

## REVIEW

# Prescribing Drugs to Pregnant Women in Primary Healthcare

## Birinci Basamakta Gebeye İlaç Reçeteleme

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## ABSTRACT

It is crucial for the health of both the mother and the fetus that drugs are only used during pregnancy when absolutely necessary. While appropriate drugs can be used for appropriate indications during pregnancy, it is preferably recommended not to use medication except for the necessary vitamins. In cases where the drug is to be used, the pregnancy category of the medication to be used should be known for the selection of the appropriate medication. Drugs that we regularly prescribe because they are safe should be high on our list of preferences, and if there is chronic drug use, the use of drugs must be regulated with caution and constantly reviewed for appropriateness.

**Keywords:** Drug Utilization, Pregnancy, Teratogens

## ÖZ

Gebelik döneminde sadece gerekli durumlarda ilaç kullanılması hem anne hem de bebek sağlığı açısından çok önemlidir. Gebelik döneminde uygun endikasyonda uygun ilaçlar kullanılabilmesi gibi tercihen gerekli olan vitaminlerin kullanımı dışında çıkmayarak ilaç kullanılmaması önerilmektedir. İlaç kullanılacağı durumlarda ise uygun ilacın seçimi için kullanılacak ilacın gebelik kategorisi bilinmelidir. Güvenilir olması nedeniyle sıklıkla deneyimlediğimiz ilaçlar tercih sıralamamızda üstte yer almalıdır ve kronik ilaç kullanımı varsa dikkatli davranarak ilaçların kullanılmasının düzenlenmesi ve uygunluğunun sürekli gözden geçirilmesi gerekmektedir.

**Anahtar Kelimeler:** İlaç Kullanımı, Gebelik, Teratojenler

## Introduction

Pregnancy is defined as a physiological state in some studies and a pathological state in others because it affects almost all systems and includes a process that can change a person's lifestyle and quality of life. This review article includes drug recommendations for some diseases or symptoms (Gastrointestinal system problems and infections that may cause symptoms of nausea, indigestion, reflux, pain, fever) that are commonly observed during pregnancy (1-3).

The teratogenic period is the time between the first and second months after the last menstrual period when organ formation occurs. Adverse effects on the fetus between these days may result in an anomaly. The belief that "when the drugs are taken before the first month, the drug either has no effect on the embryo or causes a miscarriage" is widely accepted (4-6).

The main consideration in drug use during pregnancy is the potential for the drug to cause harm to the pregnant woman and the baby, which should be determined by a classification system. Table 1 shows the pregnancy risk categories recommended by the U.S. Food and Drug Administration (FDA) (7,8-12).

At least a subset of drugs should be thoroughly comprehended in primary health care, and the risk of harm to both the pregnant woman and the fetus should be minimized. Table 2 lists the drugs that, if well-

known in primary health care services, do not pose a risk of additional drug use (9-13).

Penicillin, Cephalosporins, Macrolides, and Metronidazole are among the antibiotics that can be safely used in pregnancy. Antibiotics containing substances such as Tetracycline, Minocycline, Doxycycline, and Trimethoprim/Sulfamethoxazole are contraindicated in pregnancy. These antibiotics are in category "X" and care should be taken due to their frequent use (9-11). Anti-acids and gastric drugs are frequently used for stomach, gastroesophageal reflux disease, and digestive problems that are frequently seen during pregnancy, and the biggest mistake when using these drugs is to believe that all of them are safe (14-16). Anti-emetics are indispensable in pregnancy and because of the recent increase in the use of ondansetron due to its effect mechanism via the central route, caution should be exercised, and pregnant women should be adequately informed that no use of anti-emetics is required unless they are in difficulty. It should be kept in mind that the pregnancy categories (updated FDA pregnancy labeling rule) given for the active pharmaceutical ingredients in the text are constantly updated and therefore subject to change. (3,9,12).

### Recommendations

First, because pregnancy is possible at an elderly and younger age, especially in women aged 15 to 49, the presence of pregnancy should be questioned in addition to the presence of chronic disease when prescribing medications to individuals. Initiation of a teratogenic pharmacologic agent without knowing the pregnancy status may lead to an irreversible outcome and may even result in the termination of pregnancy (17,18).

In order to avoid harming the pregnant woman and, especially, the baby during pregnancy, drugs should be chosen as few as possible and in accordance with the FDA pregnancy category in the presence of an indication. This can be avoided by prescribing only a small number of drugs for which the current pregnancy category is known (1,2,9). Since some drug prospective information may contain incomplete or inaccurate information, it is important to stick to the sources that contain the most reliable and up-to-date information for the FDA pregnancy category. Furthermore, it should be noted that pharmacologic agents may fall into different FDA pregnancy risk categories during different trimesters (18-20).

When prescribing medication to a pregnant woman, the patient must inform the doctor of her pregnancy status. Even if the patient is not pregnant, the doctor should still be informed of the patient's future pregnancy plans. The patient, as well as the doctor, has the responsibility to provide accurate information during the medical examination and treatment. Regardless of the reason and age, every pregnant woman should clearly provide information about her pregnancy status when she applies to a health institution (21-23).

Various nutritional supplements are also preferred by pregnant women and should not be used without consulting a doctor. Especially herbal nutritional supplements are often considered vitamins but they can harm both the mother and the baby. The use of vitamins, just like the use of all nutritional supplements, should be used with the decision of a physician and under the supervision of a physician (24-26).

Follow-up of chronic diseases should be performed more carefully in pregnant women with chronic diseases and taking drugs before pregnancy, and the pregnant woman should be ensured to come for follow-up visits at more frequent intervals. Pregnant women should be followed up on for all of these reasons, both in gynecology and obstetrics outpatient clinics and in primary health care services (16,20,27,28).

Since primary health care services are the first place of contact and the most easily accessible health care institutions, patients' pregnancy status should be questioned more carefully and not overlooked. Primary healthcare professionals should be familiar with the current pregnancy categories of the drugs to be prescribed to pregnant women, though not as much as a gynecologist, and if they are not, they should

not treat pregnant women without first reviewing the prospectus (16,17,29).

**Table 1.** FDA Pregnancy Risk Categories (7,8-12).

A: Controlled studies in pregnant women have shown that there is no risk of teratogenic effects on the fetus in the first trimester (first trimester).
B: Experiments on animals have shown that there is no risk of teratogenic effects in the fetus, but there have been no controlled studies in humans, or experiments on animals have shown a risk of teratogenic effects in the fetus, but controlled studies in humans have shown no risk of teratogenic effects in the fetus.
C: Although experiments on animals have shown a risk of teratogenic effects, there are no controlled studies on pregnant women or no experiments on animals or pregnant women.
D: Although there is no conclusive evidence of a risk of teratogenic effects on the fetus, these drugs can be used in pregnant women when safer drugs are unavailable or ineffective in life-threatening diseases.
X: Drugs for which the risk of teratogenic effects has been conclusively proven in animal and human experiments and for which the risk of teratogenicity outweighs the benefits. It should never be used during pregnancy.

**Table 2.** Drug recommendations during pregnancy (9-13).

Antipyretics and Painkillers	
Paracetamol	It is the most widely known and used pharmacological agent that is safe for pregnant women and the most widely used anti-inflammatory drug. It belongs to pregnancy category B.
Diclofenac Sodium	It should be preferred, especially when the use of paracetamol is inadequate. It belongs to category B in the 1st and 2nd trimesters of pregnancy and belongs to category D in the last trimester.
Antibiotics	
Amoxicilline	Preparations containing only amoxicillin should be preferred over preparations with additional combinations. It belongs to pregnancy category B. It can be safely used in all respiratory infections, as well as urinary tract infections and skin infections.
Phosphomycine	It is indicated for the treatment of uncomplicated lower urinary tract infections. It belongs to pregnancy category B and is available in disposable, single-use, chasis-shaped forms for ease of use.
Anti-Emetics	
Ondansetron	Although its use in pregnant women has increased in recent years, it is mainly used to prevent nausea and vomiting due to cancer treatments with drugs and radiation. It is also commonly used to prevent nausea and vomiting after surgeries. Belongs to category D in the 1st trimester of pregnancy; category B in the 2nd and 3rd trimesters.
Dimenhydrinate	It is frequently used in the treatment of motion sickness and Meniere's disease and is less preferred during pregnancy than other pharmacologic agents. It belongs to pregnancy category B.
Metoclopramide HCL	It acts on the area of the brain that prevents nausea and vomiting. It belongs to pregnancy category B.
Anti-Acids	
Sodium Alginate + Sodium Bicarbonate + Calcium Carbonate	Preferably only anti-acids containing these combinations should be used. It belongs to pregnancy category A.
Sodium Alginate + Magnesium Carbonate + Calcium Carbonate	It belongs to pregnancy category B.
Hydrotalcite	It belongs to pregnancy category C.
Sucralfate	It belongs to pregnancy category B.

Note: It should be kept in mind that the pregnancy categories (updated FDA pregnancy labeling rule) given for the active pharmaceutical ingredients in the text are constantly updated and therefore subject to change.

## Drugs to be Avoided

Pregnant women should be clearly informed that the drug should not be used during pregnancy unless necessary. There may be situations that can be overlooked. It should not be forgotten that drugs, especially toxic drugs, antibiotics, antidepressants and psychiatric drugs, drugs containing hormones, anticoagulants, immunosuppressive drugs, may have irreversible effects on the fetus. In cases where these drugs should be used, the decision should be made according to the balance of gain and loss. The drug groups with the highest potential to harm the fetus may generally be according to current pregnancy risk categories and availability: Isotretinoin, warfarin, methotrexate, retinoids, cyclosporine, angiotensin converting enzyme inhibitors, angiotensin receptor blockers, thiazides, aminoglycoside antibiotics and phenytoin. The evaluation should be made by the decision of the council to be formed by the related medical disciplines (6-8,20,30,31).

## Conclusion

Since pregnancy is already a rough experience, it is essential to avoid further straining and endangering both mother and fetus when medication is necessary. In order to avoid this, medication should not be started without first knowing the FDA category, and if there is any doubt in the current pregnancy category information, even when a known drug is about to be started, drug information should be checked again from a reliable source each time.

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