New Zealand College of Midwives
TE KĀRETI O NGA KAIWHAKAWHANAU KI AOTEAROA

Consensus Statement: **Reducing the risk of developing pre-eclampsia**

The New Zealand College of Midwives (Inc) considers that midwives have an essential role in alerting women to the factors in their obstetric or health history that make them at high risk of developing pre-eclampsia during pregnancy.

The New Zealand College of Midwives considers further research is needed into the efficacy of low dose aspirin for women with moderate risks of developing pre- eclampsia.

Rationale:

Women with major risk factors for pre-eclampsia, as defined below, have an approximately 20% risk of developing pre-eclampsia. Low dose aspirin taken during pregnancy reduces the incidence of pre-eclampsia for these women. The optimum timing for the daily administration of Low Dose Aspirin (LDA) is at bedtime[8,9], commencing preferably between 12 and 16 weeks gestation[1,2,3,13]. However, if LDA is commenced after 16 weeks it may still be of benefit in reducing the risk of pre-eclampsia[9-12]

<u>Major risk factors for pre-eclampsia are defined as:</u>

- Pre-eclampsia in previous pregnancy & birth <37 weeks or HELLP syndrome (haemolysis, elevated liver enzymes and low platelets).
- Predisposing medical conditions
  - Autoimmune e.g. Systemic Lupus Erythematosus (SLE), scleroderma, anti-phospholipid syndrome
  - Chronic hypertension (especially moderate and severe)
  - Diabetes type 1 and 2
  - Chronic kidney disease [1,2,3]
- Assisted conception with oocyte donation[4]
- Family history of preeclampsia (mother and / or sister)[1]

Guidance/Practice Notes:

At registration with an LMC midwife it is recommended that women are offered a comprehensive health assessment, including general health and maternity history which would include assessment of risk factors for pre-eclampsia[5]

When a major risk factor for pre-eclampsia is identified, midwives should ensure that women are offered information about the benefits of prophylactic low dose aspirin, and initiate a prompt referral for obstetric assessment and care planning[6,7]

When considering whether a woman may require Low dose Aspirin, it is advisable that a midwife discusses this with an obstetrician in the first instance before a prescription is initiated (preferably before 16 weeks). This should be documented in the woman's clinical notes and on the referral.

LDA is usually discontinued at 36-37 weeks gestation.

Roles and responsibilities for ongoing antenatal care; monitoring and timing for follow up with obstetric specialist is also planned and documented at the time of obstetric consultation and understood by the woman[6]

Women with major risk factors for pre-eclampsia will also benefit from calcium supplementation during pregnancy. A decision regarding a recommendation for calcium supplementation will be made at the time of obstetric consultation and the prescription provided by the obstetrician at that time[13,14].

Women who have had pre-eclampsia in the recent pregnancy should be advised at discharge from maternity services[14]:

- that they have increased risk of developing pre-eclampsia in future pregnancies
- to seek care at an early gestation for any future pregnancies, in order to access prophylaxis (low dose aspirin and possibly calcium) and other advice especially if pre-eclampsia was early onset or complicated by HELLP syndrome
- to address other modifiable risk factors for pre-eclampsia such as obesity and postpartum weight retention.
- to be aware of the higher risk of developing later hypertension and cardiovascular disease. Annual BP checks and maintaining a healthy weight are recommended[15,16].

References:

1. Duley L, Henderson-Smart DJ, Meher S, King JF. *Antiplatelet agents for preventing pre-eclampsia and its complications.* Cochrane Database of Systematic Reviews 2007, Issue 2. Art. No: CD004659. DOI: 10.1002/14651858.CD004659.pub2.

2. Bujold E, Roberge S, Lacasse Y, Bureau M, Audibert F, Marcoux S, Forest J-C Giguere Y. *Prevention of pre-eclampsia and intrauterine growth restriction with aspirin started in early pregnancy- a meta-analysis.* Obstet Gynecol 2010;116:402-14.

3. Askie LM, Duley L, Henderson-Smart DJ, Stewart LA, on behalf of the PARIS Collaborative Group. *Antiplatelet agents for prevention of pre-eclampsia: a meta-analysis of individual patient data.* Lancet May 2007 DOI:10.1016/S0140-6736(07)60712-0

4. Masoudian P, Nsar A, de Nanassy J, Fung-Kee-Fung K, Bainbridge S A, El Demellawy D. Oocyte donation pregnancies and the risk of preeclampsia or gestational hypertension: a systematic review and metaanalysis. American Journal of Obstetrics and Gynecology. 2016, 214 (3), 328-39

5. *Midwives Handbook for Practice*. New Zealand College of Midwives. 2015

6. *Guidelines for Consultation with Obstetric and Related Medical Services.* Ministry of Health 2012. Retrieved December 2013 from http://www.health.govt.nz/publication/guidelines-consultation- obstetric-and-related-medical-services-referral-guidelines

7. *Hypertension in pregnancy. The management of hypertensive disorders during pregnancy*. National Institute for Health and Clinical Excellence (NICE). August 2010 Retrieved July 2014. http://www.nice.org.uk/guidance/CG107

8. Ayala D, Ucieda R, Hermida R C*. Chronotherapy With Low-Dose Aspirin for Prevention of Complications in Pregnancy.* Chronobiology International. 2013, 30 (1-2), 260- 279

9. Tong S, Mol B, Walker S. *Preventing preeclampsia with aspirin: does dose or timing matter?* American Journal of Obstetrics and Gynecology. 2017 http://dx.doi.org/10.1016/j.ajog.2016.12.003

10. Duley L, Henderson-Smart DJ, Meher S, King J. Antiplatelet agents for preventing pre-eclampsia and its complications. Cochrane Database Syst Rev. 2007;2:CD004659.

11. Meher S, Duley L, Hunter K, Askie L. Antiplatelet therapy before or after 16 weeks' gestation for preventing preeclampsia: an individual participant data meta-analysis. Am J Obstet Gynecol. 2017;216(2):121-8.e2.

12. Askie LM, Duley L, Henderson-Smart DJ, Stewart LA, Group PC. *Antiplatelet agents for prevention of pre-eclampsia: a meta-analysis of individual patient data.* Lancet. 2007;369(9575):1791-8.

13 . Roberge, S., Nickolaides, K, Demers, S., Hyett, J., Chaillet, N., Bujold, E. *The role of aspirin dose on the prevention of preeclampsia and fetal growth restriction: systematic review and meta-analysis.* American J Obstet Gynecol 2017, 216, 110-20; e1-6.

14. Hofmeyr GJ, Lawrie TA, Atallah ÁN, Duley L *Calcium supplementation during pregnancy forpreventing hypertensive disorders and related problems.* Cochrane Database of Systematic Reviews 2010, Issue 8. Art. No.: CD001059. DOI: 10.1002/14651858.CD001059.pub3. 0

15. Guidance regarding the use of low-dose aspirin in the prevention of pre-eclampsia in high-risk women. December 2017. Developed by NZ Committee of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) and New Zealand College of Midwives (NZCOM).

16. Brown MC, Best KE, Pearce MS, Waugh J, Robson SC, Bell R. Cardiovascular disease risk in women with pre-eclampsia: systematic review and meta-analysis. Eur J Epidemiol. 2013;28(1):1-19.

17. Wu P, Haththotuwa R, Kwok CS, Babu A, Kotronias RA, Rushton C, et al. Preeclampsia and Future Cardiovascular Health: A Systematic Review and Meta-Analysis. Circ Cardiovasc Qual Outcomes. 2017;10(2).

Ratification:

This statement was ratified at the New Zealand College of Midwives AGM on 28/8/2014
Reviewed and References updated 2018