What is the new evidence on maternal sleep position in late pregnancy?

Going to sleep in the supine position (on the back) in late pregnancy is a recently identified and modifiable risk factor for late stillbirth. New research shows that women can halve their risk of stillbirth by going to sleep on their side from 28 weeks pregnancy compared with sleeping in the supine position.

What are the key messages for pregnant women?

- From 28 weeks of pregnancy, women should settle to sleep on their side for any episode of sleep, including:
  - Going to sleep at night
  - Returning to sleep after any awakenings
  - Day time naps
- The going-to-sleep position is the one held longest during the night so women should not be concerned if they wake up on their back, but should simply roll back onto their side. Either side appears equally safe.

What is the evidence on maternal side sleep and risk of stillbirth?

Accumulating evidence has shown an association between maternal supine going-to-sleep position and stillbirth > 28 weeks' gestation. In the past five years there have been several international scientific studies about women's sleeping position during pregnancy. These case controlled and cross-sectional studies have shown that women who go to sleep on their back have a higher chance of having a stillborn baby compared women who go to sleep in another position.\(^{1,2,3,4}\)

The studies found that the chance of having a stillborn baby ranged between 2.5 to 8 times greater for women who went to sleep on their back. The research suggests that 1 in 10 stillbirths occurring in late pregnancy (> 28 weeks' gestation) could potentially be avoided if women did not go to sleep on their back during this time.\(^{1,2,3,4}\)

A 2019 meta-analysis using all the available world-wide data on the topic demonstrated an adjusted odds ratio of 2.63 (95% CI 1.72-4.04, p<0.0001) for late stillbirth in women who reported a going-to-sleep supine position\(^5\). Going to sleep on the left or right side appeared equally safe\(^5\).

Why does sleep position affect the risk of stillbirth?

Studies using magnetic resonance imaging (MRI) show that in late pregnancy, mothers lying supine put pressure on the inferior vena cava, which can reduce the blood flow by 80%. The pregnant woman's aorta is also partly compressed in this position\(^6,7\) which reduces the blood flow and oxygen delivery to the pregnant uterus, placenta, and fetus. Other studies have shown that the maternal supine position reduces fetal movements and increases fetal heartrate decelerations\(^8\).

How should I address this new recommendation with pregnant women?

It is important to discuss the recommendation on sleep position with women before 28 weeks' gestation. Women report a willingness to change their going-to-sleep position to reduce the risk.

NSW Health has developed new resources for health professionals (poster) and for pregnant
women (flyer) to support this recommendation. Alternative versions of these resources are available for Aboriginal women. Health professionals are encouraged to display the posters in their maternity facilities and distribute the flyers to pregnant women.

Where can I find further information and resources about side sleeping and stillbirth?

NSW Health website landing page for Reducing Stillbirth www.health.nsw.gov.au/reducingstillbirth which includes:

- Further information on NSW Health stillbirth prevention initiatives
- Link to Stream Solutions for ordering the ‘Side Sleep’ resources
- Link to the My Health Learning eLearning module on ‘Side Sleep’ (available in late 2019)

Stillbirth Centre for Research Excellence website: www.stillbirthcre.org.au

Safer Baby program website and resources: https://saferbabybundle.org.au (publicly available from 15 October 2019)


References

1. Heazell A, Li M, Budd J et al, 2017, Going-to-sleep supine is a modifiable risk factor for late stillbirth – findings from the Midlands and North of England Stillbirth Case-Control Study TBC.
4. McCowan LME, Thompson JMD, Cronin RS et al, 2017, Going to sleep in the supine position is a modifiable risk factor for late pregnancy stillbirth; Findings from the New Zealand multicentre stillbirth case-control study. PLOS One https://doi.org/10.1371/journal.pone.0179396