

PREGNANCY

"Take care of yourself- Someone is waiting for your love"

Introduction-Physical & Psychological Changes-Diet Suggestion-Drug Contraindication

Note- This notes is for the general awareness and basic information about pregnancy. Always take an expert advice before taking any medicine or special food items.

Solution-Pharmacy
"Sharing is Better than Selling"

List of Content PREGNANCY- A INTRODUCTION

Title	Importance	
Introduction	Here we will discuss about the status of physical and mental situation	
Changes during pregnancy	We will let you know- what is normal and what is abnormal changes	
Nutrient Foods	What should your diet plan, How to live these preciouses days	
Risk factors	What should you leave immediately, and which things you should avoid	
Safe & Unsafe medicines	Medicine which are safer (Nothing is 100% safe in pregnancy) & These medicine should not be taken, until doctor suggest	
Teratogenicity	Possible teratogenic drugs with their example and syndrome	
Solution's Request	What we expect from you is- "Take care of yourself- Someone is waiting for your love"	

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PREGNANCY

Pregnancy is period from conception to birth. After the egg is fertilized by a sperm and then implanted in the lining of the uterus, it develops into the placenta and embryo, and after a specific time it is converted into a fetus. Duration of pregnancy is about 40 weeks long, which starts from the first day of the woman's last menstrual period, and is divided into three trimesters, each lasting three months.

There are 03 phases of changes in woman's life- (1) When she born (2) When she become adult (3) when she is become pregnant. All these are unexplainable and we not capable to elaborate that. Although in these 03 changes 01 is not remembered by any one, 2 one is gives you happiness but along with a few restrictions, but the 3 phase gives you extreme pleasure with full of emotional attachments. The physical changes start to appear from the very first day of conception, although it take time to be visualized. In respect to each trimester and each day the life inside womb get mature. All these are crucial and demand care and attention. In these phase you ought to know the to do and not to do list. You should make a diet plan which give a perfect nutrition to mother and the foetus developing inside. Along with food you should also take care of your mental health and peace. Do not take any type of tension and avoid unsafe habits like- smoking, drinking, other narcotics, late night working, junk food consumption.

There are so many new way to improve the health of pregnant woman and foetus, which include- soft and slow music of piece, reading good books, watching the traditional history related serials which will motivate and educate both of you. (Some research prove this that it affect the intellectual level of foetus) one more thing solution would like to include that- its not the only responsibility of woman who is pregnant but it's a equal responsibility of her husband and her family member. Give her mental piece and touch of love, these two things are more powerful then artificial therapy. Visit to a natural and floral place can give additive effect to the upcoming life.

Changes During Pregnancy

"Solution" has classified the changes during pregnancy in two main class. (Just to make easy explainable) (1) Physical Changes (2) Mental changes (Emotional Changes). Physical changes can be seen by every one but the mental changes can only felt by the lady who is pregnant, because others may try their best to understand but trying and feeling are two different things.

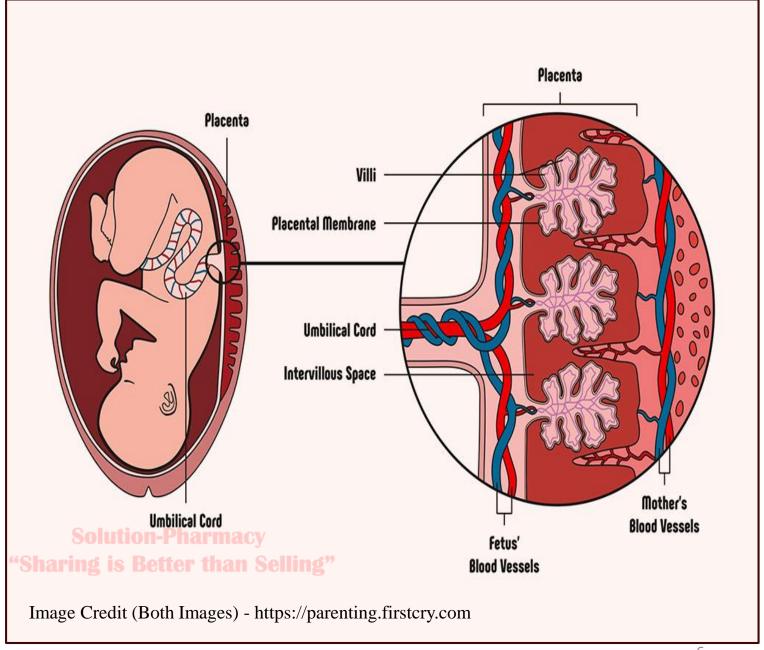
Physical Changes		
Increasing Womb Size		
Increase Nutrition Demand		
Decrease Physical Work		
Decrease in Appetite		
Weight Gain		
Fluid Retention		
Dizziness and fainting		
Increase BMR		
Ach and Pain in Body		
Heart burn & Gas		

then best to understand but trying and feeling are two different tillings.
Mental Changes (Emotional Changes or Psychological Changes)
Feeling of Responsibility
Expecting Care & Support Especially from Husband
Sometime she may feel Irritation
Mood Swings- Happy for being mother and scare how would she manage the pain of delivery and other
Anxiety- Often anxiety and fear can go hand in hand
Postpartum depression
Forgetfulness- Usually forget to do something
Over caring/ Protective- For upcoming life
During this time, there may be emotional fluctuations between positive feelings (excitement, happiness, and joy) and rather negative ones (disbelief, anticipation, worry, and tearfulness)

Physical Changes During Pregnancy

Changes	Description	
Increasing Womb Size	Every day there is growth in foetal size, so this changes start appearing as increase in womb size	
Increase Nutrition Demand	There is placenta which connect mother to a foetus, which also supply nutrition to upcoming life	
Decrease Physical Work	Everyday womb size increase which simultaneously increase body weight which reduce the work	
Decrease in Appetite	Although there is more need of nutrition but appetite is reduced, because the stomach size is reduced	
Weight Gain	Hormonal changes occur which affect the body mass ration and somehow increase average weight	
Fluid Retention	Swelling is a normal part of pregnancy that is caused by this additional blood and fluid. Normal swelling, which is also called edema, is experienced in the hands, face, legs, ankles, and feet.	
Dizziness and fainting	Due to increase in body weight and other emotional downfall dizziness and fainting may take place	
Increase BMR The energy necessity of basal metabolism is influenced by nutrition prior to pregnancy and the fetus. Women having larger babies tend to have greater increases in their BMR.		
Ach and Pain in Body	One of the most common sharp pains that women report is a stabbing pain in and around the uterus, abdomen or groin area. While this can be uncomfortable, in many cases it can be explained by normal changes that occur during pregnancy.	





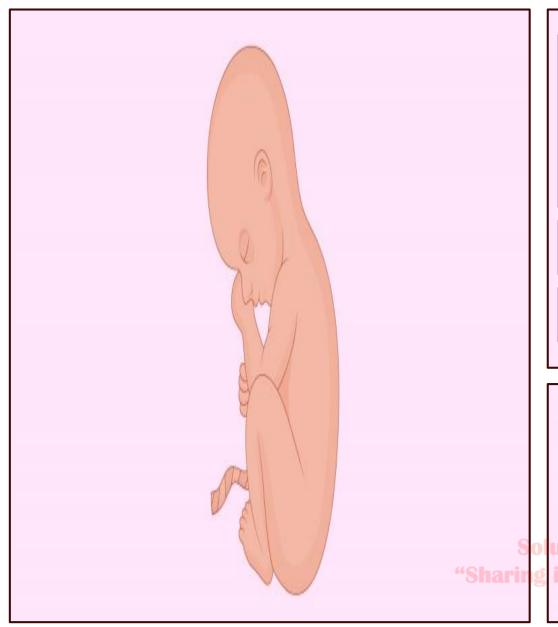
Trimester wise changes in pregnancy

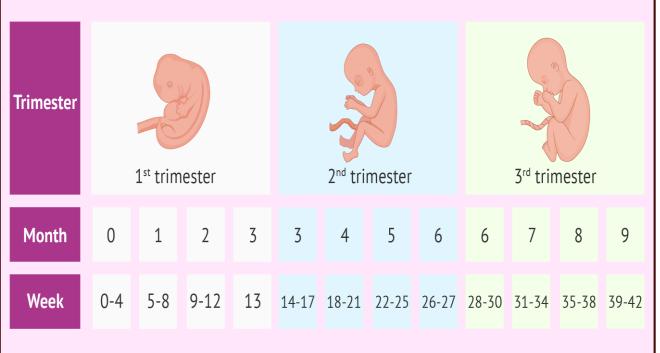
Changes in First Trimester Changes in Second Trimester	 Extreme tiredness Tender, swollen breasts. Upset stomach with or without throwing up (morning sickness) Cravings or distaste for certain foods Mood swings Constipation Need to pass urine more often Headache Heartburn Weight gain or loss Body aches, such as back, abdomen, groin, or thigh pain Stretch marks on your abdomen, breasts, thighs, or buttocks A line on the skin running from belly button to pubic hairline Patches of darker skin, usually over the cheeks, forehead, nose, or upper lip. Numb or tingling hands, called carpal tunnel syndrome Itching on the abdomen, palms, and soles of the feet. 	solution Sol
Changes in Third Trimester	 Shortness of breath Heartburn Swelling of the ankles, fingers, and face. Tender breasts, which may leak a watery pre-milk called colostrum Your belly button may stick out Trouble sleeping . Reference- https://www.nhp.gov.in/healthlyliving/pregnancy 	

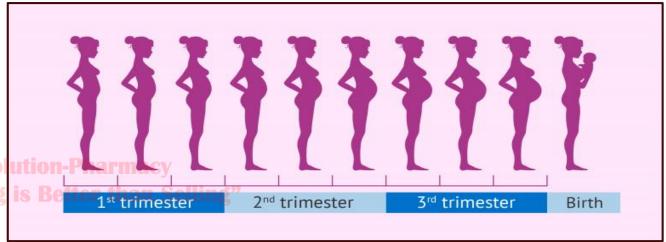
Different Stages in Pregnancy

Original Image Sources- www.invitra.com









Final Month- Nine Month

All 9 Month Images Reference- Original Image Sources- www.invitra.com

List of foods that may boost your health

Food	Importance	Remark
Onion	Onions is rich in many vital ingredients like- carbohydrates, minerals, vitamins, and fibers. They also have folic acid which is good in pregnancy and that is also a good supplement for of calcium, iron, magnesium, sulfur etc. All these ingredients are useful for the growth of new cells.	from various consult your ın.
Figs	The mineral and nutrients present in figs is much higher than any other common fruit or vegetable. These are high in natural sugars along with soluble fibers. They are also rich in minerals like potassium, calcium, iron, copper, and are a good source of antioxidants, which provide prevention from free chain oxidation.	llected you to diet pla
Jaggery	This is the concentrated product of the sugar cane juice. This is the richest source for glucose and iron. This provide essential energy and reduce the chances of weakness and fatigue. This is completely safe and useful until it does not taken in large quantity.	data has been cc Solution" advice sician before any
Passionfruit	- I IN CAMENICALIAL IO INCENTA MAICAL AIRL INCAHINAME HIDID HIAL CHAUICE HICEPIONEL OF THOSPHAIL WOMEN AIRL I	
Peaches	Peaches can be consumed during pregnancy because it is a good source of Vitamin C and vitamin C is necessary for the development and growth of the fetus. It helps with the growth and formation of bones, teeth, along with other vital tissues. Preaches is rich in fiber and we know that fiber is very good for the digestive system of the pregnant woman.	Although these sources. The "phys

List of foods that may boost your health

Food	Importance	Remark
Jujube	If taken in moderation Jujube is safe to consume during pregnancy. Also, there is n number of reasons to snack this fruit, which has zero cholesterol, when you are hit by hunger pangs at odd hours during pregnancy.	ious ⁄our
Apple	It is well accepted that- 'Once apple in day keep you doctor away' Eating apple during pregnancy is very good for health, this reduce the chances of asthma in later life. Apple fruit gives many nutrition to both- the mother and foetus.	been collected from various advice you to consult your ore any diet plan.
guava	A ripe guava is completely safe if consumed after washing well and after peeling. This way you can bring down the chances of infections. Eating guava in moderation creates no issues and since the fiber content is higher, it even assists in digestion. The good amount of Vitamin C also contributes to an enhanced immunity	
Okra	Okra is said to be packed with vitamins such as A, B (including B1, B2 and B6), vitamin C, zinc, minerals and even calcium. In addition, it is also full of fiber and folic acid, which is a boon for pregnancy. It even helps to prevent birth defects in the baby and is also a good cure for constipation.	Although these data has been co sources. The "Solution" advice physician before any
Peanuts	Peanuts are packed with a lot of essentials and its consumption in moderation is extremely useful and beneficial for a pregnant woman's body is Better than Selling"	
Orange	Oranges are safe to eat during pregnancy, but you should have them in moderation. They provide plenty of nutrients and are a rich source of vitamin C, folic acid, calcium, potassium, and more	Although sources.

List of foods that may boost your health

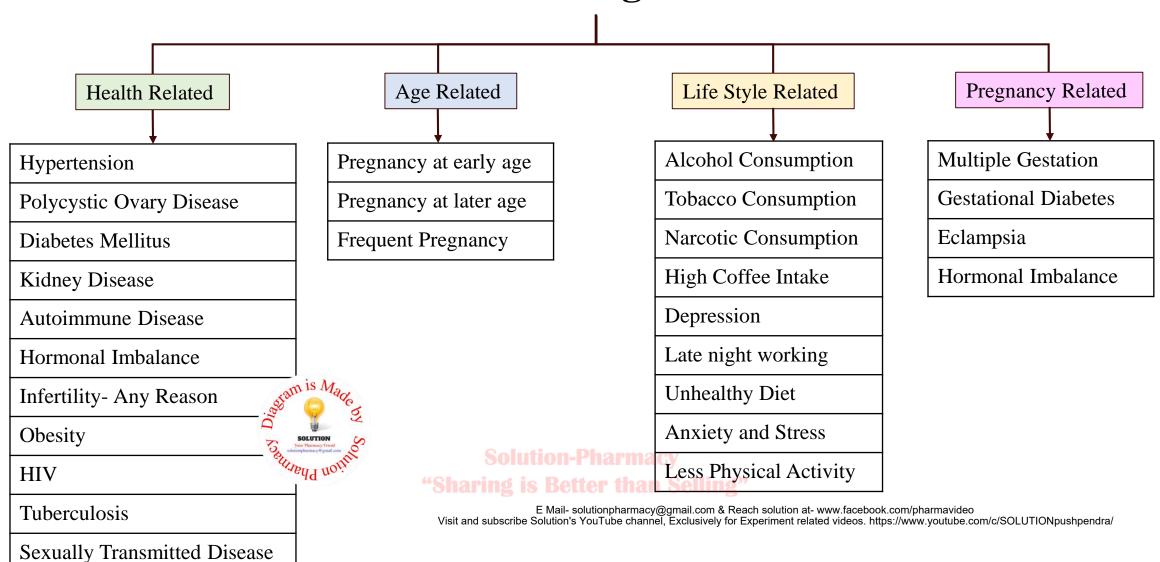
Habit	Importance	
Almond	Almond is the richest source of nutrition and it is highly recommended for the pregnant woman. One to two almond per day after soaking overnight along with milk provides a good and balanced source of essential nutrition. Almond is very good for the development of brain and sharpening the memory.	
Walnut	Walnuts are a rich source of Omega 3 fatty acids, which are necessary for the baby's brain activity along with the maintenance of fat level in pregnant woman. Walnuts is full of vitamins, fiber, magnesium, copper, and manganese. They are also loaded with calcium, iron, zinc, and selenium.	
Pomegranate	This fruit or its juice is really essential for the pregnant woman and for the developing fetes. During pregnancy the iron and folic acid level reduce and this juice is good option for the supplement of iron an hemoglobin balance. Expecting mothers should consume vitamins and minerals, which can provide nutrients throughout the pregnancy. But there should not be excess of juice. Eating complete fruits will give extra fiber too, which is good for the digestion.	
Egg	Eggs are the ultimate health food as they contain a little bit of almost every nutrient you need. A large egg contains 77 calories, as well as high-quality protein and fat. It also packs many vitamins and minerals. Eggs are a great source of choline. Choline is essential for many processes in your body, including brain development and health	
Milk	Everyone knows the value and importance of milk. It is highly nutritious and is a vital source of calcium and vitamin D for women during pregnancy. Pregnant women need between 1000 and 1300 mg of calcium every day to nourish their body and the body of their developing baby. It is recommended that they consume three cups of milk every day to meet the daily requirement	

Do all those things which create a smile on you face ...

Habit	Importance	
Diet	The proper diet is very essential during the pregnancy, because you are the not only one who is eating, there is one more who is depending on you and so you have to take a proper and balanced diet.	
Sleep	A proper and complete sleeping is very essential and advisable, although many woman face difficulty in sleeping during their pregnancy, but a positive trial should be done. At least they may take sleep whenever they feel to do so.	
Exercise/Yoga	Exercise and yoga play a important role to maintain your body in a proper and functioning state. But do not try to do by yourself, you should always take a expert advice and it should be performed under the supervision or guidance of instructor.	
Music	You will not believe but its proved that listing slow and soft music which is full of emotion is very useful to you in pregnancy. Along with music you may also include the religious literature or their audio-video format.	
Morning walk	Walking is the best exercise you can do in either pregnancy or in non- pregnancy case. Walking at the morning and seeing green plant may boost your health. Morning walk gives fresh air rich in oxygen.	
Hobby	In pregnancy you got weight and not able to do heavy physical work, most of the time you will need to seat in a ideal condition, and this may cause irritation so better you start doing the task of your on interest. Fulfilling your remaining hobby is the best way to utilizing your time in a productive way.	

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Risk Causing Factors



List of Contraindicated & Safe Medicines

Reference- We have adopted this data as such from KD Tripathi, Essential of medical pharmacology- 8th Edition.

Category	Uncertain/Unsafe	Safe Alternative
Antiemetics (Morning Sickness)	Ondansetron, Domperidone (Contraindicated)	Promethazine, Doxylamine, Dicyclomine, Prochlorperazine, Metoclopramide
Drug for peptic ulcer	Cimetidine, lansoprazole, Mosapride	Ranitidine,Famotidine,Omeprazole,Pantoprazole
Laxative (Mostly used category)	Senna, Bisacodyl, Docusates, Saline purgative	Dietary fibre, Ispaghula, Lactose
Analgesic (Headache, Body pain)	Aspirin, Metronidazole, NSAIDs, COX-2 Inhibitor, Codeine, Pethidine Morphine (Contraindicated)	Paracetamol, Ibuprofen (The dose should be min)
Antiallergic	Codeine, Dextromethorphan, Bromhexine, Expectorants	Nasal drops of- Xylometazoline, Oxymetazoline, Budesonide.
Antibacterial (Mostly used category)	Cotrimoxazole, Fluoroquinolones (Contraindicated) Tetracycline (Contraindicated), Doxycycline (Contraindicated) Chloramphenicol (Contraindicated) Gentamicin, Streptomycin (Contraindicated) Kanamycin (Contraindicated) Tobramycin (Contraindicated) Clarithromycin, Azithromycin, Vancomycin, Clindamycin	Penicillin G, Ampicillin, Amoxicillin-Clavulanate, Cloxacillin, Erythromycin, Piperacillin, Cephalosporin.

List of Contraindicated & Safe Drugs

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Category	Uncertain/Unsafe	Safe Alternative
Antitubercular	Streptomycin (Contraindicated)	Isoniazid, Rifampicin, Ethambutol, Pyrazinamide
Anti Amoebic	Metronidazole, Tinidazole, Quinidochlor	Diloxanide Furoate, Paromomycin
Antimalarial	Artemether, Artesunate, Primaquine (Contraindicated)	Chloroquine, Mefloquine, Proguanil, Quinine (For 1st trimester)
Anthelmintic	Albendazol _(Contraindicated) Menendazole (Contraindicated) Invermectin, Pyrantel pamoate, Diethylcarbamazine (Contraindicated)	Piperazine, Niclosamide, Praziquantel
Antifungal	Amphotericin B (Contraindicated) Fluconazole, Iitraconazole (Contraindicated) Ketoconazole (Contraindicated) Grisofulvin (Contraindicated), Terbinafine	Cotrimazole, Nystatin, Tolnaftate
Antiviral	Acyclovir, Ganciclovir (Contraindicated) Ganciclovir (Contraindicated) Amantadine (Contraindicated) Vidarabine (Contraindicated)	E Mail- solutionpharmacy@gmail.com & Reach solution at- www.facebook.com/pharmavideo Visit and subscribe Solution's YouTube channel, Exclusively for Experiment related videos. https://www.youtube.com/c/SOLUTIONpushpendra/
Antihypertensive	ACE Inhibitor (Contraindicated) Angiotensin antagonist (Contraindicated) Cy Thiazide diuretic, Furosemide, Propranolol, Nitroprusside	Methyldopa, Hydralazine, Atenolol, Metoprolol, Pindolol, Nifedipine, Prazocin, Clonidine
Antidiabetic	Sulfonylureas (Contraindicated) Metformin (Contraindicated) Pioglitazine, Repaglinide, Nateglinide, Acarbose (Contraindicated)	Human Insulin

List of Contraindicated & Safe Drugs

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Category	Uncertain/Unsafe	Safe Alternative
Antithyroid Drugs	Carbimazole, Radioactive Iodine (Contraindicated) Iodine	Propylthiouracil
Antipsychotic	Chlorpromazine, Fluphenazine (Contraindicated) Clozapine, Olanzapine, Risperidone	Haloperidol, Trifluoperazine
Antidepressant	Trimipramine (Contraindicated) Dothiepin (Contraindicated) Sertraline, Paroxetine, Citalopram, Trazodone, Venlafaxine, Moclobemide	Amitriptyline, Imipramine, Fluoxetine
Anticoagulant	Warfarin (Contraindicated) Acenocoumarol, Phenindione (Contraindicated)	Heparin (unfractionated and LMW)
Antiasthamatic	Theophylline, Ketotifen (Contraindicated) Montelukast, Zafirlukast, Systemic corticosteroids.	Salbutamol, Ipratropium bromide, Beclomethasone

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Teratogenicity Caused by Drugs

Teratology is the study of environmentally and medicine induced congenital anomalies or abnormality in developing fetus. Under the teratogenicity various functional abnormalities like- CNS function, death, prenatal onset growth deficiency, specific effects like carcinogenesis and recognizable syndromes, magnitude of risk are included. If any drug which is high lipid soluble and of low molecular weight is given to mother during pregnancy then there is strong chances that those drugs may cross the defensive barrier of BPB that is blood placental barrier. Large molecules with molecular weights greater than 1,000 do not easily cross the placenta into the embryonic-fetal bloodstream to exert potential teratogenic effect. Using ethanol during pregnancy may cause severe dysfunction in organ development and it is totally discontinue as soon as pregnancy confirms.

There are a number of medicine which my cause teratogenic effect. Anticonvulsant drugs taken by pregnant women to prevent seizures are among the most common causes of potential harm to the fetus. The frequency of major malformations, growth retardation, and hypoplasia of the midface and fingers, known as anticonvulsant embryopathy, is increased in infants exposed to anticonvulsant drugs. Fetal valproate syndrome (FVS) results from prenatal exposure to valproic acid (VPA) It is characterized by a distinctive facial appearance, a cluster of minor and major anomalies, and central nervous system dysfunction. Phenytoin is another most commonly used antiepileptic medications, Exposure during pregnancy is also associated with hydantoin syndrome that includes abnormalities like short nose, low or broad nasal bridge, epicanthic folds, hypertelorism, microcephaly, abnormal ears, wide mouth, oral clefts, hypoplasia of distal phalanges, short/webbed neck, low hairline, abnormal mental development and abnormal motor development

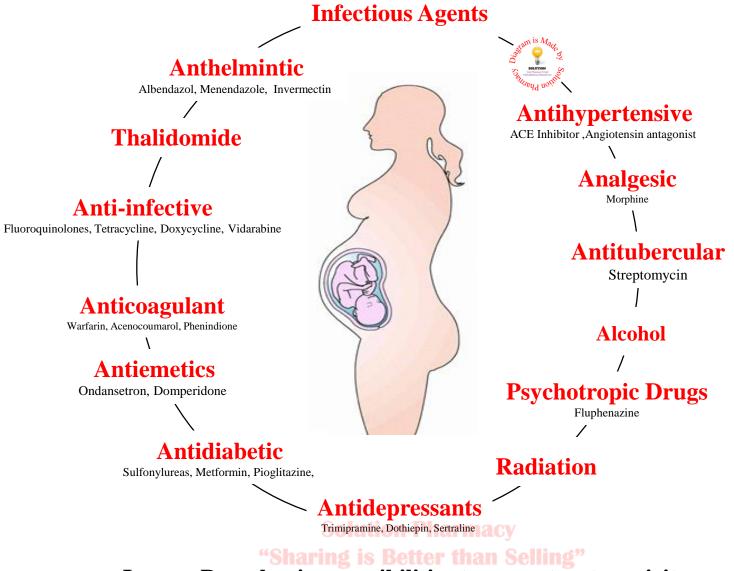


Image- Drug having possibilities to cause teratogenicity

Agents with their Teratogenic Effects

Drug/ Agents	Teratogenic Effects Teratogenic Effects
Tobacco and Nicotine	Increased risk of developing attention-deficit/ hyperactivity disorder (ADHD).
Alcohol (In Large Dose)	Microcephaly, Developmental delay, Dysmorphic facies consisting of low nasal bridge, Midface hypoplasia, Long featureless philtrum, Small palpebral fissures, Thin upper lip
Anxiolytics	BZD may produce the benzodiazepine syndrome. This syndrome consists of facial dysmorphism, hypotonia and delayed motor development, polycystic kidney, sub mucous clef hard palate, microcephaly, varying degrees of mental retardation, convulsions, and neonate abstinence syndrome
Anticonvulsants	The use of valproic acid in the first trimester of pregnancy is associated with an increased risk of spina bifida, but data on the risks of other congenital malformations are limited
Antibacterial	Administration of norfloxacin during pregnancy especially in early stage and at high doses could induce some fetal defects and abnormalities so it is advisable to avoid using this drug during pregnancy. , birth defects with methotrexate include skeletal defects, low birth weight, and a wide range of developmental abnormalities. Chloroquine, an antimalarial drug, has been associated with an increased risk of auditory and optic abnormalities. Yellow-brown discoloration of teeth may occur due to deposition of the antibiotic in calcifying teeth with tetracycline use in late pregnancy

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Agents with their Teratogenic Effects

Drug/ Agents	Teratogenic Effects
ACE Inhibitors	The administration of these drugs during the second and third trimesters of pregnancy causes high fetal and perinatal mortality
Folic Acid Antagonist	Aminopterin is a folic acid antagonist, it leads to fetal aminopterin syndrome some malformations, facial anomalies such as cleft palate, high arched palate, micrognathia, ocular hypertelorism, external ear anomalies, abnormal cranial ossification, abnormalities in first branchial arch derivatives, intrauterine growth retardation and mental retardation and include central nervous system defects such as hydrocephalus.
Warfarin	Warfarin therapy during pregnancy has been associated with spontaneous abortion, stillbirth, nasal hypoplasia, stippled epiphyses, distal limb hypoplasia and malformations of the CNS, eye, jaw and urinary tract
Thalidomide	Thalidomide was used clinically in the 1960s. The limb deformities produced by thalidomide is known as phocomelia and amelia that are characterized by severe shortening or complete absence of legs and or arms, whereas the ear malformations include anotia, microtia and hearing loss.
Cytomegalovirus	Infection of viruses like congenital CMV is a major public health concern. CMV causes serious neurodevelopmental sequelae, including mental retardation, cerebral palsy and sensorineural hearing loss



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