



**Review Article**

**PREGNANCY: AN OVERVIEW OF C-SECTION DELIVERY**

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**ABSTRACT**

Cesarean section (CS) is a surgical procedure used to deliver one or more babies. CS is usually performed when vaginal delivery will put the mother or child's health or life at risk. Since CS also involves risk for adverse outcome for both mother and child, concern has been expressed regarding its increased use. The purpose of this paper to know about Some women may require an urgent and unplanned caesarean even though they were expected to have a normal vaginal birth. A cesarean section is the delivery of a baby through a cut (incision) in the mother's belly and uterus. It is often called a C-section. In most cases, a woman can be awake during the birth and be with her newborn soon afterward.

**Keywords:** Cesarean birth, childbirth education, C-section, Risk for adverse.

**INTRODUCTION**

**S**exual reproduction is the process by which organisms produce offspring by making germ cells called gametes. After the male gamete (sperm cell) unites with the female gamete (secondary oocyte)—an event occur called fertilization—the resulting cell contains one set of chromosomes from each parent. Males and females have anatomically distinct reproductive organs that are adapted for producing gametes, facilitating fertilization, and, in females, sustaining the growth of the embryo and fetus. The male and female reproductive organs can be grouped by function.

The gonads—testes in males and ovaries in females—produce gametes and secrete sex hormones. Various ducts then store and transport the gametes, and accessory sex glands produce substances that protect the gametes and facilitate their movement. Finally, supporting structures, such as the penis in males and the uterus in females, assist the delivery of gametes, and the uterus is also the site for the growth of the embryo and fetus during pregnancy.<sup>(1)</sup>

**FEMALE REPRODUCTIVE SYSTEM.**

The organs of the female reproductive system are followings:-<sup>(2),(3)</sup>

**Internal Organs**

- Vagina
- Uterus
- Fallopian tubes (Uterine tubes)
- Cervix
- Ovaries

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## External Organs

- Mons Pubis
- Pudendal Cleft
- Labia Majora
- Labia Minora,
- Bartholin's Glands,
- Clitoris
- Vaginal Opening
- Mammary glands

## PREGNANCY

Pregnancy is the time during which one or more offspring develops inside a woman.<sup>(4)</sup> A multiple pregnancy involves more than one offspring,

such as with twins.<sup>(5)</sup> Pregnancy can occur by sexual intercourse or assisted reproductive technology. It usually lasts around 40 weeks from the last menstrual period (LMP) and ends in childbirth.<sup>(4),(6)</sup> Symptoms of early pregnancy may include missed periods, tender breasts, nausea and vomiting, hunger, and frequent urination.<sup>(7)</sup> Pregnancy may be confirmed with a pregnancy test.<sup>(8)</sup>

## Female Reproductive System

The female reproductive system (or female genital system) is made up of the internal and external sex organs that function in human reproduction.<sup>(10)</sup>

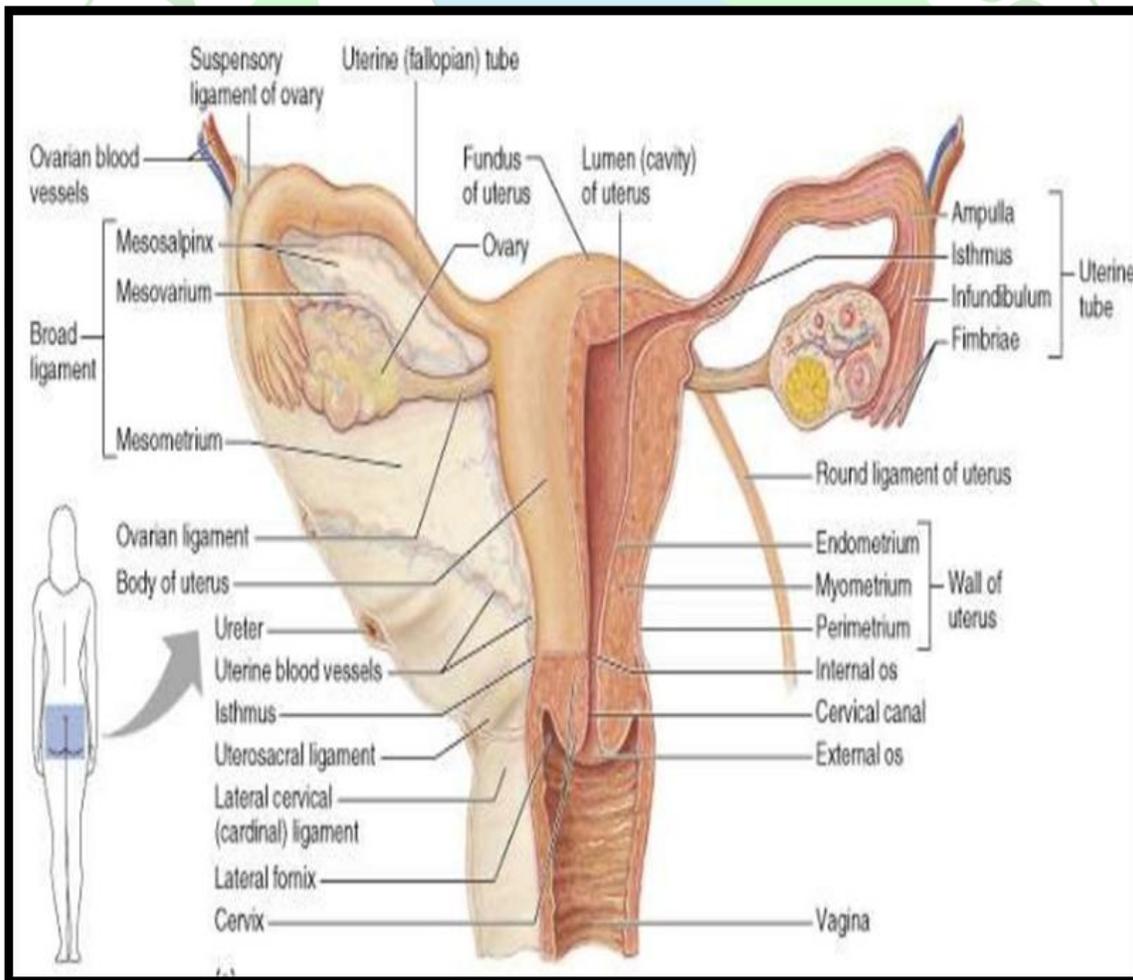
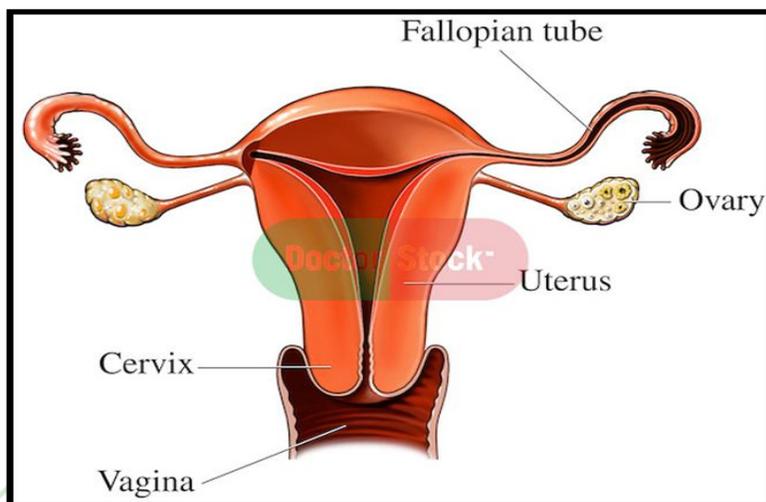


Figure-1: Female Reproductive System

## Internal Organs

The female internal reproductive organs are the vagina, uterus, Fallopian tubes, Cervix and ovaries.



**Figure-2: Internal Organs of Female Reproductive System**

### **Vagina**

The vagina is a fibro muscular (made up of fibrous and muscular tissue) canal leading from the outside of the body to the cervix of the uterus or womb. It is also referred to as the birth canal in the context of pregnancy. The vagina accommodates the male penis during sexual intercourse. Semen containing spermatazoa is ejaculated from the male at orgasm, into the vagina potentially enabling fertilization of the egg cell (ovum) to take place.

### **Cervix**

The cervix is the neck of the uterus, the lower, narrow portion where it joins with the upper part of the vagina. It is cylindrical or conical in shape and protrudes through the upper anterior vaginal wall. Approximately half its length is visible, the remainder lies above the vagina beyond view. The vagina has a thick layer outside & it is the opening where fetus emerges during delivery.

### **Uterus**

The uterus or womb is the major female reproductive organ. The uterus provides mechanical protection, nutritional support, and waste removal for the developing embryo (weeks 1 to 8) and fetus (from week 9 until the delivery). In addition, contractions in the

muscular wall of the uterus are important in pushing out the fetus at the time of birth.

### **Fallopian Tube**

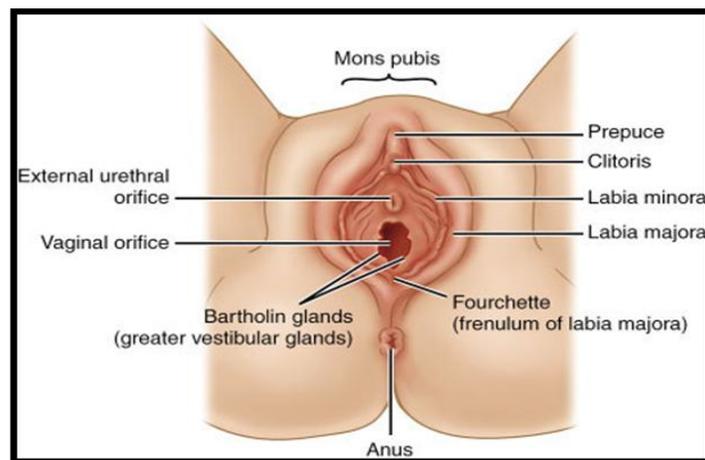
The Fallopian tubes are two tubes leading from the ovaries into the uterus. On maturity of an ovum, the follicle and the ovary's wall rupture, allowing the ovum to escape and enter the Fallopian tube. There it travels toward the uterus, pushed along by movements of cilia on the inner lining of the tubes. This trip takes hours or days. If the ovum is fertilized while in the Fallopian tube, then it normally implants in the endometrium when it reaches the uterus, which signals the beginning of pregnancy.

### **Ovaries**

The ovaries are small, paired organs located near the lateral walls of the pelvic cavity. These organs are responsible for the production of the egg cells (ova) and the secretion of hormones. The process by which the egg cell (ovum) is released is called ovulation. The speed of ovulation is periodic and impacts directly to the length of a menstrual cycle.

### **External Organs**

External organs are collectively called vulvas pudendum.



**Figure-3: External Organs of Female Reproductive System**

### **Mons Pubis**

The mons pubis (also known simply as the mons, and known specifically in females as the mons Venus or mons veneris), is a rounded mass of fatty tissue found over the pubic symphysis of the pubic bones. In human females, the mons pubis forms the anterior portion of the vulva. It divides into the labia majora (literally "larger lips"), on either side of the furrow known as the pudendal cleft, that surrounds the labia minora, clitoris, urethra, vaginal opening, and other structures of the vulval vestibule.

### **Pudendal Cleft**

The pudendal cleft (also called the cleft of Venus, pudendal fissure, pudendal cleavage, pudendal slit, urogenital cleft, vulvar slit, rima vulvae, or rima pudendi) is a part of the vulva, the furrow at the base of the mons pubis where it divides to form the labia majora.

### **Labia Majora**

The labia majora are two prominent longitudinal cutaneous folds that extend downward and backward from the mons pubis to the perineum. Together with the labia minora they form the labia of the vulva. The labia majora is homologous to the male scrotum.

### **Labia Minora**

The labia minora also known as the inner labia, inner lips, vaginal lips or nymphae, are two flaps of skin on either side of the human vaginal

opening in the vulva, situated between the labia majora (the Latin for big lips; also called outer labia, or outer lips). Inner lips vary widely in size, color, and shape from individual to individual.

### **Bartholin's Glands**

The Bartholin's glands are two pea sized compound racemose glands located slightly posterior and to the left and right of the opening of the vagina. They secrete mucus to lubricate the vagina and are homologous to bulbourethral glands in males. However, while Bartholin's glands are located in the superficial perineal pouch in females, bulbourethral glands are located in the deep perineal pouch in males. Their duct length is 1.5 to 2.0 cm and open into navicular fossa. The ducts are paired and they open on the surface of the vulva.

### **Clitoris**

The clitoris in humans, the visible button-like portion is near the front junction of the labia minora, above the opening of the urethra.

The clitoris is the human female's most sensitive erogenous zone and generally the primary anatomical source of human female sexual pleasure. In humans and other mammals, it develops from an outgrowth in the embryo called the genital tubercle.

## ***Pregnancy and It's Complications***

Pregnancy is typically divided into three trimesters. The first trimester is from week one through 12 and includes conception. Conception is when the sperm fertilizes the egg. The fertilized egg then travels down the fallopian tube and attaches to the inside of the uterus, where it begins to form the fetus and placenta.<sup>(4)</sup>

The first trimester carries the highest risk of miscarriage (natural death of embryo or fetus).<sup>(11)</sup> The second trimester is from week 13 through 28. Around the middle of the second trimester, movement of the fetus may be felt.

At 28 weeks, more than 90% of babies can survive outside of the uterus if provided high-quality medical care. The third trimester is from 29 weeks through 40 weeks.<sup>(4)</sup>

### ***Complications***

#### **• Maternal Problems**

##### **Gestational diabetes**

When high blood sugar levels develops in a woman without diabetes during pregnancy is known as Gestational diabetes.

##### **Hyperemesis gravidarum**

Hyperemesis gravidarum is the presence of severe and persistent vomiting, causing dehydration and weight loss. It is more severe than the more common morning sickness and is estimated to affect 0.5–2.0% of pregnant women.

##### **Pelvic girdle pain**

Pelvic girdle pain (PGP) disorder is complex and multi-factorial altered with altered laxity/stiffness of muscles, laxity to injury of tendinous/ligamentous structures to 'mal-adaptive' body mechanics.

##### **High blood pressure**

Potential severe hypertensive states of pregnancy are mainly Preeclampsia, Eclampsia, Gestational hypertension, HELLP syndrome, Liver cirrhosis.

## **Deep vein thrombosis**

Pregnancy-induced hypercoagulability as a physiological response to potential massive bleeding at childbirth.

### **Anemia**

Levels of hemoglobin are lower.

### **Infection**

A pregnant woman is more susceptible to certain infections. Pregnant women are more severely affected by, for example, influenza, hepatitis E, herpes simplex and malaria.

### **Peripartum cardiomyopathy**

Peripartum cardiomyopathy is decrease in heart function. It increases the risk of congestive heart failure, heart arrhythmias, thromboembolism, and cardiac arrest.

### **Fetal and placental problems**

#### **Ectopic pregnancy**

Ectopic pregnancy is implantation of the embryo outside the uterus.

#### **Miscarriage**

Miscarriage is the loss of a pregnancy prior to 20 weeks.

#### **Placental abruption**

Placental abruption is separation of the placenta from the uterus.

#### **Placenta praevia**

When the placenta fully or partially covers the cervix is known as Placenta praevia.

### **Multiple pregnancies**

Multiples may become monochorionic, sharing the same chorion, with resultant risk of twin-to-twin transfusion syndrome. Monochorionic multiples may even become monoamniotic, sharing the same amniotic sac, resulting in risk of umbilical cord compression and entanglement. In very rare cases, there may be

conjoined twins, possibly impairing function of internal organs.

### Vertically transmitted infection

Several pathogens can cross the placenta and cause (perinatal) infection. The term TORCH complex refers to a set of several different infections that may be caused by transplacental infection. Babies can also become infected by their mother during birth.

## METHODS OF CHILD BIRTH

### VAGINAL CHILD BIRTH

#### Stages of Vaginal Child Birth

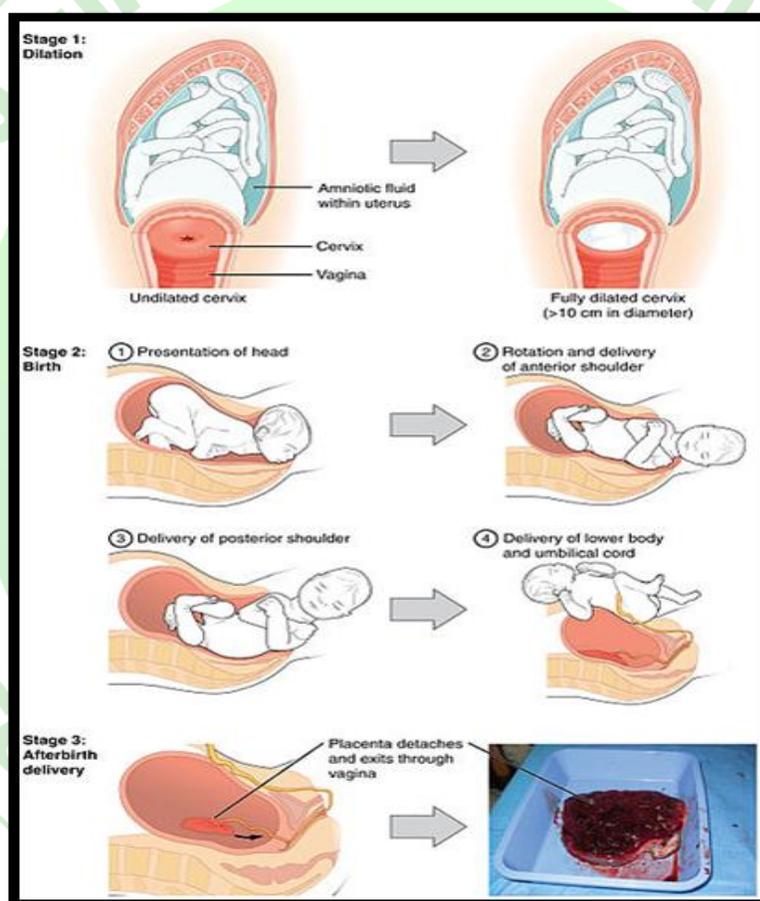


Figure 4: Sequence of images showing the stages of ordinary childbirth.

#### First Stage (Stages of Labour)

The first stage of labour is divided into "latent" and "active" phases.

Latent phase

Active phase

Childbirth, also known as labour and delivery, is the ending of a pregnancy by one or more babies leaving a woman's uterus.<sup>(12)</sup> Most babies are born head first; however about 4% are born feet or buttock first, known as breech.<sup>(13),(14)</sup>

#### There are two common ways of child birth:-

Vaginal child birth (Normal / Ordinary child birth)

Cesarian child birth (C-Section child birth)

#### Latent Phase

The latent phase of labour is also called the quiescent phase, prodromal labour, or pre-labour.<sup>(15)</sup> The latent phase is generally defined as beginning at the point at which the woman perceives regular uterine contractions.<sup>(16)</sup>

## Active Phase

The active stage of labour has geographically differing definitions. In the US, the definition of active labour was changed from 3 to 4 cm, to 5 cm of cervical dilation for multiparous women, mothers who had given birth previously, and at 6 cm for nulliparous women, those who had not given birth before.<sup>(17)</sup> This has been done in an effort to increase the rates of vaginal delivery.<sup>(18)</sup>

### Second Stage: Fetal Expulsion

The expulsion stage (stimulated by prostaglandins and oxytocin) begins when the cervix is fully dilated, and ends when the baby is born. As pressure on the cervix increases, women may have the sensation of pelvic pressure and an urge to begin pushing. At the beginning of the normal second stage, the head is fully engaged in the pelvis; the widest diameter of the head has passed below the level of the pelvic inlet. The fetal head then continues descent into the pelvis, below the pubic arch and out through the vaginal introitus (opening). This is assisted by the additional maternal efforts of "bearing down" or pushing. The appearance of the fetal head at the vaginal orifice is termed the "crowning". At this point, the woman will feel an intense burning or stinging sensation.<sup>(19)</sup>

### Third Stage: Placenta Delivery

The period from just after the fetus is expelled until just after the placenta is expelled is called the third stage of labour or the involution stage. Placental expulsion begins as a physiological separation from the wall of the uterus.<sup>(20)</sup>

Placental expulsion can be managed actively or it can be managed expectantly, allowing the placenta to be expelled without medical assistance. Active management is described as the administration of a uterotonic drug within one minute of fetal delivery, controlled traction of the umbilical cord and fundal massage after delivery of the placenta.<sup>(21)</sup>

### Fourth Stage

The "fourth stage of labour" is the period beginning immediately after the birth of a child

and extending for about six weeks. The terms postpartum and postnatal are often used to describe this period.<sup>(22)</sup> It is the time in which the mother's body, including hormone levels and uterus size, return to a non-pregnant state and the newborn adjusts to life outside the mother's body.<sup>(23)</sup>

## PHASES OF VERTEX DELIVERY (head presentation)

### Six Phases of a Typical Vertex Delivery (Head-First Presentation)

Engagement of the fetal head in the transverse position. The baby's head is facing across the pelvis at one or other of the mother's hips.

- Descent and flexion of the fetal head.
- Internal rotation.
- Delivery by extension.
- Restitution.
- External rotation.

### Cesarian Child Birth (C-Section)

Caesarean section, also known as C-section, is the use of surgery to deliver one or more babies.<sup>(24)</sup> A C-section typically takes 45 minutes to an hour. It may be done with a spinal block such that the woman is awake or under general anesthesia. A urinary catheter is used to drain the bladder and the skin of the abdomen is then sterilized. An incision of about 15 cm (6 inches) is then typically made through the mother's lower abdomen. The uterus is then opened with a second incision and the baby delivered. The incisions are then stitched closed.<sup>(24)</sup> A woman can typically begin breastfeeding as soon as she is awake and out of the operating room. Often a number of days are required in hospital to recover sufficiently to return home.<sup>(24)</sup>

C-sections result in a small overall increase in poor outcomes in low risk pregnancies.<sup>(25)</sup> They also typically take longer to heal from, about six weeks, than vaginal birth.<sup>(24)</sup>

### Classification of C-Section

Caesarean sections have been classified in following ways by different perspectives.

- Based on urgency
- Based on mother characteristics
- Caesarean delivery on maternal request
- After previous Caesarean
- Twins
- Breech birth
- Resuscitative hysterotomy

### Based on Urgency

Caesarean sections are classified as being either an elective surgery or an emergency operation.<sup>(26)</sup> The classification of urgency of the delivery is an important issue affecting decision about of the most appropriate method of anaesthesia. The decision whether to perform general anaesthesia or regional anaesthesia (spinal or epidural anaesthetic) is important and is based on many indications, including how urgent the delivery needs to be as well as the medical and obstetric history of the woman.<sup>(26)</sup> Regional anaesthetic is almost always safer for the woman and the baby but sometimes general anaesthetic is safer for one or both.

### Based on Mother Characteristics

#### Caesarean delivery on mater request

Caesarean delivery on maternal request (CDMR) is a medically unnecessary caesarean section, where the conduct of a childbirth via a caesarean section is requested by the pregnant patient even though there is not a medical indication to have the surgery.<sup>(27)</sup>

#### After previous caesarean

Mothers who have previously had a caesarean section are more likely to have a caesarean section for future pregnancies.

#### Twins

For otherwise healthy twin pregnancies where both twins are head down a trial of vaginal delivery is recommended at between 37 and 38 weeks.<sup>(28),(29)</sup> Vaginal delivery in this case does not worsen the outcome for either infant as compared with caesarean section. There is controversy on the best method of delivery where the first twin is head first and the second

is not. When the first twin is not head down at the point of labour starting, a caesarean section should be recommended.<sup>(29)</sup> Although the second twin typically has a higher frequency of problems, it is not known if a planned caesarean section affects this.<sup>(28)</sup>

#### Breech birth

A breech birth is the birth of a baby from a breech presentation, in which the baby exits the pelvis with the buttocks or feet first as opposed to the normal head-first presentation. In breech presentation, fetal heart sounds are heard just above the umbilicus.

#### Resuscitative hysterotomy

A resuscitative hysterotomy, also known as a peri-mortem caesarean delivery, is an emergency caesarean delivery carried out where maternal cardiac arrest has occurred, to assist in resuscitation of the mother by removing the aortocaval compression generated by the gravid uterus.

#### Need of C-Section Delivery

C-Section delivery needed due to following medical reasons that affect pregnancy.

- Pregnancy complications
- Labor pain and birth complications

#### Pregnancy Complications

- A c-section in a previous pregnancy or other surgeries on uterus (womb).
- Placental problems can cause dangerous bleeding during vaginal birth.
- An infection, like HIV or genital herpes.
- Multiple babies (twins, triplets or more).
- A chronic health condition, like diabetes or high blood pressure, that requires treatment.

#### Labor Pain and Birth Complications

- Baby is too big to pass safely through the vagina.
- Baby is in a breech position.
- Labor is too slow or stops.
- Umbilical cord prolapse.

- Fetal distress.
- Some of birth defect. Birth defects change the shape or function of one or more parts of the body.

### Procedure of C-Section Delivery

The normal cesarean procedure averages 45 minutes to an hour. The baby is usually delivered in the first 5-15 minutes with the remaining time used for closing the incision.

- Pre-Surgery
- Surgery
- Post-Surgery

### Pre-surgery

Before surgery, an anesthetic (general, spinal, or epidural) have been given one to mother. A general anesthetic is normally only used for emergency cesareans because it works quickly and the mother is sedated.

The spinal and epidural anesthesia will numb the area from the abdomen to below the waist (sometimes the legs can be numb also), so that nothing can be felt during the procedure. In this

### Regions of C-Section

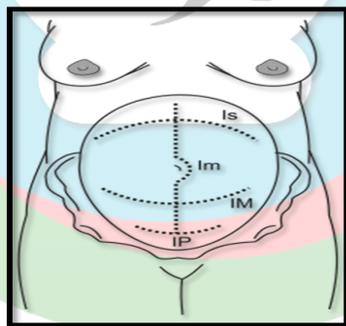


Figure-5: Several caesarean sections

- Is: supra-umbilical incision
- Im: median incision
- IM: Maylard incision
- IP: Pfannenstiel incision

An incision will make in the abdomen wall first. The health care provider will then suction out the amniotic fluid and then deliver the baby. The baby's head will be delivered first so that the mouth and nose can be cleaned out to allow it to breathe. Finally, placenta will be delivered (you

procedure you will probably receive a catheter to collect urine while your lower body is numb.

### Surgery

Based on the type on incision (longitudinal or transverse) made on the uterus.

- The classical caesarean section involves a midline incision on the uterus longitudinal incision which allows a larger space to deliver the baby. It is performed at very early gestations where the lower segment of the uterus is unformed as it is safer in this situation for the baby.
- The lower uterine segment section is the procedure most commonly used today; it involves a transverse cut just above the edge of the bladder. It results in less blood loss and has fewer early and late complications for the mother, as well as allowing her to consider a vaginal birth in the next pregnancy.
- A caesarean hysterectomy consists of a caesarean section followed by the removal of the uterus. This may be done in cases of intractable bleeding or when the placenta cannot be separated from the uterus.<sup>(30)</sup>

may feel some tugging) after which the surgical team will begin the close up process.

### Post Surgery

After the surgery, mother might begin to experience some nausea and trembling. This can be caused by the anesthesia, by the effects of your uterus contracting or from an adrenaline let down. These symptoms usually pass quickly and can be followed by drowsiness. After discharged

from the hospital mother will be advised on the proper post-operative care.<sup>(30)</sup>

### RISKS AND COMPLICATIONS OF C-SECTION DELIVERY

Some possible risks of C-Section include:-

- Risks and complications for mother
- Risks and complications for baby

### RISKS AND COMPLICATIONS FOR MOTHER

- **Infection:** Infection can occur at the incision site, in the uterus and in other pelvic organs such as the bladder.
- **Hemorrhage or increased blood loss:** There is more blood loss in a cesarean delivery than with a vaginal delivery. This can lead to anemia or a blood transfusion (1 to 6 women per 100 require a blood transfusion<sup>1</sup>).
- **Injury to organs:** Possible injury to organs such as the bowel or bladder.
- **Adhesions:** Scar tissue may form inside the pelvic region causing blockage and pain. Adhesions can also lead to future pregnancy complications such as placenta previa or placental abruption<sup>3</sup>.
- **Extended hospital stay:** After a cesarean, the normal stay in the hospital is 3-5 days after the birth, if there are no complications.
- **Extended recovery time:** The amount of time needed for recovery after a cesarean can range from weeks to months.
- **Reactions to medications:** There can be a negative reaction to the anesthesia given during a cesarean or negative reaction to pain medication given after the procedure.
- **Risk of additional surgeries:** Includes possible hysterectomy, bladder repair or another cesarean.
- **Maternal mortality:** The maternal mortality rate for a cesarean is higher than with a vaginal birth.
- **Emotional reactions:** Some women who have had a cesarean report feeling negatively about their birth experience.

### RISK AND COMPLICATIONS FOR THE BABY

- **Premature birth:** If gestational age was not calculated correctly, a baby delivered by cesarean could be delivered too early and have low birth weight<sup>6</sup>.
- **Breathing problems:** When delivered by cesarean, a baby is more likely to have breathing and respiratory problems. Some studies show the existence of greater need for assistance with breathing and immediate care after a cesarean than with a vaginal delivery<sup>7</sup>.
- **Low APGAR scores:** Low APGAR scores can be the result of anesthesia, fetal distress before the delivery or lack of stimulation during delivery (Vaginal birth provides natural stimulation to the baby while in the birth canal). Babies born by cesarean are 50% more likely to have lower APGAR scores than those born vaginally<sup>8</sup>.
- **Fetal injury:** Very rarely, the baby may be nicked or cut during the incision (on average, 1 or 2 babies per 100 will be cut during the surgery<sup>9</sup>)

### PROS AND CONS OF C-SECTION DELIVERY

#### C-Section Pros

- Mothers don't have to endure long hours of labor and can usually schedule when they want to give birth.
- Women are at decreased risk for pelvic floor injury and birth trauma.
- Avoid post-term pregnancies.
- A baby's risk of being infected with the mother's STD or infection is greatly reduced.

#### C-Section Cons

- Surgical risks and complications from anesthesia.
- Women are at increased risk for serious health complications (like heart attacks, blood clots and postpartum infection) after a cesarean delivery.
- Pain
- Bleeding
- Infections

## MANAGEMENT OF C-SECTION DELIVERY

Healthcare professionals adjust the care plan from assessment until discharge to accommodate the woman anticipating cesarean birth.

- Pre- operative management
- Intra operative management
- Post operative management

### PRE- OPERATIVE MANAGEMENT

#### Preoperative Assessment

- To obtain health history of mother.
- To collect information about past surgeries, secondary illnesses, allergies to foods or drugs, reaction to anesthesia.
- Woman with poor nutritional status is at risk for a slow wound healing.
- Woman with protein or vitamin deficiency is also at risk for poorer healing.
- Age can also affect surgical risk because it can cause decreased circulatory and renal function.
- To prevent fluid and electrolyte imbalance, intravenous fluid replacement is initiated preoperatively and postoperatively.

#### Preoperative Diagnostic Procedures

Before undergoing surgery, the diagnostic procedures recommended by physician are followings:-

- Circulatory function assessment – CBC, PT, PTT
- Renal function assessment – Urine examination
- Fetal heart rate
- Blood group type and cross matching
- Ultrasound – To find out fetal position and maturity.

#### Preoperative Measures

Preoperatively, there are measures that should be taken to ensure the woman's safety during surgery.

- The most important responsibility of the surgeon is securing the informed consent from the patient.
- The consent must be informed, and the risks and benefits of the procedure must be explained in a language that the woman understands.
- The woman is provided with a clean hospital gown and her hair is pulled into a ponytail.
- The woman's nails should be free from nail polish or any acrylic fingernails.
- To decrease stomach secretions, a gastric emptying agent is used before surgery.

### INTRA OPERATIVE MANAGEMENT

- The anesthesia of choice is usually a regional block.
- Encourage the woman to remain on her side or insert a pillow under her right hip to keep her body slightly tilted to the side to prevent supine hypotension.
- Epidural anesthesia is administered while the woman is lying on her side, and it has an effect that lasts for 24 hours, so continuous pulse oximetry must be used 24 hours post surgery to detect respiratory depression.
- For the skin preparation, shaving away abdominal hair and washing the skin over the incision site with soap and water could reduce the bacteria on the skin.

### POST OPERATIVE MANAGEMENT

- After surgery, the woman would be transferred by stretcher to the postanesthesia care unit.
- If spinal anesthesia was used, the woman's legs are fully anesthetized so she cannot move them.
- Some women may need patient controlled analgesia or continued epidural injections to relieve the pain.
- Supplement the analgesics with comfort measures such as change in position or straightening of bed linen.

### SUMMARY AND CONCLUSION

Pregnant women who have complications in their pregnancy and are not allowed to give birth vaginally. Cesarean birth becomes the birth

method of choice. A Cesarean section (C-section) is surgery to deliver a baby. Some C-sections are planned, but many are done when unexpected problems happen during delivery, such as:-

- Health problems in the mother
- The mother carrying more than one baby
- The size or position of the baby
- The baby's health is in danger
- Labor is not moving along as it should

The surgery is relatively safe for mother and baby. Still, it is major surgery and carries risks. It also takes longer to recover from a C-section than from vaginal birth. It can raise the risk of having difficulties with future pregnancies. Some women may have problems attempting a vaginal birth later. Still, many women are able to have a vaginal birth after cesarean (VBAC).

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