

## Appendix 1: Details of the available literature on sex for induction of labour

At term, nipple and genital stimulation have been advocated as a way of naturally promoting the release of endogenous oxytocin.<sup>1</sup> In 2005, a Cochrane Review examined the evidence for breast stimulation as a method for inducing labour and found six trials of 719 women, showing a decrease in the number of women not in labour at 72 hours with nipple stimulation compared with no intervention.<sup>2</sup> However, this finding was only significant among women who already had a favourable Bishop score (a cervical assessment used to predict the success of achieving a vaginal delivery). When breast stimulation was compared with intravenous oxytocin in the review, there was no difference in rates of cesarean delivery, number of women in labour at 72 hours or rates of meconium staining. However, the included studies did not look at time to vaginal delivery as an outcome. Overall, nipple stimulation seems to have minimal or no effect for women with an unripe cervix, but may be helpful for inducing labour in those with a ripe cervix.

Few studies have looked at the role of intercourse as a cervical-ripening technique. However, prostaglandin concentrations have been shown to be 10 to 50 times higher in the cervical mucus of pregnant women two to four hours after intercourse, compared with concentrations before intercourse.<sup>3</sup> In a study of 47 women who had sex at term compared with 46 who abstained, there was no significant difference in Bishop scores. On average, the sexually active group delivered four days earlier, which was not considered clinically significant.<sup>4</sup>

A Cochrane Review assessing the utility of sex as a method for induction of labour found only one trial of 28 women at term that compared the effect of sex over three nights with no intercourse.<sup>5</sup> This study showed no change in Bishop score or five-minute Apgar score, but there were no data on achievement of vaginal delivery within 24 hours.<sup>6</sup> No studies have compared sex with other iatrogenic methods of inducing labour. Tan and coauthors published a randomized controlled trial in which 108 term pregnant women were advised to have sex and were compared with 102 controls with no advice.<sup>7</sup> No difference was found between the groups for rates of spontaneous onset of labour, cesarean delivery and neonatal outcomes, but the high rate of intercourse in both cohorts (60% v. 40%) makes these data difficult to interpret.

Overall, there is no evidence to support the theory that sex at term has any effect on Bishop score, spontaneous onset of labour, cesarean delivery rates or neonatal outcomes, but there are no known harmful consequences in patients with low-risk pregnancies.

### References

1. Goodlin RC, Schmidt W, Creevy DC. Uterine tension and fetal heart rate during maternal orgasm. *Obstet Gynecol* 1972;39:125-7.
2. Kavanagh J, Kelly AJ, Thomas J. Breast stimulation for cervical ripening and induction of labour. *Cochrane Database Syst Rev* 2005:CD003392.
3. Toth M, Rehnstrom J, Fuchs AR. Prostaglandins E and F in cervical mucus of pregnant women. *Am J Perinatol* 1989;6:142-4.

4. Schaffir J. Sexual intercourse at term and onset of labor. *Obstet Gynecol* 2006;107:1310-4.
5. Kavanagh J, Kelly AJ, Thomas J. Sexual intercourse for cervical ripening and induction of labour. *Cochrane Database Syst Rev* 2001:CD003093.
6. Bendvold E. Coitus and induction of labour [article in Norwegian]. *Tidsskrift for Jordmodre* 1990;96:6-8.
7. Tan PC, Yow CM, Omar SZ. Effect of coital activity on onset of labor in women scheduled for labor induction: a randomized controlled trial. *Obstet Gynecol* 2007;110:820-6.