



Can I eat in labour?

We often hear that birthing mothers and people in the throes of labour have been advised NOT to eat by midwives in hospital. This is more common on the labour ward setting, during an induction of labour and if the medical team are prepping for a caesarean delivery, perhaps if 'they' feel the labour is 'not progressing'. This is dangerous language as creates fear and undermines the birthing persons confidence in their labour and clients have felt angry and frustrated by this understandably. I am frustrated writing this.

We want you to know you can always eat and drink in your labour if you want to!

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This is where the policy originally came from and some further information to arm you :

In the **1940s**, when several practices were quite common:

- Twilight Sleep, an intravenous injection of morphine and scopolamine, was used for patients giving birth in hospitals. This medication combination caused sedation and no memory of the birth afterwards.
- Most white patients were also given inhaled anesthetics (gas, also known as general anesthesia) to make them unconscious for the traditional episiotomy + forceps-assisted vaginal delivery of the baby. Back then, the gases of choice were ether or chloroform, and they were given in inexact (imprecise) amounts.

As you can imagine, anesthesia in the 1940s was more dangerous, and aspiration was more common than it is today.

In the 1940s, when aspiration was recognized as a major problem during birth, anesthesiologists were using very primitive tools to keep a person's airway open when under general anesthesia, and some doctors didn't use any airway tools at all.

(Aspiration is when a person vomits stomach contents into their mouth while under anesthesia. If the contents of the stomach are aspirated back down the airway—going down the “wrong tube”— then this can lead to infection and breathing problems, called aspiration pneumonitis. Due to the possible risk of aspiration, general surgery patients are often asked to fast for at least eight hours before scheduled procedures (however, as we will discuss later, some fasting policies for general surgery are being rejected due to new evidence)).

In 1946, Dr. Curtis Mendelson published the landmark study responsible for “Nothing by Mouth” policies. He described how giving general anesthesia during birth could lead to the inhalation of stomach contents, which in rare cases could lead to severe lung disease or death.

When Dr. Mendelson looked at 44,016 patients who gave birth from 1932 to 1945, he found that aspiration occurred in 66 of them (0.15% or 1 in 667). All the people who experienced aspiration had a mixture of gas, ether, and oxygen given to them through a mask during the delivery. It is not clear if any of them had airway protection. General anesthesia wasn't limited to Cesarean deliveries; it was also used to control the patient during vaginal births. More than half of the people in the study had a longer anesthesia time and greater anesthesia depth than usual. Most of the aspirations were from liquids, and only a few were from solids. There were two deaths in the study; both patients had general anesthesia without airway protection, aspirated solid food, and died of suffocation on the delivery table.

Mendelson concluded that aspirations are preventable and recommended using IV fluids instead of oral fluids. He also recommended switching to local anesthesia when possible, instead of general anesthesia. His advice caught on, and “Nothing by Mouth” became the norm in hospitals across the U.S. and even around the world. The NPO practice has persisted, becoming a part of hospital culture, even though the modern population is nothing like the people who gave birth back in Dr. Mendelson's time, who were exposed to general anesthesia all the time, and without airway protection.

Let's jump ahead to 1997, when researchers conducted the first large U.S. study to look at pregnancy-related deaths due to anesthesia between the years 1979 to 1990. General anesthesia was used in 41% of the sample in the earlier years, and 16% of the sample in the later years. **The risk of death because of aspiration during Cesarean was 1 death for every 1.4 million births (Hawkins et al. 1997).**

A follow-up study looked at anesthesia and pregnancy-related deaths in the U.S. between 1991 and 2002 (Hawkins et al. 2011). During this time, general anesthesia was used in approximately 14% of births. They found that anesthesia-related deaths fell 60% over time.

The authors calculated that there were 6.5 deaths per million uses of general anesthetics from the later years in the sample (1997-2002). The number of these deaths directly caused by aspiration was not studied because it was too difficult to distinguish them from the other deaths related to airway problems, such as intubation problems, inadequate ventilation, or respiratory failure (Personal correspondence, Hawkins, 2016).

Similarly, a study in Michigan between 1985 and 2003 reported eight anesthesia-related deaths among pregnant people. Five of the eight deaths involved general anesthesia; none of the participants in this study died from aspiration (Mhyre et al. 2007).

We have heard many doctors say that everyone going into labor is assumed to be at risk of aspiration (because it is not possible to predict who will end up needing a Cesarean surgery under general anesthesia), so everyone should be NPO during labor. **However, the studies above show that aspiration death is extremely rare during childbirth.** The few published deaths that we found were completely preventable—standard airway protection was not provided. Overall, a small percentage of Cesareans require general anesthesia today, and when they do, failed airway management is rare.

More recently, a 2-year national descriptive study from the U.K. examined aspiration during pregnancy and the immediate postpartum period between 2013 and 2015 (Knight et al. 2016).

They found nine confirmed cases of aspiration out of nearly 1.5 million pregnancies, giving an estimated rate of only 6 aspiration events per million pregnancies. Seven of the cases occurred with general anesthesia, representing 2.2 cases per every 10,000 uses of general anesthetics.

The authors write that aspiration in pregnancy and immediately postpartum in the U.K. is extremely rare: “Reassuringly, there does not appear to be a substantial number of cases associated with oral intake in labor following the change in policy [to no longer restrict oral intake among low-risk people in labor.]”

Ultimately, people have the human right to decide if they would like to eat or drink during labor, or not. Hospital policy is not binding on patients, including birthing people, and hospitals do not have the legal authority to prevent a laboring person from eating and drinking if they so choose.

The reviewers mentioned a few circumstances that can increase risk of aspiration – eclampsia, pre- eclampsia, having a body mass index (BMI) of 30 and above, and the use of intravenous (IV) opioids (such as morphine) to manage labor pain (which may further delay stomach emptying). They ended by saying that more research focusing on high-risk birth is needed, but people with these risk factors could possibly benefit from fasting during labor.

In an interview we did with the authors of this study, they said that the anesthesiology profession has made great progress since the 1940s. Even though Cesarean rates have risen as high as 32% of all U.S. deliveries, widely increased use of regional anesthesia during surgery, such as a spinal or an epidural, has resulted in far fewer anesthesia-related pregnancy deaths.

When a general anesthetic is used, doctors now use new strategies to reduce the volume of stomach contents, make stomach juices less acidic (by administering medications), and keep the person’s airway safe. These advances were not available back in Dr. Mendelson’s time (Personal communication, M. Bautista, 2015).

Recall that the large Hawkins et al. 1997 study (of around 45 million births) looked at birth and death certificates and found the risk of aspiration death during delivery to be 0.7 per million people. That estimate is from a sample in the 1980s, before general anesthetic use decreased from 41% of all Cesareans to less than 6% now (nearly all involving emergent situations) (D'Angelo et al. 2014), and before pregnancy-related deaths fell an additional 60% (Hawkins et al. 2011).

So, the risk of aspiration during surgery under general anesthesia is likely even lower today than in 1997, the last time we have exact numbers published about aspiration death in the U.S. population. As it says in a recent Anesthesiology editorial, “The actual incidence of the complication is so low, we cannot accurately describe it” (Palmer and Jiang, 2022).

The researchers who presented at the 2015 ASA meeting concluded that “Nothing by Mouth” is an outdated restriction that should not be applied to low-risk people giving birth today. Their findings were echoed in a 2016 opinion paper published by Sperling et al. in the American Journal of Obstetrics and Gynecology

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