

Peanut Ball: A Birthing Tool for Women in Labour

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Abstract

A peanut ball is a giant peanut shell shaped ball which can be used as a birthing tool by the women during labour as a non-pharmacological method for reducing pain and shortening labour duration, specially if received an epidural or analgesic. The placement of peanut ball between the legs of a woman can help increase the pelvic diameter and help in opening up the birth canal easily. Researches have proved its efficacy as the ball helps in progress of labour, shortening labour duration, decreasing PPH, improving feto-maternal circulation. The peanut ball can be used in different positions according to maternal choice. Choosing correct size of the ball depends on maternal height and body weight. Choosing wrong sized peanut balls can result in no benefits for the mothers. Nurses should monitor feto-maternal parameters and plot the partograph for noting the progress of labour. After each use, the balls should be disinfected and stored in bags for future use. Further researches should be conducted to prove its efficacy.

Keywords-Peanut ball, birthing tool non-pharmacological, epidural , analgesic, labour, PPH, feto-maternal, partograph

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I. Introduction

Giving birth to a baby is the most wonderful and memorable experience for a woman. She suffers a lot of pain during this process. As midwives, we have great responsibilities towards relieving the labour pain, shortening the labour stage and help the woman to give birth in comfortable position. Researches are being carried on usage of different types of birthing tools to make the birthing process a comfortable one. Birthing balls, CUB support, squat bars, birthing stools are different types of birthing tools---peanut ball is one of them.¹ It is a non-pharmacological measure to lessen the labour pain and labour duration used by the midwives.

What is a peanut ball?

A peanut ball is an oblong, peanut-shell shaped that dips in the center so that a woman can wrap her legs around peanut balls during the first and second stages of labour. It is latex-free and burst resistant. The middle circumference of the peanut ball is shorter than the both ends.²



Fig 1: A peanut ball

Benefits of a peanut ball

The simple placement of the peanut ball between a laboring woman's legs could increase pelvic diameter and allow more room for fetal descent.³ The natural curve of the ball encourages your body to relax and works to enhance dilation or fix infant positioning.⁴ Some studies have shown the use of a peanut ball reduces the caesarean rate in mothers who have an epidural.⁵

The benefits of a peanut ball are-

- It helps to open up the pelvis as it encourages movement of the woman
- Increase the progress of labour by dilatation of cervix
- Facilitates in descending of fetal head
- As the mother can change her positions with a peanut ball, it causes improved maternal-fetal circulation
- Shorten the labour duration
- Decreases risk of postpartum haemorrhage
- Less chances of instrumental deliveries(forceps & ventouse) and caesarean sections²
- Improved maternal satisfaction²
- Successful establishment of breast feeding after delivery by reducing mental and physical exhaustion of the mother.

Difference between a peanut ball and a birthing ball

- The peanut ball is shaped like a peanut shell, while a birthing ball is round shaped.
- A mother uses a peanut ball on bed while a birthing ball can be used on ground
- A peanut ball offers more relaxed posture during labour—when compared to standard birthing ball method.³

How to use a peanut ball for labouring women

A woman should receive an analgesic or an epidural before using a peanut ball so that she can remain pain -free and comfortable in the first stage of labour. A woman should change her position with a peanut ball every 30 to 45 minutes interval. The different positions that a woman in labour can use a peanut ball are-

1.**Side-lying position**- while lying in a side lying position (preferably left), the peanut ball is placed between the thighs and both legs are wrapped around it. It helps rotate a baby in a safer position.³



Fig 2: Peanut ball in side-lying position

2.**Taylor or semi-sitting position**- In a semi sitting position, the peanut ball is placed between the thighs, with the top leg rests over the peanut ball over the natural curve and the bottom leg is bent and rests under the ball.³



Fig3: Peanut ball in semi-sitting position

3. Leaning Forward Over the Peanut Ball-

Leaning over the peanut ball is usually used without an epidural but can be used with and epidural. The woman is placed on hands and knees lowering the bottom of the bed. She rests on the peanut ball for comfort making sure that the mother is hanging the baby so that it can turn to the optimal position especially if OP (occipito -posterior) or acynclitic. This provides some gravity advantage and aligns fetus with pelvic inlet and enlarges the pelvic inlet.⁶

Other positions are squatting, hands and knees, fire-hydrant position, tuck position, in which a peanut ball can be used.

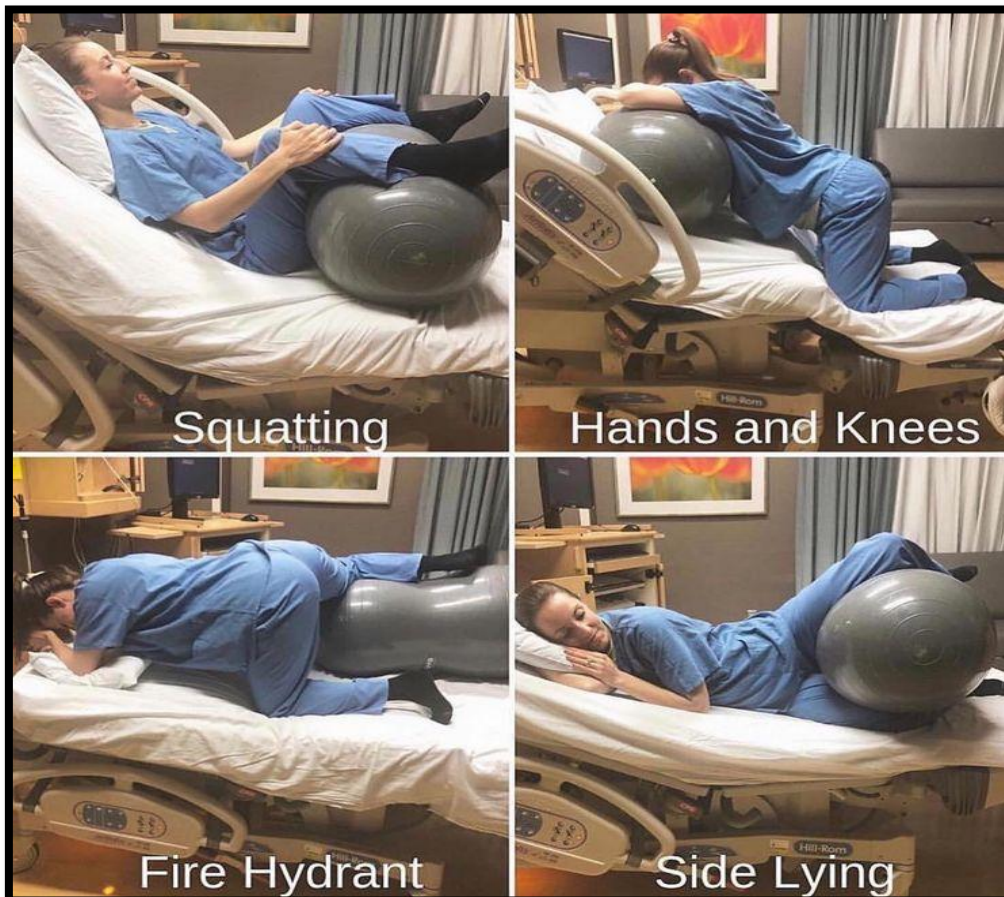


Fig4: Peanut ball in different positions

The **tucked side-lying position and hands & knees position** enables the mother for pushing during the second stage of labour.

4. During the tucked side-lying position, the mother's body is turned into side-lying position and the top of the bed is elevated to a 45-degree angle to help move the baby lower in the birth canal.

5. In **squatting position**, the knees are moved closer toward the chest for a deeper squat-like position.

6. In the **hands & knees position**, the mother rests her body on her hands & knees and the peanut ball is used more like a pillow for her upper body.⁵

7. In **fire-hydrant position**, the head is faced to the bed on your hands and knees, one bent leg is put up on the peanut ball. Switching sides after 20 to 30 minutes is advised to the mother.⁷

Who should not use a peanut ball

The peanut ball may not be used in the following situations-

- Women who will undergo caesarean section delivery due to some obstetrical emergencies
- Women having ankle or leg injury.
- Women having injury in hip, pubic bone or pelvis.⁸

Size of peanut ball-

Generally the size of the peanut ball to be used depends on the height and body built of the women-

- Women under 5-feet-3-inches: the 40 cm peanut ball is used.
- Women between 5-feet-3-inches and 5-feet-6-inches: the 50 cm peanut ball is used.
- If women are 5 feet-7-inches or taller and/or obese (if BMI greater than 35): the 60 cm peanut ball is used.
- 70 cm balls are used only to sit on and straddle.⁹

Effect of using wrong sized peanut ball

Wrong size Peanut Ball can cause a few problems:

- Using the incorrect size can cause hip problems – If the ball is too large, too much torque is placed in lateral aspect, with abduction of hip joint causing guarding, not relaxing. It's very important to not let the ankle hang. This could cause the outlet to close more and pull on the hip. Again shorter balls can prevent widening of the pelvis.¹⁰



Fig 5: Different sizes of a peanut ball



Fig 6: Measurement of peanut ball

How to clean peanut balls

Peanut balls, after using can be cleaned or wiped with mild disinfectant and store them in bags for future use. Direct sunlight should be avoided to prevent wrinkle.¹¹

Nurses' responsibilities while using peanut ball

A nurse should follow the following points while using a peanut ball-

- Select the peanut ball of appropriate size according to the height and body built of a woman
- Demonstrate the different positions to the women along with their merits
- Observe the women if they are using the peanut ball correctly and are changing their positions alternately every 30 to 45 minutes.
- Monitor the maternal & fetal parametres (vital signs, cervical dilation, uterine contraction, fetal heart rate) at regular interval and plot in partograph to note the progress of labour.
- Clean & disinfect the peanut balls and store them for future use.

Sharing a nurse's experience of using a peanut ball for labouring women

Carly Trythall, a nurse at the University of Utah Hospital in Salt Lake City, has worked with the peanut ball for labour in two different hospitals in her career as a nurse. She has mostly used the ball in the side lying position for helping to shorten labor. She said that most of her patients have been "accepting and eager" to try the ball and find it very comfortable. She finds that the ball is "most beneficial for moms who are not able to change positions frequently and utilize gravity (i.e.women with epidurals)."⁵

Research studies on peanut balls

A randomized, controlled study was conducted in 2015 by Tussey C.M., Botsios E. et al, to determine whether use of a "peanut ball" decreased length of labour and increased the rate of vaginal birth. Women who used the peanut ball ($n = 107$) versus those who did not ($n = 91$) demonstrated shorter first stage labor by 29 min ($p = .053$) and second stage labor by 11 min ($p < .001$). The intervention was associated with a significantly lower incidence of cesarean surgery ($OR = 0.41, p = .04$). They concluded that peanut ball is potentially a successful nursing intervention to help progress labor and support vaginal birth for women labouring under epidural analgesia.²

Hickey L, Savage J conducted a research study to assess the effect of peanut ball and position change in labouring women with epidural in 2019. A total of 343 participants were included, with 164 women in the Peanut Ball group. It was placed after epidural administration; women were repositioned a minimum of every 1 to 2 hours, and the Peanut ball was removed at second stage of labor and duration was recorded. They found out that , women in the PB group were 50% less likely to have cesarean birth. For women with cervical dilation of 4 cm or less, rates of vaginal birth were 61% with use of the peanut ball. They concluded that peanut balls can be effective in shortening labour stage and decreasing caesarean rates.¹²

II. Conclusion

Hospital authorities should procure adequate peanut balls to help the women in labour during birthing. The nurses and doctors should encourage more women to use peanut balls during labour as it is a wonderful non-pharmacological measure to lessen labour pain and duration. More research studies should be conducted to prove the efficacy of peanut balls.

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