WHO recommendation on oral fluid and food intake during labour for women at low risk

15 May 2014

Recommendation

For women at low risk, oral fluid and food intake during labour is recommended.

(Weak recommendation, very low-quality evidence)

Publication history

First published: May 2014

Updated: prioritized for updating in 2018

Assessed as up-to-date: May 2014

Remarks

- Given that restriction of oral fluid and food intake during labour has no beneficial effects on important clinical outcomes including use of labour augmentation, the GDG put its emphasis on respect for the wishes of the woman and therefore made a positive recommendation.

- The GDG noted that no cases of Mendelson’s syndrome (inhalation of food and drink from the stomach into the lungs during general anaesthesia – the most important safety concern limiting oral intake during labour) were reported in over 3000 women participating in the trials included in the systematic review.

Background

Difficult labour (or dystocia) is characterized by abnormally slow labour progress arising from inefficient uterine contractions, abnormal fetal presentation or position, inadequate bony pelvis or abnormalities of the pelvic soft tissues of the mother. (1, 2) Evidence suggests that up to one third of first-time mothers experience delay in the first stage of labour. (3)

Augmentation of labour is the process of stimulating the uterus to increase the frequency, duration and
intensity of contractions after the onset of spontaneous labour. It has commonly been used to treat delayed labour when uterine contractions are assessed to be insufficiently strong or inappropriately coordinated to dilate the cervix. Labour augmentation has traditionally been performed with the use of intravenous oxytocin infusion and/or artificial rupture of amniotic membranes (amniotomy). The procedure aims to shorten labour in order to prevent complications relating to undue prolongation, and to avert caesarean section. There is evidence that a significant proportion of women with uncomplicated pregnancies are subjected to routine augmentation of labour with oxytocin. (4)

While augmentation of labour may be beneficial in preventing prolonged labour, its inappropriate use may cause harm. Augmentation with synthetic oxytocin may result in uterine hyperstimulation, with adverse effects such as fetal asphyxia and uterine rupture, and thus increase the risk of a cascade of interventions during labour and delivery. (5)

Methods

The recommendation was developed using standardized operating procedures in accordance with the process described in the "WHO handbook for guideline development", guided by the GRADE approach.(6) Outcomes used for this recommendation were aligned with the prioritized outcomes from the WHO recommendations on augmentation of labour (2014).(7)

A Cochrane systematic review was conducted, on use of the partograph as a monitoring tool to identify when intervention becomes indicated during labour.(8) In the review, randomized controlled trials relevant to the key question were screened by review authors, and data on relevant outcomes and comparisons were extracted. Evidence profiles (in the form of GRADE tables) were prepared for comparisons of interest, including the assessment and judgments for each outcome, and the estimated risks.

WHO convened a Guideline Development Group (GDG) meeting on recommendations on augmentation of labour in September 2013, where this recommendation was developed. The GDG comprised of a group of independent experts, who used the evidence profiles to assess evidence on effects on the pre-specified outcomes. GDG members discussed the balance between desirable and undesirable effects, overall quality of supporting evidence, values and preferences of stakeholders, resource requirements, cost-effectiveness, acceptability, feasibility and equity, to formulate the recommendation. Remarks were added to clarify the recommendation, and aid implementation.

Further information on procedures for developing this recommendation are available here.

Recommendation question

For this recommendation, we aimed to answer the following question:

- In pregnant women in labour (P), does oral fluid and food intake during labour (I), compared to no intervention (C), improve maternal and perinatal outcomes (O)?

Evidence Summary

The evidence relating to oral fluid and food intake during labour was extracted from a Cochrane systematic review including five trials (> 3000 women).(8) The trials were conducted in the United Kingdom (three), the Netherlands (one) and Canada (one).
The trials examined different comparisons: complete restriction of food and drink (other than ice chips) versus freedom to eat and drink at will, water only versus specific food and drink, and water versus carbohydrate drinks (so-called sports drinks). All of the included trials involved women considered to be at low risk of potentially requiring general anaesthesia.

Any restriction of food and drink versus some food and fluid: maternal outcomes

- Three trials (476 women) reported the mean duration of labour associated with restriction of oral intake (other than ice chips). There was no significant difference between the comparison groups (RR –0.29 hrs, 95% CI –1.55 to 0.97) and the findings were inconsistent among the trials.

- All 5 trials (3103 women) reported rates of caesarean section. Again, there were inconsistencies between trials in the size and direction of effect, and overall there was no significant evidence to indicate that restricting food and drink had an effect on the number of women undergoing caesarean section (RR 0.89, 95% CI 0.63 to 1.25).

- There were no significant differences observed between groups in the use of other interventions in labour. The use of epidural analgesia was very similar in both groups (RR 0.98, 95% CI 0.91 to 1.05; 5 trials, 3103 women), as was the rate of labour augmentation (RR 1.02, 95% CI 0.95 to 1.09; 5 trials, 3103 women) and the number of operative vaginal births (RR 0.98, 95% CI 0.88 to 1.10; 5 trials, 3103 women). The use of narcotic pain relief was similar irrespective of restrictions in oral intake (RR 0.94, 95% CI 0.74 to 1.21; 3 trials, 349 women).

- There were no estimable data for the number of women developing Mendelson’s syndrome or for any regurgitation during general anaesthesia. Maternal ketonuria was reported in 1 trial (328 women); the rate was very similar in both randomized groups (RR 0.99, 95% CI 0.66 to 1.49). Vomiting during labour was also similar in the 2 groups although there was some inconsistency in results from the trials (RR 0.90, 95% CI 0.62 to 1.31; 3 trials, 2574 women). There was no significant difference between groups for rates of nausea (RR 0.80, 95% CI 0.54 to 1.18; 1 trial, 255 women).

Any restriction of food and drink versus some food and fluid: infant outcomes

- Very few infant outcomes were reported in this review.

- There was no significant difference for low Apgar score at five minutes between groups (RR 1.43, 95% CI 0.77 to 2.68; two trials).

- One trial reported infant admissions to NICU and the frequencies were very similar in both groups (RR 1.03, 95% CI 0.73 to 1.45).

Subgroup analysis

- One trial examined complete restriction of oral food and fluid (other than ice chips) versus freedom to eat and drink and reported similar outcomes for mothers and babies in both groups. There were no significant differences between groups for duration of labour, caesarean section, operative vaginal birth, use of epidural, labour augmentation, or adverse maternal outcomes such as nausea or ketonuria. There were no estimable data for Apgar score at five minutes.

- Similarly, two trials that examined water only versus specific food and drink showed no evidence of differences between the groups for any of the maternal or infant outcomes reported.

- Two trials looked at water versus carbohydrate drinks. Again there was no evidence of significant differences between groups for any of the outcomes reported.
Further information and considerations related to this recommendation can be found in the WHO guidelines, available at: [http://apps.who.int/iris/bitstream/handle/10665/112826/WHO_RHR_14.15_eng...](http://apps.who.int/iris/bitstream/handle/10665/112826/WHO_RHR_14.15_eng...)

**Implementation considerations**

- The successful introduction of this recommendation into national programmes and health-care services depends on well-planned and participatory consensus-driven processes of adaptation and implementation. The adaptation and implementation processes may include the development or revision of existing national guidelines or protocols based on this recommendation.
- The recommendation should be adapted into a locally appropriate document that can meet the specific needs of each country and health service. Any changes should be made in an explicit and transparent manner.
- A set of interventions should be established to ensure that an enabling environment is created for the use of the recommendations (including, for example, the availability of augmentation agents and monitoring capacity), and that the behaviour of the healthcare practitioner changes towards the use of this evidence-based practice.
- In this process, the role of local professional societies is important and an all-inclusive and participatory process should be encouraged.

**Research implications**

The GDG did not identify further research priorities on this topic.

**Related Links**


**Supporting systematic review:**


**References**


Citation


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