Pregnancy

**Definition**

The period from conception to birth. After the ovum is fertilized by a sperm and then implanted in the lining of the uterus. Pregnancy usually lasts 40 weeks and divided into three trimesters, each lasting three months.

* Pregnancy is not a medical condition but a physiological period that requires unique sets to provide dental management.
* Endocrine changes are that most significant alterations that contribute to the picture of pregnancy.
* Fatigue is a common physiologic finding during the first trimester that may have a psychologic impact. Second trimester, patients typically have a sense of well-being and relatively few symptoms. During the third trimester, increasing fatigue and discomfort and mild depression may be reported.
* Blood volume increases by 40% to 50%, cardiac output by 30% to 50%, but red blood cell volume increases by only about 15% to 20%, resulting in a fall in the mater­nal hematocrit leading to anemia and the requirement of folate and iron extra supply.
* Some medical conditions may be unmasked at pregnancy, like cardiomyopathy and glomerularnephritis.
* Late in pregnancy, a syndrome called "Supine hypotensive syndrome" characterized by sudden fall in blood pressure, bradycardia, fatigue, weakness and loss of consciousness due to supine position. This resulted from gravid uterus pressing on the inferior vena cava decreasing the cardiac input with subsequent decrease in cardiac output.
* Changes in respiratory function during pregnancy include elevation of the diaphragm which decreases the volume of the lungs in the resting state, thereby reducing total lung capacity by 5% and the functional residual capacity (FRC), the volume of air in the lungs at the end of quiet exhalation, by 20%. Again supine position could participate in dyspnea to pressure on lungs.
* First trimester is a critical period for prescribing drugs, since the organogenesis of the fetus takes place at that time, some medications best avoided as possible. The remaining pregnancy is associated with growth and maturation of the already existed organs.
* Miscarriage or abortion is a common phenomenon in pregnancy accounting 15% among all pregnant women during the first 20th weeks.
* **The current five pregnancy labeling categories are as follows:**

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| **Category** | **Description** |
| **A** | Controlled studies in humans have failed to demonstrate a risk to the fetus, and the pos­sibility of fetal harm appears remote |
| **B** | Animal studies have not indicated fetal risk, and human studies have not been conducted, *or* animal studies have shown a risk, but con­trolled human studies have not |
| **C** | Animal studies have shown a risk, but controlled human studies have not been con­ducted, *or* studies are not available in humans or animals |
| **D** | Positive evidence of human fetal risk exists, but in certain situations, the drug may be used despite its risk. |

**Necessary medications and their category:**

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| --- | --- | --- | --- |
| **Local anesthetics** | **Category**  | **Pregnancy** | **Breastfeeding** |
| Lidocaine | B | Yes | Yes |
| Articaine | C | Consultaion | Unkown |
| **Analgesics**  | **Category** | **Pregnancy** | **Breastfeeding** |
| Acetaminophen | B | Yes | Yes |
| Aspirin | C/D | Avoid in third trimester (early closure of ductus arteriosus) | Avoid |
| Ibuprofen | B/D | Avoid in third trimester (Delayed labour) | Yes |
| Naproxen | B/D | Avoid in third trimester (Delayed labour) | Yes |
| **Antibiotics** | **Category** | **Pregnancy** | **Breastfeeding** |
| Penicillin, cephalosporin, metronidazole, azithromycin, erythromycin, clindamycin | B | Yes | Yes |
| Tetracycline | D | Avoid | Avoid |
| Clarithromycin | C | Avoid | Yes |
| Fluoroquinolones | C | Avoid | Avoid |
| **Dental management of pregnant women** |
| **(P) Patients evaluation** | * Evaluate and determine trimester of pregnancy.
* Obtain medical consultation if the patient’s condition is poorly controlled, if signs and symptoms point to an undiagnosed condi­tion, or if the diagnosis is uncertain.
* Defer surgery u ntil after delivery if possible and any elective procedure.
* Avoid dental radiographs u n less information about tooth roots or bone is necessary for proper dental ca re. If radiographs must be taken, use lead apron and thyroid collar.
 |
| **B** |

|  |  |
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| * Bleeding
 |  No issues.  |
| * Breathing
 |  Patient may have difficulty breathing in the supine position.  |
| * Blood pressure Risk of supine hypotension syndrome.
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| **C** | Chair position: Pregnant may not tolerate supine position, keep her in semi-supine or upright position.Cardiovascular: High blood pressure would raises suspension about preeclampsia. |
| **D** |  Avoid as possible. Use drugs in category A and B in necessity. |
| **E** | In case of lost consciousness, turn her to left lateral position. |