

Pregnancy: occupational aspects of management

Concise guidelines for clinical practice

Health and Work Development
Unit, Royal College of
Physicians

14 March 2013



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Members of GDG

Prof Keith Palmer (chair)

Prof Jens Peter Bonde

Miss Elaine Scott, Consultant obstetrician

Ms Jane Munro, Royal College of Midwives

Ms Elizabeth Duff, National Childbirth Trust

Ms Susan Murray, Unite, the Union

Dr Sian Williams, Clinical director, HWDU

Dr Nadia Sheikh, Consultant OH physician

Dr Ira Madan, Consultant OH physician

Dr Karen Walker-Bone, Consultant rheumatologist

Dr Sara Hoffbrand, General practitioner



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Background to the concise guideline

- Builds on full guideline published in 2009 by the RCP
- Systematic literature review was updated
- Recommendations based on this evidence were developed by a multidisciplinary guideline development group
- Funded by NHS Plus and the RCP



Aim of the guideline

To enable evidence-based advice to be given in relation to pregnant women who are, or concerned they may be, exposed to certain hazards at work. The guidance is relevant to health professionals in primary and secondary care.



Patient group covered by the recommendations

Healthy women with uncomplicated singleton pregnancies concerned about the risks from five common workplace exposures:

- prolonged working hours (≥ 40 h/week)
- shift work (3-shift schedule or fixed nights)
- lifting (typically 10-12kg)
- prolonged standing (>4 h/day)
- heavy physical workload



Adverse outcomes covered

- miscarriage
- preterm delivery
- small for gestational age
- low birth weight
- pre-eclampsia and gestational hypertension (considered together).



Exclusions

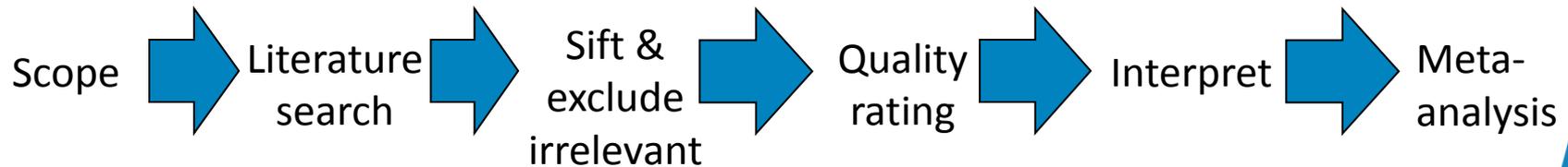
- adverse obstetric history
- obstetric risk factors
- pregnancy complications
- pregnant with more than one baby

These women should be advised to seek individualised advice from their obstetrician or midwife.



Methodology

- Literature search: EMBASE, MEDLINE
- Jan 1966 to June 13th 2012 (miscarriage).
Jan 1966 to Dec 31st 2011 (other outcomes).
- Exclusion processes/quality rating
- Meta-analysis



Overarching messages

- All exposure-outcome pairs show v low or no risk to pregnancy
- Larger, better quality studies more likely to show no risk

‘Current evidence offers no justification for imposing mandatory restrictions in relation to working hours, shift working, lifting and physical workload for pregnant women at work’



Overarching messages

‘Regardless of any potential risks to the fetus, the physiological demands of late pregnancy (after 28 weeks gestation) are such that women may struggle to cope with excessive work demands such as those covered by these guidelines.

A good case exists for limiting them, and their employers should have regard to making reasonable adjustments to the worker’s job profile’



Information sheets

Royal College of Physicians | fom
Faculty of Occupational Medicine

Advising women with a healthy, uncomplicated, singleton pregnancy on: heavy lifting and the risk of miscarriage, preterm delivery and small for gestational age

This advice sheet is based on the findings from a systematic literature review and associated evidence based guideline on the risk of heavy lifting on five specific pregnancy outcomes: miscarriage, preterm delivery, small for gestational age, low birthweight, pre-eclampsia/gestational hypertension.

This advice does not cover any other potential adverse outcomes of pregnancy and these would need to be considered separately.

Background risk and definitions

- On average, 67% of pregnant women (1 in 15) have a preterm delivery (birth of a baby before the 37th week of pregnancy), whether or not they undertake heavy lifting at work.
- Around 12% (1 in 8) of all recognised pregnancies in the UK end in miscarriage (loss of a recognised pregnancy before the 24th week of gestation).
- 10% (1 in 10) of deliveries are small for gestational age (when this is defined in the standard way as birthweight below the 10th centile on the expected distribution of birthweights by duration of gestation).
- Heavy lifting: the Health and Safety Executive does not give specific guidance for pregnant women, but a 'typical' load in research studies that provided such detail was about 10-12 kg (load that is not uncommonly lifted in the home by pregnant women with toddlers).

Added risks from heavy lifting

- It is uncertain whether or not heavy lifting at work while pregnant puts women at increased risk of miscarriage, preterm delivery, or small for gestational age. It is possible that heavy lifting has no effect on these outcomes, but the balance of evidence suggests a very small increase in risk for all three outcomes.
- If risks are increased, then there is good evidence that any increase in risk relating to these outcomes is likely to be very small.
- A best estimate of risk is that there could be:
 - 0.2 extra cases of miscarriage per 100 pregnancies amongst women undertaking heavy lifting at work.
 - 0.1 extra cases of preterm delivery per 100 pregnancies amongst women undertaking heavy lifting at work and
 - 0.8 extra cases of small for gestational age for every 100 deliveries among women undertaking heavy lifting at work.
 It may be easier to visualise these as in the pictures overlaid rather than in numbers.
- There is not enough evidence to draw firm conclusions about the risk of pre-eclampsia and gestational hypertension, although such evidence as exists suggests that risks are probably no more than small.

Other considerations

Keeping active is generally thought to be healthy for pregnant women. This should be taken into account when considering whether, and by how much, heavy lifting at work may need to be reduced. >>>

This guideline has been funded by the Royal College of Physicians and NIS Health at Work – the network of occupational health teams dedicated to ensuring that the NIS has a healthy, motivated workforce that is able to provide the best possible patient care.

What this means

- Because the risks of miscarriage, preterm delivery and small for gestational age are likely to be very small, if present at all, we do not recommend a mandatory reduction in heavy lifting at work.
- If a pregnant woman experiences psychological distress about the risk of miscarriage, preterm delivery or small for gestational age that is not allayed by the explanation of risks above, she should be advised to discuss this with her employer and consider reducing heavy lifting at work.
- In women encountering difficulties at work as the pregnancy progresses, working arrangements and associated symptoms should be reviewed with the employer or the manager and those involved in the employee's obstetric care.

Heavy lifting and the risks of preterm delivery

6.7 women in 100 have a preterm delivery (dark purple).

Among pregnant women undertaking heavy lifting at work, an extra 0.1 women may suffer a preterm delivery because of heavy lifting (light purple).

Heavy lifting and the risks of small for gestational age

10 deliveries in 100 will be small for gestational age (dark purple).

Among pregnant women undertaking heavy lifting at work, an extra 0.8 deliveries may be small for gestational age (light purple).

Heavy lifting and the risk of miscarriage

Approximately 12 women in 100 with a recognised pregnancy have a miscarriage (dark purple).

Among pregnant women who undertake heavy lifting at work, an extra 0.2 women may suffer a miscarriage because of heavy lifting at work (light purple).

Royal College of Physicians | fom
Faculty of Occupational Medicine

Available from:
www.rcplondon.ac.uk/pregnancyguidelines



Royal College of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Information sheets

- for health professionals
- summarising the evidence for each exposure-outcome pair
- available from the RCP website:
www.rcplondon.ac.uk/pregnancyguidelines



Advising women on work patterns during pregnancy

It should be recognised that there may be disadvantages to changing a pregnant worker's shift pattern or refraining from work.

Some women make a lifestyle choice to work fixed nights and find an imposed change to their shift pattern disruptive and stressful in itself.



Advising women on shift work and the risk of preterm delivery



Background risk ●
Extra cases ●



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Advising women on shift work and the risk of miscarriage

3 shift schedule

Fixed nights



Background risk ●

Extra cases ●



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Advising women on activities undertaken at work during pregnancy

Keeping active is generally thought to be healthy for pregnant women. This should be taken into account when considering whether, and by how much, certain activities need to be reduced.



Advising pregnant women on prolonged standing and the risk of miscarriage



Advising pregnant women on prolonged standing and the risk of preterm delivery



Background risk ●
Extra cases ●



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Advising pregnant women on prolonged standing and the risk of small for gestational age



Background risk ●
Extra cases ●



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Advising pregnant women on heavy lifting and the risk of miscarriage



Background risk ●
Extra cases ●



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Advising pregnant women on heavy lifting and the risk of small for gestational age



Background risk ●
Extra cases ●



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Advising pregnant women on heavy lifting and the risk of preterm delivery



Background risk ●
Extra cases ●



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Advising pregnant women on heavy physical workload and the risk of miscarriage



Background risk ●
Extra cases ●



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Advising pregnant women on heavy physical workload and the risk of preterm delivery



Background risk ●
Extra cases ●



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Advising pregnant women on long working hours and the risk of miscarriage



Advising pregnant women on long working hours and the risk of preterm delivery



Background risk ●
Extra cases ●



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards

Conclusions

- Systematic review of the literature indicates that these exposures are unlikely to carry much of an increased risk for any of the outcomes
- In general women can be reassured that such work included in this review is associated with little, if any, adverse effect on pregnancy



Questions?

Full guideline available:

www.rcplondon.ac.uk/pregnancyguidelines

Please contact HWDU with any questions about the guideline:

hwdu@rcplondon.ac.uk



Royal College
of Physicians

fom
Faculty of Occupational Medicine

Setting higher standards