



Current Resources for Evidence-Based Practice, March/April 2016

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New Recommendations on Oral Intake in Labor

Most pregnant women in the United States are restricted in some degree from eating or drinking during labor (Declercq, Corry, Applebaum, & Herrlich, 2013). In a 1998 survey of 740 U.S. labor and delivery units, approximately 74% reported that they restricted oral intake to ice chips and/or clear liquid during latent and active phases of labor (Hawkins, Gibbs, Martin-Salvaj, Orleans, & Beaty, 1998). However, in research recently presented at the 2015 American Society for Anesthesiologists meeting, [Harty, Sproul, Bautista, Major, and Farrell \(2015\)](#) recommended wide-scale changes to practice guidelines on this matter.

Intrapartum providers typically restrict food and water from laboring women to reduce the risk of gastric aspiration during urgent or emergent general anesthesia (Jaynes & Scott, 2012). These restrictions emerged in 1946 after Dr. Curtis Mendelson audited 44,016 obstetric records and identified 66 clinical cases in which women experienced pulmonary aspiration, including two fatal cases (Mendelson, 1946). These findings prompted providers to shift the standard of care in hospital birth settings across the United States, and 'nothing by mouth' orders became the norm. Despite dramatic reductions in the use of general anesthesia during labor and the increase in specialized management of general anesthesia in labor by anesthesiologists, nothing by mouth orders for laboring women are commonplace today (Sharts-Hopko, 2010).

Glucose is the primary metabolic substrate used by the uterus. The physiologic work of labor, including uterine and skeletal muscle contractions, results in an increase of glucose utilization

(Maheux et al., 1996). The energy and caloric demands of a laboring woman are similar to those of a marathon runner (Sharts-Hopko, 2010). In the absence of proper nutrition, women use fat as an energy source, which results in a shift towards ketosis and increased acidity of maternal and fetal blood. Increased acidity in the woman's bloodstream decreases uterine contractions and can lead to longer labor and newborn acidemia (American Society of Anesthesiologists [ASA], 2015; Wray, Jie, Kendrick, & Quenby, 2007). Physiologic adaptations of pregnancy and labor and birth management practices delay gastric motility and theoretically increase aspiration risk (Blackburn, 2014). Women who fast have increased stomach acid secretion and lower gastric pH, which increases their risk for poor aspiration outcomes (Gyte & Richens, 2006). In the event of aspiration, a gastric pH of less than 2.5 is associated with lung injury, and solid food intake results in higher pH values (Ng & Smith, 2001).

In a 2013 Cochrane review of oral intake in labor, the authors found no benefits or harms associated with the practice of restricting access to food and liquids during labor for low-risk women (Singata, Tranmer, & Gyte, 2013). In the studies selected for this review, women's feelings of autonomy and cultural preferences were not considered. The authors of the review recommended that low-risk women should be given the autonomy to decide what to eat and drink during labor. They noted that nothing by mouth policies do not reflect even the majority population's cultural preferences, and restricting oral intake during labor is contrary to patient-centered care.

Current recommendations on oral intake during labor vary among professional organizations in the United States. The American College of Nurse-Midwives recommends that low-risk women determine their own oral intake during labor (American College of Nurse Midwives, 2008). The World Health Organization (1996)

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recommends that health care providers do not interfere with a woman's desire for oral intake in labor because energy demands are so great. The American College of Obstetricians and Gynecologists (2009) recommends that women with uncomplicated labor may drink modest amounts of clear liquids during labor if they wish but should not eat solid food.

In a recent literature review of 385 studies on hospital-based births, Harty et al. (2015) found only one case of aspiration associated with labor and birth between 2005 and 2013, and that case was highly complicated and thus considered a significant outlier. These researchers attributed these statistics to advances in anesthesia technology, including women's increased use of anesthesia administered via epidural or spinal block rather than through facemask.

Before these improvements, endotracheal tubes were more commonly used, which potentially increased the risk of aspiration (ASA, 2015). The most recent and updated ASA *Practice Guidelines for Obstetric Anesthesia* (ASA, 2016) still reflects the opinion that laboring women should avoid all solid food. Interestingly, in the updated recommendations released in February 2016, the ASA pointed to "insufficient published literature to address the safety of any particular fasting period for solids in obstetric patients" (ASA, 2016, p. 273). However, in a press release from late 2015, the ASA publicized the findings of Harty et al. (2015), who concluded that most healthy women might benefit from a light meal during labor (ASA, 2015). Women with higher risk, including those with preeclampsia, eclampsia, obesity, and using opioids for labor pain, are not included in this recommendation.

Many women's health care providers view birth as a normal, physiologic process, and rules that prevent women from eating in labor contribute to the misconception that pregnancy is a pathological process and not a family and woman-centered life event (American College of Nurse-Midwives, 2008). Women reported greater satisfaction with childbirth when they had control of what they ate and drank (Simpkin, 1986), and most women choose to consume less food and more liquids as labor progresses (Jaynes & Scott, 2012). From a risk management perspective, the potential for aspiration in a laboring woman is nearly nonexistent in the current medical environment, and eating and drinking restrictions during labor lead to a diminished sense of autonomy and cultural expression in laboring women. From a patient care

perspective, it is inappropriate to assume that every woman in labor will require the same plan of care. This is especially true regarding labor and birth, which vary in terms of time and path. Since insufficient evidence exists to support standardized nothing by mouth orders for low-risk women in labor and birth, we should support a new standardized model of care for women and engage our physician colleagues to do the same.

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