



Cephalopelvic Disproportion (CPD)

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What Is CPD?

Cephalopelvic Disproportion (CPD) is the medical diagnosis used when an infant's head is declared too big to fit through the mother's pelvis. Often, this diagnosis is made after the woman has labored for some time, but other times, it is entered into a woman's medical record before she even labors. A misdiagnosis of CPD accounts for many of the unnecessary cesareans performed in North America and around the world annually. This diagnosis does not have to impact a woman's future birthing decisions. Many actions can be taken by the expectant mother to increase her chances of birthing vaginally.

Absolute vs. Relative CPD

Absolute CPD is very rare and may be diagnosed in the following circumstances:

- The mother sustained a severe pelvic injury.
- The mother suffered from malnutrition as a child (i.e. rickets).

Research tells us that the term "absolute," may be too strong. Many women who are told that they have "absolute CPD" go on to have vaginal births. Even women who have had damage to their pelvic structure from severe malnutrition or a pelvic injury can sometimes go on to birth vaginally. In one study, 68% of women diagnosed after labor with "absolute CPD" still went on to have a vaginal birth. However, in extremely rare cases, true absolute CPD does exist, usually in the context of severe malnutrition or a permanent injury.¹



Relative CPD (also known as FPD - Feto-Pelvic Disproportion) is the supposed inability of a baby to navigate through the mother's pelvis, perhaps due to one of the following reasons:

- Position of the baby's head - The baby may have his head straight or tilted back instead of flexed with chin to chest. The baby's head may also be asynclitic (tilted to the side).
- Nuchal arm or hand - The baby may have her hand(s) or arm(s) raised to her head.
- Posterior position - Baby is facing mother's front instead of back.
- Other malposition of the baby's head - The back of the baby's head may be facing sideways and has arrested in that position (transverse arrest). Occasionally, this happens as the baby tries to turn during labor into a more favorable position. Also brow or face presentations, where other parts of the baby's head present first instead of its crown, may cause the baby to not be able to descend.
- Misalignment of the pelvis - The mother's pelvis could be misaligned due to many factors (mild pelvic jarring due to falls, sports injuries, or car accidents). Many women report this to be generally well-treated with chiropractic care.
- Restriction of movement - Limitations on mother's mobility in labor are very common due to hospital policy, epidural anesthesia, and/or continuous fetal monitoring.
- Rupture of membranes - The breaking of the mother's waters, either naturally or artificially by her care provider, can cause the baby to drop into the pelvis in an unfavorable position. An arbitrary and artificial time limit being placed on labor may not allow the laboring woman's body enough time to birth.

Understanding the Mechanics of Birth

A woman's pelvis is flexible and is made to open during birth. When there is interference with the birth process (induction before baby is ready, mother's movement is restricted, etc.), the pelvis is not able to open to its maximum. The baby's head molds (changes shape) during labor and delivery in order to fit through the pelvis. Neither the pelvis nor the baby's head are fixed in one position; both expand and shift as labor progresses. A birthing woman's pelvis is most likely to expand freely and accommodate the baby when the following conditions are present:

The birth takes place when the baby is ready and when natural birth hormones are present. The laboring woman moves freely to her comfort level. Adequate time is allowed for the molding of the baby's head.



CPD Myths

Some care providers will tell women that the following factors may prevent their babies from fitting through their pelvises. Many of these statements lack valid research and some of them have been actively disproved. Many women have had vaginal births despite meeting one or more of these criteria.^{2 3 4}

- Your sacrum is prominent, protruding, or flat.
- You were previously diagnosed with CPD or Failure to Progress (FTP).
- Your baby is too large.
- You have a narrow pubic arch.
- Your pelvic dimensions are too small.
- You have an android/platypelloid pelvis.
- Your partner is tall.
- You are too short.
- Your shoe size is too small.
- You are petite.
- You and your partner are different races.
- You are obese and fatty tissue is padding your pelvis making it more difficult for your baby to fit through.

Many women who are diagnosed with CPD go on to birth larger babies vaginally. Click [here](#) to see ICAN's "Question CPD" video.

Pelvimetry



If you have been previously diagnosed with CPD, your care provider may suggest pelvimetry. Pelvimetry is the measurement of the pelvis via clinical manual exam, x-ray, CT scan, or MRI. Many studies have debunked pelvimetry as a reliable indicator of the ability to birth vaginally. In one study of women diagnosed with an "inadequate pelvis" after one previous cesarean section, 67% went on to VBAC.^{5 6 7 8 9 10}

Suggestions Which May Help Lower Your Risk for a CPD Diagnosis

- Some women report that chiropractic care throughout and between pregnancies is helpful in avoiding CPD. Look for a chiropractor who has experience working with childbearing women and utilizes in-utero constraint techniques.
- If you want to be mobile in labor, listen to your body. Don't remain strapped to the bed; insist on getting up and moving around.
- Learn labor positions that aid in opening your pelvis.¹¹ Consider reading & using *The Pink Kit*, a childbirth education tool useful for any woman planning a VBAC. It can help a woman find the best birth positions for her particular pelvic shape and size.
- Learn the position of your baby and how to encourage your baby to be in the optimal position. Read the material at [Spinning Babies website](#).
- Have a doula. Research shows that a birthing woman with continuous labor support is more likely to have a shorter labor and a spontaneous vaginal birth.¹²

How Likely Am I To Birth Vaginally After a Cesarean for CPD?

Studies report two-thirds of women will have a successful VBAC despite a previous diagnosis of CPD. One study showed an 80% VBAC success rate for women who had undergone a cesarean for arrest during the second stage of labor (CPD). In another study of women who had undergone *two* previous cesareans for CPD/FTP, 56% delivered vaginally.^{13 14 15 16 17}

Other CPD Resources: *



Sit up and Take Notice: Positioning Yourself for a Better Birth by Pauline Scott

Birthing the Easy Way - Learning the Hard Way by Sheila Stubbs

The Pink Kit by Common Knowledge Trust

[Spinning Babies Website](#)

* Your local ICAN chapter may have copies of these books & DVDs to loan you. [Click here](#) to find your closest ICAN chapter. They may also be available through the ICAN Bookstore.

References:

[1] Impey L, O'Herlihy C. First delivery after cesarean delivery for strictly defined cephalopelvic disproportion. *Obstet Gynecol* 1998 Nov;92(5):799-803.

[2] Mahmood TA, Campbell DM, Wilson AW. Maternal height, shoe size, and outcome of labour in white primagravidas: a prospective anthropometric study. *BMJ* 1988 Aug 20-27;297(6647):515-7.

[3] Walsh CA, Mahony RT, Foley ME, Daly L, O'Herlihy C. Recurrence of fetal macrosomia in non-diabetic pregnancies. *J Obstet Gynaecol* 2007 May;27(4):374-8.



[4] Wischnik A, Lehmann KJ, Ziegler M, Georgi M, Melchert F. Does the "fatty pelvis" exist? Quantitative computer tomography studies. *Z Geburtshilfe Perinatol* 1992 Nov-Dec;196(6):247-52

[5] Wong KS, Wong AY, Tse LH, Tang LC. Use of fetal-pelvic index in the prediction of vaginal birth following previous cesarean section. *J Obstet Gynaecol Res* 2003 Apr;29(2):104-8.

[6] Yamani TY, Rouzi AA. Value of computed tomography pelvimetry in patients with a previous cesarean section. *Ann Saudi Med* 1998 Jan-Feb;18(1):9-11.

[7] Ferguson JE 2nd, Newberry YG, DeAngelis GA, Finnerty JJ, Agarwal S, Turkheimer E. The fetal-pelvis index has minimal utility in predicting fetal-pelvic disproportion. *Am J Obstet Gynecol* 1998 Nov;179(5):1186-92.

[8] Krishnamurthy S, Fairlie F, Cameron AD, Walker JJ, Mackenzie JR. The role of postnatal x-ray pelvimetry after cesarean section in the management of subsequent delivery. *Br J Obstet Gynaecol* 1991 Jul;98(7):716-8.

[9] Abu-Ghazze YM, Barqawi R. An appraisal of computed tomography pelvimetry in patients with previous cesarean section. *East Mediterr Health J* 2000 Mar-May;6(2-3):260-4.

[10] Blackadar CS, Viera AJ. A retrospective review of performance and utility of routine clinical pelvimetry. *Fam Med* 2004 Jul-Aug;36(7):505-7.

[11] Michel SC, Rake A, Treiber K, Seifert B, Chaoui R, Huch R, Marcinek B, Kubik-Huch RA. MR Obstetric pelvimetry: effect of birthing position on pelvic bony dimensions. *AJR Am J Roentgenol* 2002 Oct;179(4):1063-7.

[12] Hodnett ED, Gates S, Hofmeyr GJ, Sakala C. Continuous support for women during childbirth. *Cochrane Database Syst Rev* 2007 Jul 18;(3):CD003766.

[13] Brill Y, Windram R. Vaginal birth after cesarean section: review of antenatal predictors of success. *J Obstet Gynaecol Can* 2003 Apr;25(4):275-86.

[14] Phelan JP, Ahn MO, Diaz F, Brar HS, Rodriguez MH. Twice a cesarean, always a cesarean? *Obstet Gynecol* 1989 Feb;73(2):161-5.



[15] Clark SL, Eglinton GS, Beall M, Phelan JP. Effect of indication for previous cesarean section on subsequent delivery outcome in patients undergoing a trial of labor. *J Reprod Med* 1984 Jan;29(1):22-5.

[16] Abu-Heija AT. Vaginal birth after one previous caesarean section: a Jordanian experience. *J Obstet Gynaecol* 1995 Feb;21(1):9-12.

[17] Jongen VH, Halwerk MG, Brouwer WK. Vaginal delivery after previous cesarean section for failure of second stage of labour. *Br J Obstet Gynaecol* 1998 Oct;105(10):1079-81.