemostasis due to its hypoprothombinimic action. Vitamin K should be given to infant if given near to term.   |
| Cefuroxime (2 <sup>nd</sup> gen)                      | B                      |  |
| Cephalexin (1 <sup>st</sup> gen)                      | B                      |  |
| <b>LINCOSAMIDES</b>                                   |                        |  |
| Clindamycin   | B                      |  |
| <b>CARBAPENEMS</b>                                    |                        |  |
| Ertapenem   | B <sup>1</sup>         | No human data; however, there is no evidence of increased risk of major congenital malformations with other beta-lactam antibiotics.   |
| Meropenem   | B <sup>1</sup>         |  |
| Imipenem/Cilastatin                                   | C                      |  |
| <b>MACROLIDES</b>                                     |                        |  |
| Azithromycin  | B <sup>1</sup>         | Can be used. Not expected to increase risk of major congenital malformations.  |
| Clarithromycin  | C                      |  |
| Erythromycin  | B                      |  |
| <b>FLOUROQUINOLONES</b>                               |                        |  |
| Ciprofloxacin   | C <sup>1</sup>         | Contraindicated. Teratogenic effects have been seen in experimental animals like decreased placental light, cartilage lesions and embryonic losses.  |
| Levofloxacin  | C <sup>1</sup>         |  |
| Moxifloxacin  | C <sup>1</sup>         |  |
| Ofloxacin   | C <sup>1</sup>         |  |
| <b>ANTITUBERCULAR DRUGS</b>                           |                        |  |
| Rifampicin  | C <sup>1</sup>         | When used in last weeks of pregnancy, can lead to postnatal hemorrhage in mothers and infants.   |
| Isoniazid   | C <sup>1</sup>         |  |
| Pyrazinamide  | C <sup>1</sup>         | Should be avoided.   |
| Ethambutol  | C <sup>1</sup>         | Optic neuritis has not been shown in infant.   |
| <b>TETRACYCLINES</b>                                  |                        |  |
| Doxycycline   | D <sup>1</sup>         | Contraindicated. Can lead to acute fatty liver of pregnancy. Can lead to yellowish discoloration of teeth and growth retardation due to its deposition in small bones.   |
| Tetracycline  | D <sup>1</sup>         |  |
| <b>AMINOGLYCOSIDES</b>                                |                        |  |
| Amikacin  | D <sup>1</sup>         | Contraindicated. Theoretical risk of ototoxicity and nephrotoxicity.   |
| Gentamicin  | D (IM/IV)<br>C (Ophth) |  |
| Streptomycin  | D <sup>1</sup>         |  |
| <b>SULFONAMIDES</b>                                   |                        |  |
| Trimethoprim-Sulfamethoxazole (TMP-SMX)               | D <sup>1</sup>         | Contraindicated. Association with neural tube defects (NTDs), cardiovascular malformations and facial cleft as a result of antifolate effect. In third trimester, as they increase the risk of kernicterus in the fetus. |
| <b>MISCELLANEOUS</b>                                  |                        |  |
| Chloramphenicol                                       | C                      | Contraindicated.   |
| Fusidic acid  | -                      | No adequate and well controlled studies in pregnant women. Crosses the placenta, use only when benefit > risk.   |
| Metronidazole   | B                      | May be contraindicated in 1 <sup>st</sup> trimester.   |
| Nitrofurantoin  | C <sup>1</sup>         | Should be avoided. Papillary adenomas and growth retardation in neonates.  |
| Teicoplanin   | -                      | No adequate data in pregnant women. Studies in animals showed reproductive toxicity at high doses. Should not be used unless clearly necessary.  |
| Vancomycin  | C <sup>1</sup>         | Should be avoided, associated with maternal nephrotoxicity and ototoxicity?  |

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**References**

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