



Q/ Do intercontraction intervals predict when a woman at term should seek evaluation of labor?

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EVIDENCE-BASED ANSWER

A/ NO; HOWEVER, A REDUCTION IN the intercontraction interval is associated with active labor (strength of recommendation [SOR]: **B**, cohort study).

Most primigravidas who have had regular contractions for 2 hours and multigravidas who have had regular contractions for 1 hour haven't transitioned into the active phase of labor (SOR: **B**, cohort study).

followed from presentation to delivery.¹ Cervical dilation was assessed by examination every 30 to 120 minutes, almost always performed by the same examiner throughout labor. In primigravidas, latent labor averaged 6.4 hours, with 95% of women completing the latent phase in 20.6 hours. In multigravidas, the mean duration of

latent labor was 4.8 hours, with 95% of women transitioning to active labor in 13.6 hours.

Shorter intercontraction interval linked to active labor

A recently published cohort study of women presenting to labor and delivery found that a relative decrease in the intercontraction interval was associated with a diagnosis of labor (odds ratio=1.42; 95% confidence interval, 1.06-1.90). The study failed to define either active labor or decrease in the intercontraction interval.³

Earlier admission leads to more interventions and poorer outcomes

Many studies have suggested that admitting women to the hospital during the latent phase of labor is associated with more interventions and poorer outcomes. Two large retrospective cohort studies (N=2697 and 3220) found increased rates of cesarean section in women admitted during the latent phase.^{4,5} They also reported increased use of oxytocin, epidural analgesia, intrauterine pressure catheters, and fetal scalp electrodes, and increased rates of chorioamnionitis, postpartum infection, and

Evidence summary

Multiple cohort studies demonstrate that the expected events of normal labor form a bell-shaped curve. The range of labor experiences makes predicting when a particular woman will enter active labor difficult.

When does latent labor become active labor?

The first stage of labor includes latent and active phases. The latent phase is defined as the period between onset of labor and cervical dilatation of 3 to 4 cm or the time between onset of regular contractions and escalation in the rate of cervical dilation. Regular contractions must be intense, last 60 seconds, and occur in a predictable pattern. Escalating cervical dilation is marked by a change in the cervical examination over a short period of time (usually 2 hours).¹

The World Health Organization defines active labor as cervical dilation between 4 and 9 cm, with dilation usually occurring at 1 cm per hour or faster and accompanied by the beginning of fetal descent.²

Latent labor was initially described in a large prospective cohort of 10,293 term gravidas (including 4175 nulliparas and 5599 multiparas)

Women admitted during the latent phase of labor had higher rates of cesareans and increased use of oxytocin, epidural analgesia, and other interventions.

TABLE

Consequences of hospital admission during latent vs active labor

Consequence	Nulliparous			Parous		
	Latent (%)	Active (%)	NNH	Latent (%)	Active (%)	NNH
Oxytocin ⁴	43	27	6*	20	9	9*
Epidural ⁴	82	61	5*	58	40	6*
Assisted vaginal delivery ⁴	27	25	50	8	6	50
Cesarean ⁴	10	4	17*	8	6	50
Cesarean ^{5†}	14	7	14*	3	1	50*
pH <7.1 ⁴	4	3	100	3	2	100
Apgar <7 ⁴	4	2	50	3	2	100

NNH, number needed to harm.

*Indicates relationship significant at the level <.05.

†Study by Bailit⁵ also showed significant associations for oxytocin, scalp pH, intrauterine pressure catheter, fetal scalp electrode, epidural, neonatal intubation, amnionitis, and postpartum infection. Raw data are unavailable for abstraction.

neonatal intubation.^{4,5} See the TABLE for a summary of the effects of latent-phase admission.

Labor assessment program reduced time in the labor ward

Labor assessment programs attempt to delay admission during early active labor. One randomized clinical trial (N=209) among low-risk women with reassuring maternal and fetal assessments in early labor divided the women into 2 groups when they presented for labor and delivery. One group received advice, encouragement, and support along with instructions to walk or return home and come back when labor became more active (defined as regular, painful contractions and dilation of at least 3 cm). The other group was admitted directly to the labor and delivery ward. The study found that early labor assessment decreased use of analgesics and oxytocin and reduced time spent in the labor ward.⁶

Recommendations

The American College of Obstetricians and Gynecologists (ACOG) acknowledges in patient education literature that distinguishing true from false labor is difficult. ACOG lists characteristics of each and recommend that a woman monitor the frequency of contractions for an hour and call the doctor's office or hospital if she thinks she's in labor.⁷

Similarly, a patient handout from the American College of Nurse-Midwives recommends calling the health care provider if contractions are ≤5 minutes apart for more than 1 hour, several contractions are so painful that the woman cannot walk or talk, or her water breaks.⁸

A standard textbook describes normal uterine contractions during active labor as occurring every 2 to 5 minutes, and as often as every 2 to 3 minutes.⁹

JFP

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