Natural Birth or Induction? Understanding the Differences in Birth Outcomes

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Childbirth is an emotionally and life-changing event, marking the transition into motherhood and initiating the bond between mother and baby. Over the years, medical interventions — particularly the induction of labor — have become increasingly common nationwide. Induction involves chemical or pharmacological methods, causing artificial uterine contractions before the natural laboring process takes over. Induction may be a lifesaving measure for some women; on the other hand, it is a natural part of the laboring process. Current evidence suggests that natural birth, compared to manual or chemical induction, may offer safer outcomes for mothers and infants, highlighting the importance of careful consideration of induction practice in maternal care.

"Natural birth is generally considered to be going through labor and delivery without medications and invasive medical techniques. In natural childbirth, the woman chooses to allow labor and delivery to proceed with very minimal medical intervention." (University of Colorado Medicine, 2024). At the onset of labor there is an increase in estrogen, oxytocin, and prostaglandins to soften and dilate the cervix and a decrease in progesterone, increasing the thinning and softening of the cervix. (Perry et al., 2023, pg. 327).

In contrast, induction of labor can occur pharmacologically, using drugs such as Pitocin, also known as Oxytocin, to increase contraction frequency, length, and strength, administered intravenously. Other medications include Cervidil, Prepidil, and Cytotec, all of which are administered vaginally to soften the cervix. Physical induction methods include a procedure, amniotomy, which involves artificially rupturing the amniotic sac with an amniohook. Dilators, such as a Foley balloon, are used to open the cervix and gradually increase natural prostaglandin levels. Additional methods include herbal preparations, certain foods, nipple stimulation, castor

oil, and sex. The intention of these tools and medications is to advance the mother's cervix to 10 centimeters (cm) dilation. A softened cervix at 10 cm dilation is the start of stage 2 of labor, beginning to push the baby through the vaginal canal.

Inductions are initiated when the health risks of the pregnancy outweigh the benefits, aiming to minimize risks to both mother and baby. Often, women with poorly controlled hypertension, diabetes mellitus, or preeclampsia are considered for induction. Fetal considerations include fetal growth restrictions, multifetal pregnancies, late-term pregnancies, or fetal demise. Women with a healthy pregnancy are eligible for elective induction at 39 weeks of gestation, with the expectation of minimal adverse effects on the fetus (Wheeler et al., 2022). Contraindications include shoulder presentation or transverse lie, placenta previa, previous cesarean delivery, or fetal distress. Relative contraindications encompass grand multiparity (five or more pregnancies after 20 weeks of gestation), cephalopelvic disproportion, breech presentation, or inability to monitor fetal heart rate (Perry, 2023, p. 432).

To assess whether a woman is favorable to induction, a rating system is performed by a provider. The Bishop score is a 13-point scoring card based on the criteria of station, dilation, effacement, cervical positioning, and consistency. A total score of 8 or more is similar to spontaneous or induced labor.

Over the past several years, there has been a notable increase in elective labor inductions performed in the absence of medical necessity. The numbers tripled over the last 30 years, from 9% to 31.37% from 1989 to 2020. (Simpson, 2022). Labor induction carries the risk of fetal distress due to excessive uterine activity (tachysystole) that can compromise uteroplacental perfusion. This reduction in blood flow may result in transient fetal hypoxia, often manifested as variable or late decelerations in the fetal heart rate pattern. The families that choose elective

inductions are frequently the families that want to rush the natural process of birth for convenience purposes. When using pharmacological measures to create uterine contractions when the body is not ready, there is a potential risk, such as a traumatic birth for both the mother and baby. When the body is not naturally prepared to deliver the baby, the neonate can become stuck in the birthing canal or change position, encouraging the medical staff to use instruments such as forceps or vacuum machinery to assist in the birth, which can cause trauma and other risks, specifically infection, pain, and unnecessary harm to the baby. According to Grobman (2024), there is a long-standing belief that women who are induced to start labor are at an increased risk for cesarean delivery and adverse reactions like infection or hemorrhage, equating to an estimated 500 milliliters of blood loss via vaginal birth.

According to the Cleveland Clinic (2024), benefits include enhanced bonding between mother and baby, increased self-esteem following childbirth, and a lower likelihood of cesarean delivery. The process of nonpharmacological induced labor begins at home, where the mother experiences the natural process of the body softening and dilating the cervix. Before contractions, many women use at-home remedies like raspberry leaf tea, pineapple, dates, castor oil, and sex to encourage contractions (Fischer, 2023). When a healthy mother and baby are ready, they will go to the proper medical facility, such as a hospital, birthing center, or at home with adequate medical staff. There will be several cervical exams throughout labor performed by a clinical provider to assess dilation, effacement, and the softness of the cervix. At this point, if the mother is not receiving an epidural, she can move around and use non-pharmacological pain management methods, such as physical touch, diffused breathing techniques, and a soothing environment. At any time before or during labor, the amniotic sac can rupture, expelling amniotic fluid. Rupture of membranes (ROM) starts a 24-hour timer, and the mother is now on a schedule,

as prolonged ROM increases the likelihood of infection.

Expectations of the induction labor may vary mother to mother. The first line medication to induce labor is Pitocin via IV using a complex algorithm to control the rate administered. The medication, Pitocin, can cause tachysystole, which can be dangerous if not monitored continuously. Tachysystole can result in late decelerations, which usually suggest uteroplacental insufficiency or a decreased oxygen supply to the baby captured on fetal monitoring. Each mother will progress differently based on her previous birth history, the shape of her pelvis, and other fetal factors. Once it is determined that Pitocin is not enough to expedite labor, then other options include Cervidil, a medicated vaginal insert to encourage softening of the cervix. Similar to Cervidil, Cytotec is a vaginal or buccal medication that also softens the cervix.

As reported by Runyon (2025), Nurses in the labor and delivery department have psychological effects after dealing with induced births that have turned traumatic. Nurses can develop second victim trauma; nurses and other clinicians experience trauma associated with the care they provided. Having such responsibility holds you accountable, and if anything were to happen to the mother or baby, the nurse on duty may struggle to cope with the outcome. Many nurses take home their emotions and start to experience hyperarousal symptoms, commonly, difficulty sleeping, and irritability, causing disturbances in their ability to perform effective and compassionate care. “35% of L&D (labor and delivery) nurses were found to have moderate to severe levels of secondary traumatic stress.” (Runyon et al., 2025). Nurses report negative emotions, feeling pressured to spend so much time tracking fetal heart rates, giving medications, and sticking to rigid rules that they cannot focus on supporting patients emotionally during labor and birth.

Labor induction can be clinically justified in certain high-risk situations, such as

preeclampsia, gestational diabetes, or fetal macrosomia, particularly when these conditions occur before 37 weeks of gestation. In contrast, many inductions conducted after 37 weeks are elective and are frequently scheduled for non-medical reasons, such as convenience or provider availability.

To summarize, Childbirth is the natural process designed to unfold on its own time, and honoring that process often leads to safer, more empowering experiences for mothers. Spontaneous labor uses naturally released hormones to prepare the body for birth. Induction leads to risk of infection for both mom and baby, increasing the likelihood of a cesarean delivery or fetal hypoxia. Using best practice, allowing natural descent of the baby through the cervix will decrease the use of cesarean delivery. Overall, as a healthcare team, we should evaluate the circumstances surrounding the pregnancy to determine if alternative laboring methods are necessary. Unless it is deemed that the risks are warranted, natural labor should be the course of action.

Resources

Cleveland Clinic. (2024, January 26). *Looking forward to a natural birth? try these techniques*. https://health.clevelandclinic.org/natural-birth

Fischer, A. M. (2025, June 3). *Natural methods of inducing Labor*. Nebraska Medicine Omaha, NE. https://www.nebraskamed.com/health/conditions-and-services/pregnancy-and-birth/natural-methods-of-inducing-labor

Grobman, W. A. (2024). The role of labor induction in modern obstetrics. *American Journal of Obstetrics and Gynecology*, *230*(3). https://doi.org/10.1016/j.ajog.2022.03.019

Natural Birth. University of Colorado Medicine. (n.d.). https://www.cumedicine.us/services/natural-birth#/

Perry, S. E., Lowdermilk, D. L., Cashion, K., Alden, K. R., Olshansky, E. F., & Hockenberry, M. J. (2023). *Maternal child nursing care*. Elsevier.

Runyon, M. C., Trout, K. K., Copel, L. C., & Moriarty, H. (2025). Labor and delivery nurse psychological trauma. *MCN: The American Journal of Maternal/Child Nursing*, *50*(5), 259–268. https://doi.org/10.1097/nmc.0000000000001118

Simpson, Kathleen Rice PhD, RNC, CNS-BC, FAAN. Trends in Labor Induction in the United States, 1989 to 2020. MCN, *The American Journal of Maternal/Child Nursing* 47(4):p 235, July/August 2022. | DOI: 10.1097/NMC.0000000000000824

Wheeler, V., Hoffman, A., & Bybel, M. (2020). *Cervical Ripening and Induction of Labor*. https://www.aafp.org/pubs/afp/issues/2022/0200/p177.html