WHO recommendation on adoption of mobility and upright position during labour in women at low risk

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Recommendation

Encouraging the adoption of mobility and upright position during labour in women at low risk is recommended.

*(Strong 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

- Although the evidence does not suggest that mobility and upright position in labour reduce the use of oxytocin augmentation, the GDG placed its emphasis on the clinical benefits in term of reducing caesarean section.

- GDG noted that in many settings, traditional practices of enforcing bed rest for all women in labour are common, rather than allowing women’s choices to be informed by their knowledge of the benefits of mobility and upright position. The GDG put its emphasis on providing women with the choice of an intervention that is beneficial, cheap and easy to implement, and therefore made a strong recommendation for this intervention.

- This recommendation should inform and support women’s choices on what position to adopt during the first stage of labour.

- The GDG was informed of a large, ongoing trial in the United Kingdom, which is examining maternal position in women with epidural analgesia during labour.
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 adoption of mobility and upright position (I), compared to no intervention, (C), improve maternal and perinatal outcomes (O)?
Evidence Summary

Evidence relating to mobility and upright position compared with bed care for women in labour was extracted from a Cochrane systematic review of 25 trials (> 5000 women).(8) The review included both randomized and quasi-randomized controlled trials. Most of the women recruited into the trials were at full term with no pregnancy complications. About half of the included trials recruited only nulliparous women and a subgroup analysis by parity was performed. The trials examined two different comparisons: upright and ambulant care versus bed care for women with (seven trials) and without (18 trials) epidural analgesia at the point of randomization.

Trials were conducted in a range of high-, middle- and low-resource countries, including five in the USA, seven in the United Kingdom, two in France, and one trial each in Australia, Brazil, China, China, Hong Kong Special Administrative Region, Finland, Japan, India, Iran, Sweden, Thailand, and Tunisia.

A very broad range of interventions was considered in this review; upright and ambulant positions ranged from women sitting, kneeling, squatting and walking, through to taking up other positions either on or off the bed. Compliance was poor in some trials with women choosing to take up whatever position they were comfortable with.

Upright and ambulant positions for women without epidural: maternal outcomes

- The duration of the first stage of labour was on average 1.36 hours shorter in the upright and ambulant group (95% CI –2.22 to –0.51; 15 trials, 2503 women) compared to supine and recumbent position. There was inconsistency in the size and direction of effect and high statistical heterogeneity for this outcome. The overall result favoured the upright group in both nulliparous and multiparous women; however, fewer trials examined this outcome for multiparous women and the difference for this subgroup was not significant (nulliparous: MD –1.21 hrs, 95% CI –2.35 to –0.07; 12 trials, 1486 women; multiparous: MD –0.56 hrs, 95% CI –1.19 to 0.06; four trials, 662 women).
- There were no significant differences overall or in subgroups for the duration of the second stage of labour, but there was inconsistency in the size and direction of effect in different trials (overall MD –2.29 min, 95% CI –6.49 to 1.91; nine trials, 2077 women).
- Women in the upright and ambulant groups were less likely to undergo caesarean section (RR 0.71, 95% CI 0.54 to 0.94; 14 trials, 2682 women). But there were no significant differences between groups for spontaneous vaginal birth (overall RR 1.05, 95% CI 0.99 to 1.11) or operative vaginal birth (overall RR 0.91, 95% CI 0.73 to 1.14).
- There was a modest reduction in the number of women using epidural analgesia among women in the upright and ambulant groups (RR 0.81, 95% CI 0.66 to 0.99; nine trials, 2107 women).
- No significant difference was observed between groups in the frequency of labour augmentation (RR 0.89, 95% CI 0.76 to 1.05; eight trials, 1826 women).
- Only two trials (240 women) reported on PPH; there were few events and no significant differences between groups (RR 0.71, 95% CI 0.14 to 3.55).
- Other critical maternal outcomes were not reported.

Upright and ambulant positions for women without epidural: infant outcomes

- Few critical and important infant outcomes were reported. For most outcomes event rates were low and estimates imprecise. There were no significant differences between women that were upright and ambulant versus those lying in bed during labour for perinatal mortality (RR 0.50, 95% CI 0.05 to 5.37); fetal distress leading to immediate delivery (RR 0.69, 95% CI 0.35 to 1.33); Apgar score < 7 at five minutes (RR 3.27, 95% CI 0.34 to 31.05); need for intubation at birth (RR 0.77, 95% CI 0.19 to 3.10); or admission to NICU (RR 0.58, 95% CI 0.25 to 1.36).
Other critical or important infant outcomes were not reported.

**Upright and ambulant positions for women with epidural: maternal outcomes**

- For women with epidural analgesia, there was no significant difference between groups for mode of delivery either overall or in parity subgroups: caesarean section (overall RR 1.05, 95% CI 0.83 to 1.32); spontaneous vaginal birth (overall RR 0.96, 95% CI 0.89 to 1.05); operative vaginal birth (overall RR 1.06, 95% CI 0.9 to 1.25).
- The duration of the second stage of labour was reported in two trials and there was no evidence of any difference between groups (MD 2.35 min, 95% CI –15.22 to 19.91).
- The number of women requiring labour augmentation was high in both groups (more than half) and maternal position or mobility did not have a significant effect on this outcome (RR 0.98, 95% CI 0.90 to 1.07).
- Other critical maternal outcomes were not reported.

**Upright and ambulant positions for women with epidural: infant outcomes**

- Only one infant outcome was reported. Four trials reported the number of babies with low Apgar scores at five minutes, but only two trials had estimable data and there was no significant difference between groups (RR 1.04, 95% CI 0.21 to 5.05); event rates were very low in the other two trials.

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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