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# Should We Eat or Drink in Labor?

## Labor & Birth Guidelines

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It may come as a shock to a lot of women that food and drink are discouraged or not allowed in the labor wards of the modern maternity hospital. While this does not make a lot of sense to many people, others are perfectly willing to accept this mandate.

Let's take a short tour of the history of the NPO (Latin for nil per os, nothing per mouth) orders.

In 1946 Dr. Curtis Mendelson hypothesized that the cause of pneumonia following general anesthesia was aspiration of the stomach contents, due to delayed gastric emptying in labor. He noted that food could be vomited 24-48 hours after being eaten. Dr. Mendelson experimented on rabbits to examine the effects of content in their lungs. Aspiration (taking the particles into your lungs) of undigested food could cause obstruction, but not aspiration pneumonia, and no deaths were due to aspiration of fluids with a neutral pH. The rabbits only died when they aspirated materials containing hydrochloric acid. He said by forbidding food and drink in labor you could reduce stomach volume, thereby decreasing the risk of maternal problems from acid aspiration while under general anesthesia. We also found that there were two factors that increased the risk of maternal problems:

- A volume of an aspirate of 25+ mm
- A pH of 2.5 higher (biggest problem)

However, in the 40's and 50's general anesthesia was used much more often for labor and delivery. For example, most forceps were done under general anesthesia. Gases were given with a face mask, often opaque, which hampered the anesthesiologist's view of the airway. Dr. Robert Parker, in 1950, largely blamed aspiration on poor anesthetic technique and poor quality of the practitioners.

Is there such a thing as an empty stomach in labor?

The answer is no, and the assumption is that any woman has a full stomach, regardless of when her last intake was. The emptying of your stomach is managed by two factors: The volume of stomach contents and the influence of chemical and physical properties.

We do know that the stomach empties the fastest when the volume is at its greatest, and depending on the actual contents (fats delay processing, etc.). Pain, nausea, stress and emotional disturbances, usually part of the labor process, all effect the emptying process. It is also known that stress increases the catecholamine levels (stress hormones) during labor and that this can prolong labor. Penny Simkin, a childbirth educator, has done studies where 27% of women reported that not being allowed to eat or drink was moderately to severely stressful for them.

So where do we go from here?

The risks of aspiration are only a problem when general anesthesia is used (3.5-13% of cesareans), and the technique has improved. Anesthesiologists now have more quality control.

So the two solutions that have been the most popular have been the IV and antacids before a cesarean surgery.

IV fluids are not always reasonable solution to hydration problems, as they have problems of their own: over load, closer monitoring of intake and output, hyperinsulinism in infants after 25 g of glucose, and the salt free solutions can result in serious hyponatraemia in mom and baby. And the antacids are usually given in the quantity of 30 mm, a volume known to increase the risks of aspiration pneumonia.

We also know that restricting food in labor can cause problems of its own. Besides the stress factors, restricting intake during labor can cause dehydration and ketosis.

Recent studies that have been conducted on oral hydration and food intake suggest that women who are allowed to eat and drink to comfort in labor have shorter labor (by an average of 90 minutes), less need for augmentation with [Pitocin](#)<sup>1</sup>, require fewer pain medications, and the babies had higher apgar scores than of those in the control group.

In another group of women studied all of the participants drank, and 85.5% of the ate during labor, usually earlier in labor. This did not appear to increase the frequency of nausea or vomiting. Allowing food and drink provides hydration, nutrition and increased comfort not to mention control for the laboring woman.

However, this is not to say that everyone should eat, nor should those allowed to eat be given complete freedom to choose what to eat. It is recommended that only women deemed low risk be allowed to eat and drink in labor. The diet that is suggested by some hospitals is as follows:

- tea
- fruit juice
- lightly cooked eggs
- crisp toast and butter
- plain biscuits
- clear broth
- cooked fruits

Ask your practitioner and birth place about their policies about food and drink during labor. If they do not reflect the current medical studies you may share the information with them and see if they will go along with your plan. Many hospitals and birth centers have special labor diets now and the women report being very satisfied with the outcomes.

In 2007, the [American Society of Anesthesiologists \(ASA\) released new guidelines](#)<sup>2</sup> for laboring women. They recommend that low risk women be allowed clear liquids (broth, gelatin, non-particulate drinks, etc.) in labor. Women having non-emergent cesareans can have moderate amounts of clear liquids up to two hours prior to surgery as well.

**Sources:**

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