



**Cochrane**  
**Library**

Cochrane Database of Systematic Reviews

## Antenatal education for self-diagnosis of the onset of active labour at term (Review)

Lauzon L, Hodnett ED

Lauzon L, Hodnett ED.  
Antenatal education for self-diagnosis of the onset of active labour at term.  
*Cochrane Database of Systematic Reviews* 1998, Issue 4. Art. No.: CD000935.  
DOI: [10.1002/14651858.CD000935](https://doi.org/10.1002/14651858.CD000935).

[www.cochranelibrary.com](http://www.cochranelibrary.com)

## TABLE OF CONTENTS

ABSTRACT .....	1
PLAIN LANGUAGE SUMMARY .....	2
BACKGROUND .....	3
OBJECTIVES .....	3
METHODS .....	3
RESULTS .....	4
DISCUSSION .....	4
AUTHORS' CONCLUSIONS .....	4
ACKNOWLEDGEMENTS .....	4
REFERENCES .....	5
CHARACTERISTICS OF STUDIES .....	5
DATA AND ANALYSES .....	6
Analysis 1.1. Comparison 1 Labour diagnosis education versus standard care, Outcome 1 Visits to labour suite before active labour. ....	7
WHAT'S NEW .....	7
HISTORY .....	7
CONTRIBUTIONS OF AUTHORS .....	7
DECLARATIONS OF INTEREST .....	7
SOURCES OF SUPPORT .....	8
NOTES .....	8
INDEX TERMS .....	8

[Intervention Review]

# Antenatal education for self-diagnosis of the onset of active labour at term

Leeanne Lauzon<sup>1</sup>, Ellen D Hodnett<sup>2</sup>

<sup>1</sup>Family and Newborn Unit, IWK Health Centre, Halifax, Canada. <sup>2</sup>Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, Canada

**Contact:** Frances J Kellie, Cochrane Pregnancy and Childbirth Group, Department of Women's and Children's Health, The University of Liverpool, First Floor, Liverpool Women's NHS Foundation Trust, Crown Street, Liverpool, L8 7SS, UK. [f.kellie@liverpool.ac.uk](mailto:f.kellie@liverpool.ac.uk).

**Editorial group:** Cochrane Pregnancy and Childbirth Group.

**Publication status and date:** Edited (no change to conclusions), published in Issue 9, 2017.

**Citation:** Lauzon L, Hodnett ED. Antenatal education for self-diagnosis of the onset of active labour at term. *Cochrane Database of Systematic Reviews* 1998, Issue 4. Art. No.: CD000935. DOI: [10.1002/14651858.CD000935](https://doi.org/10.1002/14651858.CD000935).

Copyright © 2017 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

## ABSTRACT

### Background

A specific program designed to teach women to recognise active labour may be beneficial through potentially decreasing the incidence of early admission to hospital, increasing women's confidence, feelings of control and empowerment, and decreasing their anxiety.

### Objectives

The objective of this review was to assess the effects of teaching pregnant women specific criteria for self-diagnosis of active labour onset in term pregnancy.

### Search methods

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (October 2007). We updated this search on 30 November 2012 and added the results to the awaiting classification section of the review.

### Selection criteria

Randomised trials comparing a structured antenatal education intervention for the identification of symptoms for self-diagnosis of active labour with usual care.

### Data collection and analysis

Trial quality was assessed.

### Main results

One study involving 245 women was included. Method of randomisation was unclear and 15% of the sample was lost to follow up in this trial. A specific antenatal education program was associated with a reduction in the mean number of visits to the labour suite before the onset of labour (weighted mean difference -0.29, 95% confidence interval -0.47 to -0.11). It is unclear whether this resulted in fewer women being sent home because they were not in labour.

### Authors' conclusions

There is not enough evidence to evaluate the use of a specific set of criteria for self-diagnosis of active labour.

---

## PLAIN LANGUAGE SUMMARY

### **Antenatal education for self-diagnosis of the onset of active labour at term**

Not enough evidence to prove the benefit of a specific set of criteria to self-diagnose active labour.

Sometimes it is difficult to tell when active labour has begun. A false diagnosis can mean multiple visits to the hospital, frustration and discomfort for the mother, decreased confidence in caregivers and additional financial burdens. Antenatal education of women has been developed to increase their confidence and decrease their anxiety. Providing a specific set of criteria to women may be an effective way of helping them recognise the onset of active labour. The review of trials found there was not enough evidence to show whether specific criteria are more beneficial than general guidelines in helping women determine their stage of labour.

## BACKGROUND

Timely diagnosis of active or progressive labour is problematic for caregivers and expectant women. The erroneous diagnosis of active labour may lead to a subsequent diagnosis of labour dystocia, the treatments for which are associated with risks for a mother and her infant (Thornton 1994). Mothers' confidence in their caregivers may be undermined and perceptions of the birth experience negatively affected when an incorrect labour diagnosis is amended (Simkin 1996). There may be additional financial burdens placed on facilities resulting from repeated assessment of women's labour status over multiple visits. These potential costs to women, their infants, and to health care may be avoided if admission to hospital for labour care occurs when active labour is established (Crowther 1989).

Providing information for pregnant women and their families about labour diagnosis may be a means of enabling women to recognise active labour, and to cope with their contractions with confidence. Potential benefits include enhancing women's feelings of control and empowerment, while providing an opportunity for educators to correct inaccurate information. The number of erroneous labour diagnoses may possibly be reduced by enabling women to remain out of hospital until active labour is likely to have become established. A multitude of educational resources have been developed for pregnant women, the quality of which vary greatly. Commonly it is physicians, midwives or antenatal educators who provide information on the recognition of labour onset.

A specific program designed to teach women to recognise active labour may be beneficial through potentially decreasing the incidence of early admission to hospital, increasing women's confidence and feelings of control and empowerment, and decreasing their anxiety. The aim of this review is to determine the effects of teaching pregnant women a specific set of criteria for diagnosing the onset of active labour. Related reviews focus on the effectiveness of the application of strict criteria for labour diagnosis by caregivers (Lauzon 2001), and on the effectiveness of individual or group antenatal education for childbirth/parenthood (Gagnon 2007).

## OBJECTIVES

To assess the effectiveness of teaching pregnant women specific criteria for self-diagnosis of active labour onset in term pregnancy.

## METHODS

### Criteria for considering studies for this review

#### Types of studies

Randomised controlled trials which compared a structured antenatal education intervention for the identification of symptoms for self-diagnosis of active labour, with standard care in whatever way standard care was defined in the setting; violations of allocated management not sufficient to materially affect outcomes; missing data insufficient to materially affect the comparison.

#### Types of participants

All pregnant women.

#### Types of interventions

Any antenatal education programs specifically aimed at enhancing women's abilities to identify signs or symptoms leading to self-diagnosis of active labour.

#### Types of outcome measures

The main outcomes of interest were:

- caesarean section rate;
- labour augmentation rates;
- admissions to labour wards or visits to labour assessment units;
- use of oxytocics, analgesics, and other intrapartum interventions;
- intrapartum complications;
- mothers' evaluations of their birth experiences;
- rates of hospital discharge diagnoses of 'not in labour' or 'false labour';
- rates of out-of-hospital emergencies (e.g. unplanned out-of-hospital births);
- admission rates to special care baby unit/neonatal intensive care unit.

#### Search methods for identification of studies

##### Electronic searches

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register by contacting the Trials Search Co-ordinator (October 2007). We updated this search on 30 November 2012 and added the results to [Studies awaiting classification](#).

The Cochrane Pregnancy and Childbirth Group's Trials Register is maintained by the Trials Search Co-ordinator and contains trials identified from:

1. monthly searches of the Cochrane Central Register of Controlled Trials (CENTRAL);
2. weekly searches of MEDLINE;
3. weekly searches of EMBASE;
4. handsearches of 30 journals and the proceedings of major conferences;
5. weekly current awareness alerts for a further 44 journals plus monthly BioMed Central email alerts.

Details of the search strategies for CENTRAL, MEDLINE and EMBASE, the list of handsearched journals and conference proceedings, and the list of journals reviewed via the current awareness service can be found in the 'Specialized Register' section within the editorial information about the [Cochrane Pregnancy and Childbirth Group](#).

Trials identified through the searching activities described above are each assigned to a review topic (or topics). The Trials Search Co-ordinator searches the register for each review using the topic list rather than keywords.

We did not apply any language restrictions.

#### Data collection and analysis

The review authors independently selected and assessed the single trial resulting from the search. Names of authors, related

institutions, journals of publication, and study results were known by the review authors when inclusion criteria were applied.

Trials under consideration were evaluated for methodological quality and appropriateness for inclusion, regardless of results and conclusions, using standard Cochrane criteria. No identified trials were excluded from this review. Included trial data were processed as described in [Clarke 2000](#).

## RESULTS

### Description of studies

See table of 'Characteristics of included studies'.

The trial compared a structured antenatal education intervention for the identification of symptoms for self-diagnosis of active labour, with no specific education, in an urban community hospital in the United States. Study participants were predominantly low-income single African-American women.

### Risk of bias in included studies

In the single trial included in this review, the method of randomisation is unclear and 15% of the sample was lost to follow up.

### Effects of interventions

The study by Bonovich ([Bonovich 1990](#)) demonstrated that a specific antenatal education program was effective in reducing the mean number of visits to the labour suite before the onset of active labour (experimental group mean 0.29 (standard deviation (SD) 0.59), control group mean 0.58 (SD 0.72); weighted mean difference -0.29, 95% confidence interval -0.47 to -0.11). It is unclear, however, whether this intervention resulted in fewer women being sent home because they were not in labour.

## DISCUSSION

The method of randomisation is unclear in the single trial included in this review, and so results must be considered with some caution. Attempts to contact the principal investigator for the purposes of clarification thus far have been unsuccessful.

This type of outcome measurement reporting is of limited clinical value. There is no conclusive evidence of benefit for teaching women a specific antenatal education program for self-diagnosis of active labour at present. Additionally, there is limited generalisability of results as the women participating were primarily single, low-income, urban African-Americans, in one hospital-based clinic in the US.

## AUTHORS' CONCLUSIONS

### Implications for practice

No implications for practice are warranted in light of the small amount of available evidence.

### Implications for research

Most women receive some instruction or advice regarding the signs and symptoms of labour. Whether women would benefit from learning a specific set of criteria for self-diagnosis of active labour remains unclear. Understanding potential effects on outcomes such as patient satisfaction and empowerment may be enhanced through qualitative methods. Until these are better understood, it is questionable whether the potential risks and benefits of a structured educational program are of sufficient importance to warrant a large clinical trial.

## ACKNOWLEDGEMENTS

None.

## REFERENCES

### References to studies included in this review

#### Bonovich 1990 *{published data only}*

Bonovich L. Recognizing the onset of labour. *Journal of Obstetric, Gynecologic and Neonatal Nursing* 1990;**19**(2):141-5.

### References to studies awaiting assessment

#### Delaram 2009 *{published data only}*

Delaram M. The effects of consultation with mother in third trimester of pregnancy on pregnancy outcomes. Iranian Registry of Clinical Trials (<http://www.irct.ir/>) (accessed 6 December 2010) 2009.

#### Lumluk 2011 *{published data only}*

Lumluk T, Kovavisarach E. Effect of antenatal education for better self-correct diagnosis of true labor: a randomized control study. *Journal of the Medical Association of Thailand* 2011;**94**(7):772-4.

### Additional references

#### Clarke 2000

Clarke M, Oxman AD, editors. Cochrane Reviewers' Handbook 4.1 [updated June 2000]. In: Review Manager (RevMan) [Computer program]. Version 4.1. Oxford, England: The Cochrane Collaboration, 2000.

#### Crowther 1989

Crowther C, Enkin MW, Keirse MJNC, Brown I. Monitoring the progress of labour. In: Chalmers I, Enkin MW, Keirse MJNC

editor(s). *Effective care in pregnancy and childbirth*. Vol. 2, Oxford: Oxford University Press, 1989.

#### Gagnon 2007

Gagnon AJ, Sandall J. Individual or group antenatal education for childbirth or parenthood, or both. *Cochrane Database of Systematic Reviews* 2007, Issue 3. [DOI: [10.1002/14651858.CD002869.pub2](https://doi.org/10.1002/14651858.CD002869.pub2)]

#### Kobayashi 2017

Kobayashi S, Hanada N, Matsuzaki M, Takehara K, Ota E, Sasaki H, Nagata C, Mori R. Assessment and support during early labour for improving birth outcomes. *Cochrane Database of Systematic Reviews* 2017, Issue 4. [DOI: [10.1002/14651858.CD011516.pub2](https://doi.org/10.1002/14651858.CD011516.pub2)]

#### Lauzon 2001

Lauzon L, Hodnett E. Labour assessment programs to delay admission to labour wards. *Cochrane Database of Systematic Reviews* 2001, Issue 3. [DOI: [10.1002/14651858.CD000936](https://doi.org/10.1002/14651858.CD000936)]

#### Simkin 1996

Simkin P. The experience of maternity in a woman's life. *Journal of Obstetric, Gynecologic and Neonatal Nursing* 1996;**25**(3):247-52.

#### Thornton 1994

Thornton JG, Lilford RJ. Active management of labour: current knowledge and research issues. *BMJ* 1994;**309**:366-9.

## CHARACTERISTICS OF STUDIES

### Characteristics of included studies *[ordered by study ID]*

#### Bonovich 1990

Methods	Method of randomisation is unclear: 'study numbers were sequentially assigned and used to randomise subjects to the experimental or control group'.
Participants	245 nulliparous women > 16 years of age at 30+ weeks' gestation who were able to communicate effectively in English, at a single US hospital-based outpatient obstetrical clinic. 37 (15%) were lost to follow up, due to incomplete hospital records or admission to hospital for complications before the onset of normal full-term labour.
Interventions	When participants had reached 37 weeks' gestation, interviews were conducted with the investigator to determine knowledge gained from family and friends regarding labour onset. Correct information was positively reinforced. Specific teaching re: palpation of uterine fundus, differentiation between Braxton-Hicks and active labour contractions, timing of contractions, recognition of amniotic fluid, and pain perception. Teaching was reinforced at subsequent weekly antenatal visits.
Outcomes	Mean number of visits to labour suite before onset of active labour (i.e. discharged undelivered).
Notes	

#### **Risk of bias**

### Antenatal education for self-diagnosis of the onset of active labour at term (Review)

Copyright © 2017 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

**Bonovich 1990** (Continued)

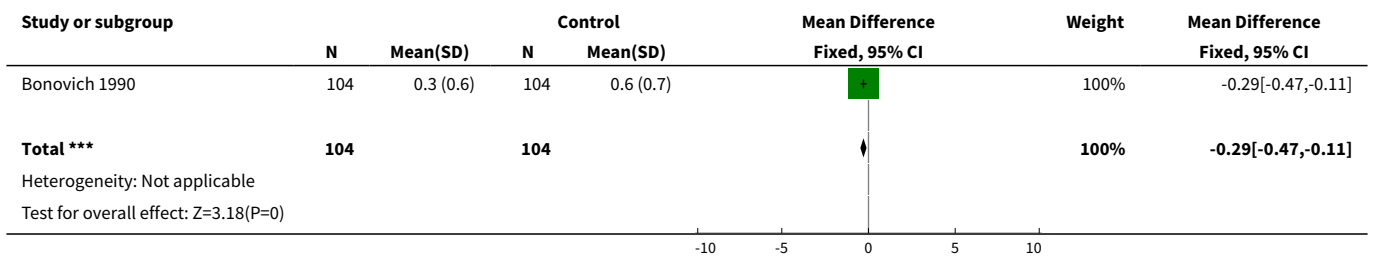
Bias	Authors' judgement	Support for judgement
Allocation concealment (selection bias)	Unclear risk	B - Unclear

**DATA AND ANALYSES**
**Comparison 1. Labour diagnosis education versus standard care**

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Visits to labour suite before active labour	1	208	Mean Difference (IV, Fixed, 95% CI)	-0.29 [-0.47, -0.11]
2 Out-of-hospital emergencies	0	0	Peto Odds Ratio (Peto, Fixed, 95% CI)	0.0 [0.0, 0.0]
3 Artificial rupture of membranes	0	0	Peto Odds Ratio (Peto, Fixed, 95% CI)	0.0 [0.0, 0.0]
4 Intrapartum analgesia	0	0	Peto Odds Ratio (Peto, Fixed, 95% CI)	0.0 [0.0, 0.0]
5 Intrapartum oxytocics	0	0	Peto Odds Ratio (Peto, Fixed, 95% CI)	0.0 [0.0, 0.0]
6 Forceps/vacuum extraction	0	0	Peto Odds Ratio (Peto, Fixed, 95% CI)	0.0 [0.0, 0.0]
7 Caesarean section rates (overall)	0	0	Peto Odds Ratio (Peto, Fixed, 95% CI)	0.0 [0.0, 0.0]
8 Caesarean section rates for labour dystocia	0	0	Peto Odds Ratio (Peto, Fixed, 95% CI)	0.0 [0.0, 0.0]
9 Satisfaction with care	0	0	Mean Difference (IV, Fixed, 95% CI)	0.0 [0.0, 0.0]
10 Admission to neonatal intensive care	0	0	Peto Odds Ratio (Peto, Fixed, 95% CI)	0.0 [0.0, 0.0]
11 Admission to labour ward on first visit	0	0	Peto Odds Ratio (Peto, Fixed, 95% CI)	0.0 [0.0, 0.0]
12 Empowerment	0	0	Mean Difference (IV, Fixed, 95% CI)	0.0 [0.0, 0.0]



**Analysis 1.1. Comparison 1 Labour diagnosis education versus standard care, Outcome 1 Visits to labour suite before active labour.**



**WHAT'S NEW**

Date	Event	Description
12 September 2017	Amended	Added <a href="#">Published notes</a> to explain that this review will no longer be updated by the review team.

**HISTORY**

Protocol first published: Issue 1, 1998  
Review first published: Issue 4, 1998

Date	Event	Description
6 December 2012	Amended	Search updated. Two new reports added to <a href="#">Studies awaiting classification</a> .
12 November 2008	Amended	Added published note about the next update of this review - see <a href="#">Published notes</a> .
11 February 2008	Amended	Converted to new review format.
23 October 2007	New search has been performed	Search updated. No new trials identified.
31 January 2004	New search has been performed	Search updated. No new trials identified.
1 July 1998	New citation required and conclusions have changed	Substantive amendment

**CONTRIBUTIONS OF AUTHORS**

The first draft of the protocol and then the review and its updates were written by Leeanne Lauzon. The drafts were commented on by Ellen Hodnett. The studies were checked for inclusion independently by both review authors. The data were abstracted by Leeanne Lauzon and then checked by Ellen Hodnett. Final drafts were prepared by Leeanne Lauzon and checked by Ellen Hodnett.

**DECLARATIONS OF INTEREST**

None known.

---

## SOURCES OF SUPPORT

### Internal sources

- University of Toronto, Canada.

### External sources

- No sources of support supplied

## NOTES

This review will no longer be updated by the review team. A new review team have prepared a new Cochrane Review ([Kobayashi 2017](#)) that combines the review by [Lauzon 2001](#) with this review, to include all interventions for labour assessment and care to delay hospital admission.

## INDEX TERMS

### Medical Subject Headings (MeSH)

\*Labor Onset; \*Patient Education as Topic; Prenatal Care

### MeSH check words

Female; Humans; Pregnancy