

Low-Dose Aspirin for High-Risk Pregnancy

INTRODUCTION

This leaflet explains the role of low dose aspirin in the prevention of pre-eclampsia. It gives guidance on the potential effects of aspirin therapy, and who is most likely to benefit from treatment.

WHY ASPIRIN?

It is thought that excessive formation of small blood clots due to an overactive clotting system may be partly responsible for development of pre-eclampsia. Aspirin suppresses special blood cells called platelets that help blood to clot. In this way, aspirin stops excessive clot formation and thins out the blood, which may prevent pre-eclampsia.¹

Faulty formation of the blood vessels in the placental bed known to be responsible for development of preeclampsia. Aspirin helps to suppress special blood cells (platelets) and improve healthy blood flow in the placenta. This way aspirin helps to prevent or slows onset of pre-eclampsia (1).

HOW ASPIRIN HELPS: EVIDENCE FROM RESEARCH STUDIES

A systematic review of 18 randomised trials with 15 908 women has evaluated use of low dose aspirin) for preventing pre-eclampsia (2).

The review showed that low dose aspirin

- reduced the risk of developing pre-eclampsia by 15(2)

IS ASPIRIN SAFE?

Information from research studies suggests that low dose aspirin is safe to use in pregnancy (2). Although aspirin is a blood thinner, there was no increase in the risk of bleeding for the woman or baby before or after delivery. Follow up of babies up to 18 months after birth did not show any increase in risk of developmental problems with aspirin use. Aspirin does not increase the risk of birth defects when taken from 12 weeks of pregnancy. Although data on aspirin commenced before 12 weeks are limited, there does not appear to be an increase in the overall incidence of birth defects with aspirin use. There is no evidence on whether aspirin increases or reduces the risk of miscarriage.

WHO MIGHT BENEFIT FROM LOW-DOSE ASPIRIN?

All pregnant women are assessed in the early stage of pregnancy to check for risk factors that increase the likelihood of developing pre-eclampsia.

Many women will be advised to take low dose aspirin if they fulfill risk assessment criteria based on the National and local guidelines.

UK guidelines on management of hypertension in pregnancy recommend low dose aspirin for women who have **any one of the high** risk factors, or **two or more moderate** risk factors (3)

HIGH RISK FACTORS:

Factors associated with a high risk (at least a three-fold increase) of developing pre-eclampsia include:

- a history of pre-eclampsia in a previous pregnancy, (particularly if this was severe or developed early)
- diabetes,
- high blood pressure outside pregnancy,
- kidney disease,
- blood clotting disorders known as thrombophilia's

MODERATE RISK FACTORS:

Other moderate risk factors that may increase a woman's risk of pre-eclampsia to a lesser extent include:

- A family history of pre-eclampsia.
- age over 40 years.
- having a first pregnancy.
- a multiple pregnancy (twins, triplets etc.); ten or more years between pregnancies.

¹ [Henderson et al 2021](#)

- raised BMI (body mass index) (over 35)²

HOW to take LOW-DOSE ASPIRIN?

If you were identified in need of taking aspirin by your midwife or obstetrician, they will give you instructions on how to obtain the correct dose of aspirin.

Aspirin is usually commenced at around 12 weeks gestation, and the recommended doses vary from 75mg to 150mg once daily.

Aspirin can be taken in a dissolved in water form or swallowed as a tablet with or after food. Women should continue to take aspirin throughout pregnancy, until they give birth. Modifications of the duration of therapy may be appropriate for some women,

Best results can be achieved when aspirin is taken daily with as little missed doses as possible. However, no need to worry if a dose is missed, best approach in this case will be going back to routine of taking medicine as soon as possible. Planning taking aspirin at the time of other tasks performed routinely (like brushing your teeth after food) makes it easier to remember taking aspirin regularly.

Taking low dose of aspirin will reduce a woman's risk of developing pre-eclampsia but does not guarantee that she won't develop the disease. Please pay close attention to signs of pre-eclampsia after 20 weeks of pregnancy.

WHO SHOULD NOT TAKE LOW-DOSE ASPIRIN?

Women who are allergic to aspirin should not use it. Aspirin may not be suitable for women who have a bleeding or platelet disorder, ulcers in the stomach or gut or severe asthma. If you have any of these conditions or take other medicines you should speak with your doctor before starting aspirin.

References

1. Atallah A, Lecarpentier E, Goffinet F, Doret-Dion M, Gaucherand P, Tsatsaris V. Aspirin for Prevention of Preeclampsia. *Drugs*. 2017 Nov 1;77(17):1819–31.
2. Henderson JT, Vesco KK, Senger CA, Thomas RG, Redmond N. Aspirin Use to Prevent Preeclampsia and Related Morbidity and Mortality: Updated Evidence Report and Systematic Review for the US Preventive Services Task Force. *JAMA*. 2021 Sep 28;326(12):1192–206.
3. Hypertension in pregnancy: diagnosis and management | Guidance | NICE [Internet]. [cited 2023 Jan 19]. Available from: <https://www.nice.org.uk/guidance/NG133>

Action on Pre-Eclampsia • Helpline: 01386 761848

Website: www.apec.org.uk • Twitter @apec_uk • Instagram @apec_uk • E-mail: info@apec.org.uk

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² [NICE GUIDELINES 2019](#)