

## **Normal Spontaneous Delivery (NSD)**

### **Introduction**

Normal Spontaneous Delivery (NSD) is the delivery of the baby through the birth canal without any surgery. Mother can decide to have a baby through drug-free method or pain relief medications. NSD is the common form of delivery since it is lower risk and with a speedy recovery.

### **Vaginal Birth after Caesarean Section (VBAC)**

The risks and benefits of VBAC compared with caesarean section are not entirely certain. VBAC will have 2–3 times increased chances of uterine rupture. Majority of published studies have reported successful delivery of 72–75% in VBAC cases. Client will be fasting and on intravenous infusion in the early stage of labour. Continuous fetal heart monitoring will be conducted during the entire labour process. If the labour is not progressing well or any problems arise at any time, caesarean section could be considered. Please discuss with your obstetrician for further details.

### **Procedure of NSD**

At the beginning of NSD, mother experiences contractions at regular intervals. Each contraction pushes the cervix to open. When the cervix is fully dilated, the presenting part of fetus emerges and then comes out through the birth canal.

1. When the cervix is gradually opened, contraction becomes stronger. The contractions may last 60 to 90 seconds with almost no rest in between. Mother will feel an uncontrollable urge to push or bear down. Please follow doctor or midwife's instruction before pushing.
2. When fetal presenting part engages into birth canal, contraction will decrease. Continue to push down in accordance with the rhythm of the contraction will further help baby passes through the birth canal.
3. When crowning occurs, mother may have burning sensation in the perineum.
4. Doctor may make a small cut to enlarge the vaginal opening to avoid tear of the perineum.
5. Baby's shoulders leave and come out of the birth canal.
6. The umbilical cord is cut and tied.
7. Delivery of placenta takes place and doctor or midwife will check for its completeness.
8. Wound will be sutured afterwards.

\* If mother had history of previous caesarean section, caution will be taken to avoid tear of the uterine scar.

There are three common procedures which may be required during the process of normal spontaneous delivery:

1. **Artificial Rupture of Membranes (ARM)**  
ARM is considered to help release prostaglandins and improve the level of oxytocin to speed up the contractions and accelerate the labour process. The indications for ARM are:
  - The cervix is ready for induction of labour
  - Prolonged labour and fetal head is engaged
  - Attending obstetrician wants to observe the colour of the amniotic fluid
2. **Episiotomy**  
It is a surgical incision of the perineum to enlarge the vaginal opening to facilitate childbirth when the condition requires. The indications for episiotomy are:
  - To prevent an uncontrolled tear which may extend to the perineal body, anal sphincter and even anus and rectum
  - Hypertensive or cardiac disease client
  - For instrumental delivery
3. **Instrumental delivery**  
It may use a vacuum extractor or a pair of forceps to help the baby to be born if the second stage of labour is prolonged or the fetus is showing signs of distress

### ARM

A toothed forcep or a plastic wand with small hook will be inserted through the cervix to pierce the amniotic sac for the fluid to flow out slowly.

### Episiotomy

1. Episiotomy is performed under local anaesthesia (local anaesthetics is sometimes not needed if client have epidural analgesia).
2. A mediolateral episiotomy will be made.

### Vacuum Extractor

1. A suction cup is applied to the fetal scalp and air is sucked out using a vacuum pump.
2. Once the cup is firmly attached, doctor will pull on the vacuum extractor while the mother pushes during a contraction.
3. Episiotomy may be necessary.

### Forceps

1. An episiotomy will be made.
2. Doctor will place one blade of the forceps on each side of the fetal head. The two blades are then locked together.
3. Doctor will pull while the mother pushes during a contraction.

## **Preparation for NSD**

1. The doctor will explain the procedure and the possible complications to the mother.
2. Remove loose objects (e.g. undergarment, dentures, jewellery and contact lens etc.) and change to operation attire.
3. Empty bladder before labor.

## **Possible Risks and Complications**

1. Normal Spontaneous Delivery
  - Excessive lochia
  - Vaginal tear and soreness
  - Hemorrhoids
  - Breast soreness and engorgement
  - Difficult urination
  - Laceration of the perineum
  - Fetal hypoxia
  - Weakening of the pelvic floor
  - Placenta failed to be delivered requiring emergency operation to remove the placenta
  - Heavy bleeding that required immediate treatment and / blood transfusion
  - Although rare, there is an increased chance of uterine rupture in VBAC cases
2. ARM
  - If the fetal head is not close to the cervix, cord prolapse may occur
  - If there is too much amniotic fluid, there is a higher risk of cord prolapse and early placenta separation.
  - If the amniotic sac and the fetal head are too close, small abrasions may appear on the baby's head when performing the procedure.
3. Episiotomy
  - Increase blood loss
  - Wound pain
  - Wound infection
  - Edema
  - Haematoma
  - Difficult urination and defecation (usually resolve after a few days)
  - Dyspareunia (pain during intercourse)

#### 4. Instrumental Delivery

##### Mother:

- Complications of episiotomy
- The instrumental delivery may fail and a caesarean section will be necessary
- Vaginal and genital tract or bladder injury

##### Baby:

- Swelling on the scalp (vacuum extractor) (usually self-limiting)
- Forceps marks on the face (forceps) (usually self-limiting)
- The collar bone may break (usually recover spontaneously)
- Intracranial bleeding (rare)
- Skull fractures (rare)
- Facial nerve injury (rare)
- Brachial plexus nerve injury (rare)

\*\* It is impossible to mention all the possible complications that may happen and the above is only a few important complications which may occur. Before agreeing for the procedure, mother must acknowledge and accept the fact that no matter how ideal the situation may be, these events may occur. It may require another operation to deal with the complications.

### **Post-partum Care**

#### 1. Rest:

- Adequate rest is essential to speed up the recovery process.
- Plan the housework and seek help from family members.

#### 2. Personal hygiene:

- Take a warm bath and avoid to catch cold.
- Blow dry your hair after shampooing.
- Clean your body as usual, in this way no need to specially clean the breasts before breastfeeding.

#### 3. Breast engorgement:

- Usually occurs on the third day after delivery.
- Painkillers prescribed may be used to relieve the pain and fever.
- Frequent breastfeeding on demand is encouraged to enhance flow of milk.
- For non breastfeeding mother, stimulation to both breasts is discouraged.

#### 4. Diet:

- Maintain well nourished from a variety of food.
- To avoid constipation, plenty of fresh fruit, vegetable and water is needed.
- Avoid any alcohol based drink, herbal medicine such as Angelica and Ginseng.

#### 5. Exercise:

- Optimal physical exercise can help to strengthen the muscles and joints, to speed up uterine involution and to prevent urinary incontinence.
- Some light exercise can be started day after delivery.

#### 6. Lochia:

- Lochia is vaginal discharge after birth and will last for 2 to 6 weeks.
- Under normal circumstances, the lochia will change from red color to dull and lighter. The amount will decrease gradually.

#### 7. Menstruation:

- Menstruation will resume within 4 to 8 weeks after delivery.
- Amount and quality may vary for the initial 1 to 2 times.
- Menstruation may delay for those breastfeeding mother.

#### 8. Revolution of uterus:

- Pain can be relieved by analgesic.
- Massage of uterus helps to expel out the lochia and fasten revolution of uterus.
- In general, 6 to 8 weeks is required for the complete revolution of uterus.

#### 9. Episiotomy wound (normal spontaneous delivery):

- Use shower or peri-bottle to rinse the vulvar area from front to back and pad dry to avoid infection
- Change maternity pads accordingly.

10. Hair Loss:

- Prominent hair loss after delivery is due to the shedding off of those rapidly growth hair during pregnancy. This phenomenon will improve gradually.

11. Mood swing after delivery:

- It is due to hormonal change. The mother may easily get miserable, irritable and insomnia
- Symptom will subside in a short period of time.
- Adequate rest, with support from husband and family members, will ease the situation.
- If condition persists, post partum blue may be suspected and referral to counselor or specialist is required.

12. Post-natal follow up:

- 1st follow up will be 1 to 2 weeks after delivery.
- Post-natal body check will be carried out by attending doctor 6 to 8 weeks later.
- Normal sexual life can be resumed if recovery is good.
- Husband is encouraged to participate in thorough family planning.

Remarks: Should there be any enquiries, please consult the attending doctor or call the following hotlines:

- ✧ Baby Friendly Hotline: 2838-7727
- ✧ Department of Health - Breastfeeding Hotline: 3618-7450

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The above information is for reference only, please enquire your doctor for details  
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