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Non-pharmacological interventions for fear of childbirth (tocophobia) in pregnancy

Authors: O'Connell MA, Khashan AS, Leahy-Warren P, Stewart F, O'Neill SM

Key messages

While non-medicine treatments may reduce levels of fear for pregnant women with a high to severe fear of childbirth compared to standard maternity care, the reduction may not represent a meaningful change in their level of fear.Non-medicine treatments probably reduce the number of women who have a caesarean section, where the baby is born surgically. Future research in this area should focus on measuring anxiety levels in women with a high or severe fear of childbirth.

What is fear of childbirth?

Fear of childbirth can range from minor worries and anxieties about giving birth, to a severe fear of childbirth that has a considerable impact on women's lives, causing distress and affecting their mental well-being. A high to severe level of childbirth fear may include extreme levels of fear also known as ‘tocophobia’.

It is normal for pregnant women – particularly first-time mothers – to be anxious, worried or fearful about giving birth. However, some women have high fear related to childbirth and a smaller number have a severe fear of childbirth or ‘tocophobia’. These women:

- may have feelings of isolation, guilt and shame;may choose to terminate a healthy pregnancy, hide a pregnancy or be in denial about a pregnancy;

Funding statement Funding statement Funding statement Funding statement Funding statement

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- may find it difficult to prepare for birth or access pregnancy information because of their fear and may experience problems bonding with their baby;
- may have sleeplessness, nightmares, stomach aches, depression and anxiety that leads to panic attacks.

Women with a high to severe fear of childbirth are more likely to have a planned or emergency caesarean birth, instrumental birth and experience physical effects related to fear, such as prolonged labour. Women with high fear of childbirth without a history of depression are more likely to experience postnatal depression.

How is fear of childbirth treated?

The causes of fear of childbirth are complex and unique for each woman. High to severe fear of childbirth is not recognised or provided for in maternity care in many places in the world. Ways of treating fear of childbirth need to be investigated.

Effective treatments would help women to have confidence in their ability to give birth, give them ways of coping with labour, and empower their decision-making during pregnancy and the birth process.

Treatments aim to provide extra support to women and include:

- sensitive education about the birth process;development of problem-solving skills;
- teaching coping strategies for labour;
- and affirming that negative childbirth events can be managed.

What did we want to find out?

We wanted to find out if non-pharmacological (non-medicine) treatments were better than the standard maternity care provided to pregnant women in terms of:

- reducing women's level of fear, as measured by a widely-used questionnaire for childbirth fear;
- reducing the number of women having a caesarean birthsection;
- reducing anxiety and depression.

What did we do?

We searched for studies that investigated non-pharmacological treatments aimed at reducing fear of childbirth. We compared and summarised the results of the studies and rated our confidence in the evidence, based on factors such as study methods and number of participants.

What did we find?

We found seven studies that involved 1357 pregnant women with a high to severe fear of childbirth including tocophobia. The studies investigated different types of treatment, including:

- psychoeducation (a structured form of education offered to people with mental health conditions);
- cognitive behavioural therapy (a 'talking therapy' that aims to help identify and change underlying thought patterns);

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- group discussion;peer teaching from other pregnant women;
- and art therapy.

The studies were conducted in five different countries (Australia, Iran, Sweden, Finland and Turkey).

We found that non-pharmacological treatments:

- may reduce fear of childbirth when measured by a widely-used questionnaire, though the reduction may not represent a meaningful change in women's level of fear.
- probably reduce the number of women who go on to have caesarean births (28% of women receiving non-drug treatments had caesarean sections, compared to 40% of women not receiving treatment for fear of childbirth).
- may make little to no difference compared to standard maternity care in terms of women's depression scores.

What are the limitations of the evidence?

Our confidence in the evidence is limited because the studies were done in such a way that their results may be inaccurate, and because there were low numbers of women in the studies.

How up to date is this evidence?

The evidence in this review is up to date to July 2020.

Effect of drugs to treat intestinal worms from contaminated soil in pregnant women

Authors: Salam RA, Das JK, Bhutta ZA

What is the issue?

Parasitic worm infections from contaminated soil include hookworm, roundworm, and whipworm. These intestinal worms (helminths) feed on blood and can contribute to iron-deficiency anaemia in women of reproductive age. Parasitic worms also release substances that stop blood from clotting, so cause further bleeding. Affected women often experience anorexia, vomiting and diarrhoea, which reduces the supply of essential nutrients for producing blood cells. As a result, the health of pregnant women and their unborn babies can be affected.

Antihelminthics are drugs that force parasitic worms out of the body, either by stunning or killing them, without causing damage to the host. Antihelminthics are highly effective against these worms, but evidence of their beneficial effect and safety when given during pregnancy is limited.

Why is this important?

Women in low- and middle-income countries (LMICs) are especially likely to have worms that can lead to anaemia, since they may be pregnant or lactating for as much as half of their reproductive lives. Women who

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are anaemic during pregnancy are more likely to have ill health, give birth prematurely, and have low birthweight (LBW) babies with low iron reserves. A lack of iron can reduce the babies' mental abilities and development as well as their physical growth.

What evidence did we find?

We searched for evidence in March 2021 and identified six randomised controlled studies (in 24 reports) that included 7873 pregnant women. All of the included studies were conducted in antenatal clinics within hospitals in LMICs (Uganda, Nigeria, Peru, India, Sierra Leone and Tanzania). All except one of the included trials gave iron supplementation to the women participating in the studies, as well as the antihelminthic drugs.

Evidence from five trials (5745 women) suggests that deworming using a single dose of antihelminthics in the second trimester of pregnancy may reduce maternal anaemia (low-certainty evidence). We are uncertain about the effects on preterm birth (1042 women in 1 study) or perinatal mortality (3356 women in 3 studies), with low-certainty evidence for both outcomes. Antihelminthics probably make little or no difference to LBW babies (3301 women in 4 studies) or birthweight (3301 women in 4 studies), with moderate-certainty evidence for both outcomes. The number of women with worms was reduced (2488 women in 2 studies; low-certainty evidence).

What does this mean?

Antihelminthic drugs given during the second trimester of pregnancy may reduce maternal anaemia and the number of women with worms, but with no impact on other maternal or pregnancy outcomes. Further research is needed among particular groups of women and on the effectiveness of additional interventions with antihelminthics, including health education.

Low-dose misoprostol given by mouth for induction of labour

Authors: Kerr RS, Kumar N, Williams MJ, Cuthbert A, Aflaifel N, Haas DM, Weeks AD

We looked at the evidence from randomised controlled trials to see if low-dose misoprostol given by mouth is effective in starting labour in women in their third trimester with a live baby. We compared misoprostol with other commonly used methods of inducing labour.

What is the issue?

Artificially starting labour, or induction, is common in pregnancy. Reasons include the mother having high blood pressure in pregnancy or the baby being past the due date. Misoprostol is a type of prostaglandin that can be taken in low doses by mouth to induce labour. Prostaglandins are hormone-like compounds that are made by the body for various functions (including the natural onset of labour). Unlike other prostaglandins

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such as vaginal dinoprostone, misoprostol does not need to be stored in the refrigerator. Taking a tablet is convenient to mothers and the low-dose tablet sizes are now available (25 µg).

Why is this important?

A good induction method achieves a safe birth for mother and baby. It is effective, results in a relatively low number of caesarean sections, has few side effects, and is highly acceptable to mothers. Some methods of inducing labour may cause more caesarean sections by being ineffective at bringing on labour, other methods may lead to more caesareans as they cause too many contractions (hyperstimulation) that result in the baby becoming distressed (foetal heart rate changes).

What evidence did we find?

We searched for evidence on 14 February 2021 and identified 61 trials involving 20,026 women for inclusion in this review. Not all trials were high quality.

Starting with oral misoprostol immediately may have a similar effect on rates of caesarean section (4 trials, 594 women; low-certainty evidence) to giving no treatment for 12 to 24 hours then starting oxytocin, while the effects of misoprostol on uterine hyperstimulation with foetal heart rate changes are unclear (3 trials, 495 women; very low-quality evidence). All women in theses trials had ruptured membranes.

Oral misoprostol was compared to vaginal dinoprostone in 13 trials (9676 women). Misoprostol use probably decreased the risk of caesarean section (moderate-certainty evidence). When studies were divided by their initial dose of misoprostol, there was evidence that use of 10 µg to 25 µg may be effective in reducing the risk of a caesarean section (9 trials, 8652 women), while the higher 50 µg dose might not reduce the risk (4 trials, 1024 women). There may be very small or no differences between misoprostol and dinoprostone in rates of vaginal births within 24 hours (10 trials, 8983 women; low-certainty evidence) but may be fewer cases of hyperstimulation with foetal heart rate changes with oral misoprostol (11 trials, 9084 women; low-certainty evidence).

Oral misoprostol was compared with vaginal misoprostol in 33 trials (6110 women). Oral use may have resulted in fewer vaginal births within 24 hours (16 trials, 3451 women; low-certainty evidence). Oral use may have caused less hyperstimulation with foetal heart rate changes (25 trials, 4857 women; low-certainty evidence), especially with a dose of 10 µg to 25 µg. There was no clear difference in the number of caesarean sections overall (32 trials, 5914 women; low-certainty evidence) but oral use likely resulted in fewer caesareans being performed because of concerns of the baby being in distress (24 trials, 4775 women).

When oral misoprostol was compared to oxytocin for induction, misoprostol use probably resulted in fewer caesarean sections (6 trials, 737 women). We found no clear difference in vaginal birth within 24 hours (3 trials,

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466 women; moderate-certainty evidence) or hyperstimulation with foetal heart rate changes (3 trials, 331 women; very low-certainty evidence).

Oral misoprostol was compared to a balloon catheter inserted in the cervix to mechanically induce labour. The number of vaginal births within 24 hours may have increased with misoprostol (4 trials, 1044 women; low-certainty evidence). Misoprostol probably reduced the risk of caesarean section (6 trials, 2993 women; moderate-certainty evidence) with no difference in risk of hyperstimulation with foetal heart rate changes (4 trials, 1044 women; low-certainty evidence).

Different doses and timings of giving oral misoprostol were explored in three small trials. The certainty of the findings from these trials was either low or very low so we cannot draw any meaningful conclusions from this data.

What does this mean?

Using low-dose (50 µg or less) oral misoprostol to induce labour likely leads to fewer caesarean sections and so more vaginal births than vaginal dinoprostone, oxytocin, and a transcervical Foley catheter. Rates of hyperstimulation with foetal heart rate changes were comparable with these methods. Misoprostol taken by mouth causes less hyperstimulation with foetal heart changes compared to when taken vaginally.

More trials are needed to establish the most effective misoprostol regimen for labour induction, but for now the findings of this review support oral rather than vaginal use, and suggest that commencing oral misoprostol at a dose of 25 µg or less may be safe and effective.

If you have any questions or comments with regard to the above document please feel free to contact me.

Kind regards

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