

Into the Know - Informed Birthing & Assisted Vaginal Births

Information and Discussion Guide

About ThinkNatal™

THINKNATAL™ is a series of educational resources aimed at providing support and information on a variety of topics that are often excluded or underrepresented in existing antenatal education. This is in collaboration with parents and a range of clinicians involved in maternity care, such as midwives, obstetricians, pelvic health physiotherapists and mental health clinicians.

What is an Assisted Vaginal Birth?

An assisted vaginal birth is when your doctor uses a vacuum cup or forceps to help your baby be born. An assisted birth can help in getting your baby out quickly or increase your chance of having a vaginal birth.¹ In Australia, approximately 1 in 4 women (26%) who are birthing for the first time will have an assisted birth.² Overall, approximately 13% of all births in Australia are assisted births.³

Common reasons you may be offered an assisted birth include:

Concern for your baby:

If your treating team are worried that your baby may be harmed due to not getting enough oxygen if they are not delivered quickly.^{1,4,5} A change in your baby's heartbeat can be a sign your baby is not well.

Slow progress

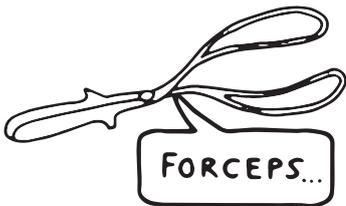
If you have been pushing for some time but are unable to push the baby out without help.^{1,4} This may be due to the position or size of your baby or if you are feeling too exhausted or weak to push.

Concern for you

If you have a medical condition which means you shouldn't push or that you should only push for a short time.^{1,4} This could be due to medical conditions such as high blood pressure or heart problems.¹

What instruments are used in assisted vaginal births?

The two main types of instruments (medical equipment) used to assist vaginal births are forceps and vacuum cups (ventouse).

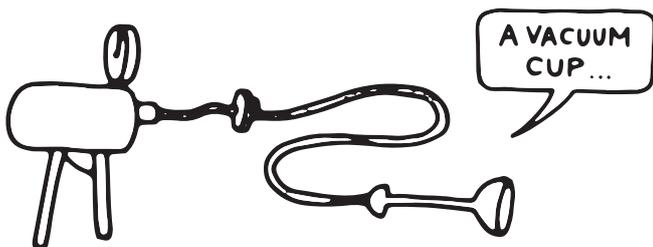


Forceps

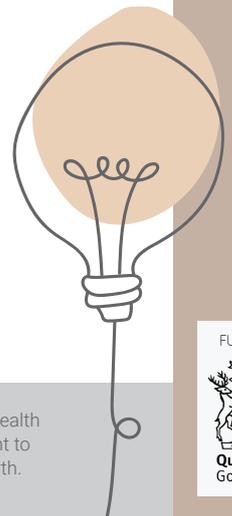
Forceps look like a pair of large salad tongs that are placed inside the vagina on either side of your baby's head.⁵ The two main types used in Australia are Neville Barnes forceps (most common) and Kielland's forceps (used to rotate your baby's head).^{1,4}

Vacuum Cup (Ventouse)

Vacuum cups are round devices which attach to your baby's head inside the vagina via suction.⁵ There are a range of vacuum cups used.¹



Once applied to your baby's head, the doctor will pull with the forceps or vacuum cup whilst you push during a contraction which assists your baby to come down the birth canal and be born.¹



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When is an assisted vaginal birth more likely?

Factors that increase the chance you may need an assisted birth include:

- You are having your first vaginal birth⁶
- Your baby weighs more than 4kg^{6,7}
- Your baby is positioned with their head looking to the side (transverse) or is lying with their back against yours (posterior)⁶
- An epidural is used for pain relief - less so if the epidural is patient controlled^{7,8}
- Your labour goes for a long time⁶
- You have a high body mass index (BMI)⁹
- You are older at the time of your birth^{6,7}

Medical decision making in assisted births

When considering whether a vacuum cup or forceps is a better choice for you, your doctor considers which is likely to be more successful given your individual circumstances and the risks of each instrument to you and your baby.^{1,4,10} Factors may include the reason for the assisted birth, the position of baby's head and whether swelling (caput) is already present, baby's size, how urgent delivery is, your ability to push and whether your baby is premature.

There are increased risks to you and your baby if your assisted birth is not successful.^{1,10} Your doctor will consider if the chosen instrument were to fail, what the safest next step would be for both you and your baby. If a vacuum assisted birth is not successful, the options are either forceps or a caesarean.¹⁰ If a forceps assisted birth is not successful, the next step is a caesarean.¹⁰

Your doctor will also consider where the safest location is for your assisted birth to occur (your birthing room or the operating theatre) based on the likelihood it will be successful and the time available to deliver if they are concerned for your baby's wellbeing.¹⁰

What are the risks associated with an assisted vaginal birth?

Overall, for babies the chance of problems happening is similar between vacuum and forceps. If forceps are used, following an unsuccessful vacuum attempt, the risks to baby can increase greater than with either of these instruments alone.¹⁰

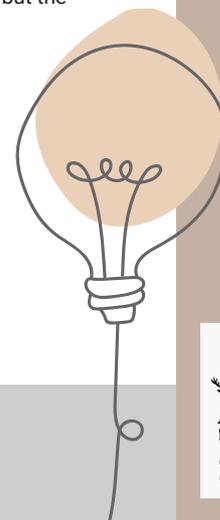
The most common risks to baby from assisted birth are minor and resolve on their own with time. These include:

- swelling on your baby's head (chignon) if a vacuum cup is used¹⁰
- marks on your baby's face from forceps¹⁰
- small cuts on your baby's face or scalp¹⁰
- bleeding under the scalp with swelling (cephalohaematoma), more likely with vacuum¹⁰
- retinal (eye) bleeding, more likely with vacuum¹⁰
- yellowing of baby's skin (jaundice)¹⁰

Other risks to your baby which are more uncommon, but more serious, include bleeding between the skull bone and skin (subgaleal haematoma) which is more likely with vacuum and bleeding in the brain (intracranial haemorrhage).¹⁰ Risks which are rare, but also serious, include skull fracture (broken bone), neck injury – linked with Kielland's rotational forceps and facial nerve injury – from forceps.¹⁰

Shoulder dystocia is also more common with an assisted birth and occurs when the baby's head is born, but the shoulders get stuck inside the vagina, and carries risks to both you and your baby.^{1,10}

Overall, for you the chance of problems happening is greater with forceps than for vacuum.¹⁰ However, this needs to be balanced with forceps having a greater chance of a successful birth than vacuum does.^{1,10}

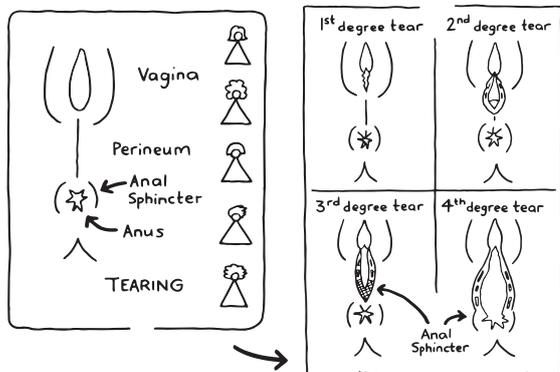


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The most common risks to you from assisted birth include:



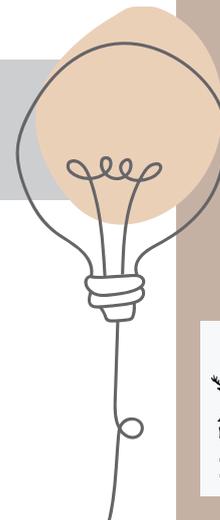
Refer to our ThinkNatal™ Perineal Tears and Pelvic Floor resources for more information

- 3rd and 4th degree perineal (tissue between the vagina and anus) tears.^{1,10} These tears extend into the anal (back passage) sphincter and are linked to faecal incontinence (accidental leakage of bowel contents). These tears are more common with forceps than vacuum.¹⁰ If forceps are used, following an unsuccessful vacuum attempt, the risk of these tears increases greater than with either of these instruments alone.¹⁰
- Need for an episiotomy (a cut made in the tissue between the vagina and anus to make the vagina opening bigger and create space for instruments).^{1,10} Episiotomies are used to minimise 3rd and 4th degree perineal tears.
- Pelvic floor (the muscles which attach to the pelvic bones and support the vagina, uterus, bladder and bowel) injury.^{1,10} Levator avulsion (tearing of the muscles off the bone) occurs in 1 in 3 forceps births.¹¹ These injuries are linked with prolapse (pelvic organ slipping) and urinary incontinence (accidental leakage of bladder bowel contents).^{12,13}
- Postpartum haemorrhage (more bleeding than normal after birth).¹⁰
- Urinary or bowel incontinence.¹⁰ May be due to pelvic floor injury, 3rd or 4th degree perineal tears or stretching of tissues during the assisted birth. More common with forceps than vacuum due to the additional width forceps adds to the baby's head whilst inside the vagina.¹⁰

Reducing the likelihood of an assisted birth

- It is not always possible to avoid needing an assisted birth. You can reduce your chances by:
- Having an upright (if no epidural) or side lying position during the pushing stage of labour^{10,14,15}
- Having a support person with you during your labour^{10,16}
- Avoiding the use of an epidural, unless you need it to manage your pain in labour^{8,10}
- If you are having your first baby and have an epidural, delaying pushing for one hour after you are fully dilated – if your and your baby's condition allows for this^{10,17}
- Induction (bringing the birth on) does not reduce the risk of needing an assisted birth, even for babies who have a higher birthweight.^{18,19}

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References: 1. RANZCOG. Instrumental vaginal birth. March 2020. Available from: [https://ranzcoog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Instrumental-vaginal-birth-\(C-Obs-16\)-Review-March-2020.pdf?ext=.pdf](https://ranzcoog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Instrumental-vaginal-birth-(C-Obs-16)-Review-March-2020.pdf?ext=.pdf). 2. Australian Institute of Health and Welfare. National Core Maternity Indicators. November 2021. Available from: <https://www.aihw.gov.au/reports/mothers-babies/ncomi-data-visualisations/contents/labour-and-birth-indicators/instrumental-vaginal-birth>. 3. Australian Institute of Health and Welfare. Australia's Mothers and Babies. December 2021. Available from: <https://www.aihw.gov.au/reports/mothers-babies/australias-mothers-babies/contents/labour-and-birth/method-of-birth>. 4. Verma GL, Spalding JJ, Wilkinson MD, Hofmeyr GJ, Vannevel V, O'Mahony F. Instruments for assisted vaginal birth. Cochrane Database Syst Rev. 2021;9:CD0005455. 5. RANZCOG. Assisted Birth. February 2021. Available from: https://ranzcoog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Patient%20Information/Assisted-birth.pdf?ext=.pdf. 6. Mazoumi C, Porcu G, Brettele F, Loundou A, Heckenroth H, Gamarro M. Risk factors for forceps delivery in nulliparous patients. Acta Obstetrica et Gynecologica Scandinavica. 2006;85:298-301. 7. Schuit E, Kwee A, Westerhuis ME, Van Dessel HJ, Graziosi GC, Van Lith JM, Nijhuis JG, Oei SG, Oosterbaan HP, Schuitmaker NW, Wouters MG, Visser GH, Mol BW, Moons KG, Groenewold RH. A clinical prediction model to assess the risk of operative delivery. BJOG. 2012;119(8):915-23. 8. Anim-Somiah M, Smyth RM, Cyna AM, Cuthbert A. Epidural versus non-epidural or no analgesia for pain management in labour. Cochrane Database Syst Rev. 2018;5:CD000331. 9. Ramos SZ, Waring ME, Leung K, Amir NS, Bannon AL, Moore Simas TA. Attempted and Successful Vacuum-Assisted Vaginal Delivery by Prepregnancy Body Mass Index. Obstet Gynecol. 2017;129(2):311-320. 10. Murphy DJ, Strachan BK, Bahl R, on behalf of the Royal College of Obstetricians Gynaecologists. Assisted Vaginal Birth. BJOG 2020;127:e70-e112. 11. Dietz H. Pelvic floor trauma in childbirth. Aust NZ J Obstet Gynaecol 2013;53:220-30. 12. Dietz HP. Pelvic floor muscle trauma. Expert Review of Obstetrics & Gynecology. 2010;5(4):479-492. 13. Memon H and Handa V. Vaginal childbirth and pelvic floor disorders. Womens Health (Lond Engl). 2013; 9(3):265-277. 14. Gupta JK, Sood A, Hofmeyr GJ, Vogel JP. Position in the second stage of labour for women without epidural anaesthesia. Cochrane Database Syst Rev. 2017;5:CD002006. 15. Epidural and Position Trial Collaborative Group. Upright versus lying down position in second stage of labour in nulliparous women with low dose epidural: BUMPES randomised controlled trial. BMJ. 2017;359:j4471. 16. Bohren MA, Hofmeyr GJ, Sakala C, Fukuzawa RK, Cuthbert A. Continuous support for women during childbirth. Cochrane Database Syst Rev. 2017;7:CD003766. 17. Brancato RM, Church S, Stone PW. A meta-analysis of passive descent versus immediate pushing in nulliparous women with epidural analgesia in the second stage of labor. J Obstet Gynecol Neonatal Nurs. 2008 Jan-Feb;37(1):4-12. 18. Middleton P, Shepherd E, Morris J, Crowther CA, Gomersall JC. Induction of labour at or beyond 37 weeks' gestation. Cochrane Database Syst Rev. 2020;7:CD004945. 19. Boulvain M, Itron O, Dowswell T, Thornton JG. Induction of labour at or near term for suspected fetal macrosomia. Cochrane Database Syst Rev. 2016;5:CD000938.

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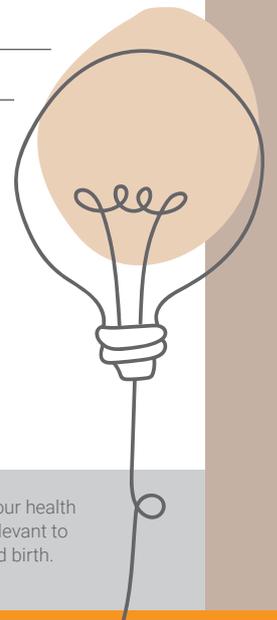
About this discussion guide

This discussion guide has been designed to help you talk to your health professional. You may want to print this out to take to your next appointment.

Every maternity unit and clinician has differences in their practices, so when preparing yourself for birth and presenting in labour, it is important to discuss:

- **in what situations would your health care team consider using a vacuum or forceps**
- **the risks for me and my baby of vacuum and forceps assisted delivery**
- **my individual risk** (see earlier section on common risks)
- **if I do have an assisted birth, does the hospital provide access to a pelvic health physiotherapist to help with my recovery**
- **if I don't want any instruments used at my birth, how I can ensure my voice is heard**
- **the pros and cons of different types of delivery with your health professional.**

My Questions / Notes



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