

induction is continued (61–63). In one study, 17% of pregnant women were still in the latent phase of labor after 12 hours, and 5% remained in the latent phase beyond 18 hours (62). In another study, of those pregnant people who were in the latent phase for longer than 12 hours and achieved the active phase of labor, approximately 40% gave birth vaginally (63). In a cohort of 10,677 nulliparous women undergoing induction of labor, 96.4% reached the active phase by 15 hours. More than 40% of people whose latent phase lasted 18 hours or more still had vaginal deliveries (64).

Therefore, if the maternal and fetal status remain reassuring, cesarean deliveries for failed induction of labor in the latent phase can be avoided by recommending that oxytocin be administered for at least 12–18 hours after membrane rupture before deeming the induction to be unsuccessful. Depending on clinical characteristics, patient preference, and discussion of the risks and benefits, the decision to continue past 18 hours may be individualized (64).

Epidural Analgesia

ACOG recommends that neuraxial anesthesia be offered for pain relief during any stage of labor. (STRONG RECOMMENDATION, MODERATE-QUALITY EVIDENCE)

Regional anesthesia is a highly effective mode of pain relief for individuals in labor. For pregnant women electing regional pain management in labor, a systematic review demonstrated that neither type of neuraxial analgesia (epidural vs combined spinal epidural) nor timing affected the risk of cesarean delivery (65).

Management of Dystocia in the First Stage of Labor

Various strategies to manage abnormal labor progression in the first stage have been investigated. In the 1960s, O'Driscoll et al (66) in Ireland proposed a comprehensive approach to labor management, now termed active management of labor, to decrease the duration of labor. This approach included standardized criteria for the diagnosis of labor, early rupture of membranes, administration of oxytocin for protracted labor, and one-to-one nursing. In the largest randomized trial (n=1,934) comparing active with routine labor management, Frigoletto et al concluded that active management was associated with a shorter duration of labor and lower incidence of maternal fever, with no difference in the cesarean delivery rate. A subsequent meta-analysis of four trials demonstrated that active management is not associated with a significant reduction in the incidence of cesarean delivery (67). Given the known risks of prolonged labor (27, 32), active management of labor is preferred over expectant management; this approach may

be tailored based on patient preference after discussion regarding the known risks.

Amniotomy

ACOG recommends amniotomy for patients undergoing augmentation or induction of labor to reduce the duration of labor. (STRONG RECOMMENDATION, HIGH-QUALITY EVIDENCE)

Multiple studies have investigated the use of amniotomy compared with no intervention, other interventions, or adjunctive to other interventions during spontaneous labor and induction of labor.

A 2020 systematic review published by the Agency for Healthcare Research and Quality (AHRQ) included five randomized controlled trials from 2007 to 2010 investigating amniotomy in pregnant women undergoing spontaneous labor compared with various control treatments (65). The specific control treatment was under the obstetrician's discretion, without intentional amniotomy in the absence of other indications such as fetal scalp electrode or intrauterine pressure catheter placement. The review determined that amniotomy in spontaneous labor decreased the total duration of time in labor for nulliparous individuals without increasing the risk for cesarean delivery, maternal infection, hemorrhage, or trauma to the pelvic floor. Neonatal outcomes were not routinely evaluated in all of the included trials, but no significant differences were noted. None of the randomized controlled trials demonstrated an increased risk of cord prolapse with amniotomy.

Early Compared With Late Amniotomy

Amniotomy has also been investigated in patients undergoing induction of labor. Multiple studies have shown shorter time intervals to delivery in those who had early amniotomy. A retrospective matched cohort study of 546 nulliparous women with singleton viable gestations undergoing cervical ripening with Foley balloon catheter compared *early amniotomy* (defined as artificial rupture of membranes less than 1 hour after Foley removal) with no artificial rupture of membranes in the first hour after cervical ripening and demonstrated higher odds of vaginal delivery within 24 hours and a shorter duration of labor induction with early amniotomy (68). A randomized controlled trial of 143 women admitted for induction were randomized to early amniotomy (concomitant with the beginning of oxytocin infusion) or late amniotomy (4 hours after the beginning of oxytocin) showed shorter labor time in nulliparous women (12 hours vs 15 hours), with no effect on the risk of cesarean delivery in nulliparous and multiparous women (69). A systematic review in 2020 of four trials from 2002 to 2017 that included 1,273 patients undergoing induction of labor after cervical ripening with either Foley catheter

