

Review]

## Immersion in water in pregnancy, labour and birth

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### Abstract

#### Background

Enthusiasts for immersion in water during labour, and birth have advocated its use to increase maternal relaxation, reduce analgesia requirements and promote a midwifery model of supportive care. Sceptics are concerned that there may be greater harm to women and/or babies, for example, a perceived risk associated with neonatal inhalation of water and maternal/neonatal infection.

#### Objectives

To assess the evidence from randomised controlled trials about the effects of immersion in water during pregnancy, labour, or birth on maternal, fetal, neonatal and caregiver outcomes.

#### Search strategy

We searched the Cochrane Pregnancy and Childbirth Group trials register (September 2003).

#### Selection criteria

All randomised controlled trials comparing any kind of bath tub/pool with no immersion during pregnancy, labour or birth.

#### Data collection and analysis

We assessed trial eligibility and quality and extracted data independently. One reviewer entered the data and another checked them for accuracy.

#### Main results

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Eight trials are included (2939 women). No trials were identified that evaluated immersion versus no immersion during pregnancy, considered different types of baths/pools, or considered the management of third stage of labour. There was a statistically significant reduction in the use of epidural/spinal/paracervical analgesia/anaesthesia amongst women allocated to water immersion water during the first stage of labour compared to those not allocated to water immersion (odds ratio (OR) 0.84, 95% confidence interval (CI) 0.71 to 0.99, four trials). There was no significant difference in vaginal operative deliveries (OR 0.83, 95% CI 0.66 to 1.05, six

trials), or caesarean sections (OR 1.33, 95% CI 0.92 to 1.91). Women who used water immersion during the first stage of labour reported statistically significantly less pain than those not labouring in water (40/59 versus 55/61) (OR 0.23, 95% CI 0.08 to 0.63, one trial). There were no significant differences in incidence of an Apgar score less than 7 at five minutes (OR 1.59, 95% CI 0.63 to 4.01), neonatal unit admissions (OR 1.05, 95% CI 0.68 to 1.61), or neonatal infection rates (OR 2.01, 95% CI 0.50 to 8.07).

### **Authors' conclusions**

There is evidence that water immersion during the first stage of labour reduces the use of analgesia and reported maternal pain, without adverse outcomes on labour duration, operative delivery or neonatal outcomes. The effects of immersion in water during pregnancy or in the third stage are unclear. One trial explores birth in water, but is too small to determine the outcomes for women or neonates.

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### **Plain language summary**

Immersion in water during the first stage of labour significantly reduces women's perception of pain and use of epidural/spinal analgesia

Water immersion during the first stage of labour significantly reduces epidural/spinal analgesia requirements and reported maternal pain, without adversely affecting labour duration, operative delivery rates, or neonatal wellbeing. Immersion in water during the second stage of labour increased women's reported satisfaction with pushing. Further research is needed to assess the effect of immersion in water on neonatal and maternal morbidity. No trials could be located that assessed the immersion of women in water during pregnancy or the third stage of labour.