

Reproductive effects 1

15

OCCUPATIONAL LIFTING AND PRETERM BIRTH: A STUDY WITHIN THE DANISH NATIONAL BIRTH COHORT

Stine Bjerrum Runge,¹ Jacob Krabbe Pedersen,¹ Susanne Wulff Svendsen,² Mette Juhl,³ Jens Peter Bonde,³ Anne-Marie Nybo Andersen¹ ¹University of Southern Denmark, Odense, Denmark; ²Regional Hospital West Jutland, Herning, Denmark; ³University of Copenhagen, Copenhagen, Denmark

10.1136/oemed-2011-100382.15

Objectives Occupational lifting may be a risk factor for preterm birth, but a recent review concluded that more than a moderate effect of lifting was unlikely. Previous studies have not focused on the possibility of time dependent associations. This study aimed to examine the association between occupational lifting during pregnancy and extremely, very, and moderately preterm birth.

Methods The study comprised 62 803 pregnant women enrolled into the Danish National Birth Cohort, 1996–2002. Gestational age at birth was obtained from the Medical Birth Registry. Preterm birth was defined as delivery after 22–37 completed gestational weeks, and the outcome was further categorised into extremely (22–27), very (28–32), and moderately preterm birth (33–36 completed weeks). Associations between self-reported occupational lifting and preterm birth were analysed with logistic regression models. Associations between lifting and extremely, very, and moderately preterm birth were analysed with Cox regression models.

Results We found an exposure-response relation between total daily load lifted and preterm birth. For total daily loads over 1000 kg/day the OR was 1.50, 95% CI (1.03 to 2.19). No threshold value was found. The associations were strongest for extremely and very preterm birth. Lifting heavy loads (>20 kg) more than 10 times/day was associated with preterm birth with an OR of up to 2.03, 95% CI (1.14 to 3.62).

Conclusions Occupational lifting was associated with an increased risk of preterm birth even in a society with a highly regulated working environment.