

An empty stomach is delayed during childbirth, but less so in women having epidural analgesia

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Physician anesthesiologists prefer that laboring women have an empty stomach because of the lower risk for aspiration (inhaling) of food in case general anesthesia for cesarean section becomes necessary. Regarding this issue, a study published Online First in *Anesthesiology*,

the official peer-reviewed journal of the American Society of Anesthesiologists (ASA), finds "stomach emptying" is substantially slower during labor—but somewhat faster in women who receive an epidural for pain control.

"These results suggest anesthesiologists should remain cautious about permitting [solid food](#) during labor, especially when epidural analgesia is not used," according to the report by Lionel Bouvet, M.D., Ph.D., and colleagues of Hospices Civils de Lyon, Lyon, France. The findings add new evidence for the ongoing debate as to whether it's safe for women to eat solid food during labor.

Researchers assessed stomach (gastric) emptying rates in four groups of women: 10 non-[pregnant women](#), 10 pregnant women at full term (around 39 weeks) but not in labor, 10 women in labor who did not receive an epidural, and 10 women in labor who received an epidural for labor pain. On an empty stomach, each woman ate a light meal of yogurt. They then had ultrasound scans to compare the rate of stomach emptying—how long it took for food to leave the women's stomachs—among the four groups.

As in previous studies, stomach emptying was substantially delayed for women in labor without epidural. The rate of stomach emptying from 15 to 90 minutes after eating was 52% in non-pregnant women and 45% in pregnant women at full term, compared to 31% for laboring women who received an epidural and 7% for women in labor who did not receive an epidural.

With epidural analgesia, stomach emptying occurred much faster during labor than during labor without epidural analgesia. After 90 minutes, the stomach was empty in 3 out of 10 laboring women who received an epidural, compared to 0 of 10 women in labor who had not received an epidural. By 2 hours, the stomach was empty in 6 of the women who

received an epidural, compared to just 1 woman without an epidural.

Although [clinical practice](#) varies, current guidelines of the ASA and Society for Obstetric Anesthesia and Perinatology (SOAP) state that "Solid foods should be avoided in laboring patients," reflecting a concern over the risk of aspiration in case anesthesia and surgery are needed. This new study is one of the first to systematically compare the extent of gastric emptying delay during late pregnancy and childbirth and with versus without epidural labor analgesia.

The results confirm a "statistically and clinically significant" longer time to an empty stomach among women in labor. However, stomach emptying is not further delayed—and in fact seems to occur faster—for those receiving epidural analgesia. Based on their findings, Dr. Bouvet and coauthors suggest that a light solid meal "could probably be allowed" for women in labor who are receiving epidural analgesia and considered low risk of [cesarean section](#) within at least the next 2 hours.

"The report by Dr. Bouvet and colleagues enables us to rethink our [current practice](#) of fasting during childbirth," comments Yandong Jiang, M.D., Ph.D., one of the editors of *Anesthesiology*. "It is desirable that women giving birth with an epidural do not have the additional stress of hunger, but instead be allowed to eat a light meal."

This contrasts with the ASA/SOAP recommendation that women in labor should consume only clear liquids to prevent aspiration, reminds Mark Zakowski, M.D., FASA, chair of ASA's Committee on Obstetric Anesthesia. "This study clearly shows that stomach emptying is quite a bit slower for [women](#) in labor, and that if they eat even a light meal of about 4 ounces of yogurt, many will still have food in their [stomach](#) a few hours later," Dr. Zakowski said. "Since the need for emergency cesarean may arise at any time, the current ASA/SOAP guideline of clear liquids only during [labor](#) seems justified."

More information: Lionel Bouvet et al, Pregnancy and Labor Epidural Effects on Gastric Emptying: A Prospective Comparative Study, *Anesthesiology* (2022). [DOI: 10.1097/ALN.0000000000004133](https://doi.org/10.1097/ALN.0000000000004133)

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