HYPERTENSION – MANAGEMENT IN PREGNANCY

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM

- Diagnosis and management of pre-eclampsia, chronic and gestational hypertension in pregnancy

2. PATIENT

- Woman with chronic hypertension i.e. blood pressure (BP) ≥140/90mmHg prior to 20 weeks gestation, or currently medicated with anti-hypertensive agent
- Woman with gestational hypertension i.e. BP ≥140/90mmHg ≥ 20 weeks gestation, with no other features of pre-eclampsia, where BP returns to normal within 3 months postpartum
- Woman with pre-eclampsia i.e. BP ≥140/90 ≥ 20 weeks gestation accompanied by one or more of the following:
  - Renal involvement: significant proteinuria – (spot urine protein/creatinine ratio ≥ 30mg/mmol); creatinine>90µmol/L or oliguria
  - Haematological involvement: thrombocytopenia; haemolysis; disseminated intravascular coagulation (DIC)
  - Liver involvement: raised transaminases; severe epigastric pain
  - Neurological involvement: eclampsia; hyperreflexia with sustained clonus ; persistent visual disturbances; severe headache; stroke
  - Pulmonary oedema
  - Fetal growth restriction
  - Placental abruption[1]

3. STAFF

- Medical, midwifery and nursing staff
- Student Midwives

4. EQUIPMENT

- Crystalloid/non-mercury auditory sphygmomanometer with cuff of appropriate size
- Urinalysis dipsticks

5. CLINICAL PRACTICE

Antenatal

- Ascertain medical history at booking visit
- Measure BP in pregnant woman at each antenatal visit using appropriate-sized cuff e.g. if upper arm >33cm circumference, use large cuff
- Have woman seated comfortably with legs resting on a flat surface and her arm resting at the level of her heart. The right arm is generally favoured for a consistent approach[1]
- Refer woman for joint physician and obstetric care in the Medical Complications of Pregnancy clinic if:
  - Chronic hypertension
  - History of early onset pre-eclampsia (< 34 weeks gestation)
  - Underlying disease e.g. renal, autoimmune etc.

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- Recommend woman at high risk of pre-eclampsia to take 150mg of aspirin daily from 12 to 36 weeks. Woman considered high risk[12,14]:
  - Hypertensive disease during previous pregnancy
  - Chronic kidney disease
  - Autoimmune disease e.g. systemic lupus erythematosus or antiphospholipid syndrome
  - Type 1 or 2 diabetes
  - Chronic hypertension
  - Screening for pre-eclampsia risk >1:100
- Advise pregnant woman with more than 1 moderate risk factor for pre-eclampsia to take 150 mg of aspirin daily from 12 to 36 weeks. Factors indicating moderate risk are:
  - first pregnancy
  - ≥ 40 years of age
  - pregnancy interval of more than 10 years
  - body mass index (BMI) ≥ 35 kg/m^2 at first visit
  - family history of pre-eclampsia
  - multi-fetal pregnancy

- Discuss woman who meets criteria for aspirin prophylaxis with obstetric team registrar on the day of booking if she has not commenced on aspirin and is ≤16 weeks. Offering a telehealth consult with her team registrar on the same day is appropriate to ensure timely commencement of aspirin.
- Give woman patient information sheet on low dose aspirin in pregnancy (see appendix 1)
- Refer woman for antenatal clinic (ANC) obstetric consultation if history of pre-eclampsia in previous pregnancy at ≥34 weeks gestation
- Review antihypertensive medications if woman already medicated at booking and book obstetric/medical clinic appointment. Cease angiotensin converting enzyme (ACE) inhibitors and diuretics as soon as possible, observe BP and/or prescribe anti-hypertensive medications appropriate for pregnancy (see Table 1)

Assessment

- Refer woman with BP ≥ 140/90 and < 20 weeks gestation for obstetric ANC consultation within one week
- Assess woman presenting with new hypertension (≥140/90 mm Hg) ≥ 20 weeks gestation for signs and symptoms of pre-eclampsia. BP should be confirmed on at least two measurements more than 15 minutes apart
- Refer woman with new hypertension (≥140/90 mm Hg) ≥ 20 weeks gestation to obstetric team by booking assessment in pregnancy day stay assessment unit (PDSU) during normal working hours, and in delivery suite outside normal working hours:
  - BP 140-150/90-95 assess within 24 hours
  - BP ≥ 151/96 assess same day
- Perform the following maternal investigations:
  - Urine dipstick analysis for proteinuria. Request spot protein/creatinine ratio if ≥1+
  - Full blood count (FBC)
  - Urates
  - Urea, electrolytes creatinine (UECs)
  - Liver function tests (LFTs)
  - If < 37 weeks gestation - Soluble fms-like tyrosine kinase-1 (sFlt-1)/placental growth factor (PlGF) if suspicious for pre-eclampsia but does not meet diagnostic criteria [15] A ratio of less ≤38 is a good negative predictor for developing pre-eclampsia within the next one to four weeks

HYPERTENSION – MANAGEMENT IN PREGNANCY cont'd

- Perform coagulation studies, blood film, lactate dehydrogenase (LDH), fibrinogen, only if severe thrombocytopenia, falling haemoglobin or DIC is suspected
- Perform the following fetal assessment (see Table 2):
    - Ultrasound assessment for fetal growth, amniotic fluid volume (AFI) and umbilical artery (UA) Doppler blood flow
    - Cardiotocograph (CTG) if ≥ 25 weeks gestation and:
        - reduced fetal movements,
        - commencement of anti-hypertensive therapy,
        - pre-eclampsia, or
        - clinical concern

Management

- Assess and monitor stable woman via PDSU
- Refer woman with gestational hypertension or pre-eclampsia to obstetric team
- Admit woman with new diagnosis or deteriorating pre-eclampsia
- Commence antihypertensive treatment if a BP profile has an average reading ≥140/90 mmHg
- Admit and treat woman urgently with systolic BP ≥160 mmHg or diastolic BP ≥110 mmHg. This is classed as 'urgent hypertension' as this woman is at risk of cerebral haemorrhage (see RHW LOP - Severe and/or Urgent Hypertension in Pregnancy)
- Prescribe antihypertensive medication according to clinical need (see Table 1). Labetalol is often used as a first line drug in the absence of contraindications such as asthma where methyldopa is commonly prescribed
- Administer medications in a staggered fashion i.e. 0600,1400, 2200 hours and 0800,1600, 2400 hours if two different antihypertensive agents are prescribed eighth hourly
- Administer regular medication one hour earlier than prescribed if BP is outside recommended parameters. PRN medication may be given one hour after administering regular medication if persistent hypertension. Recheck BP in one hour
- Do not administer regular and PRN antihypertensive medication simultaneously, unless specifically requested by a senior doctor, as this may lead to a precipitous drop in BP. **Exception:** at the commencement of treatment, first dose of labetalol or methyldopa may be prescribed with a short acting agent such as hydralazine, oral or intravenous (IV)
- Aim for a target diastolic BP of ≤ 85 mmHg[12,13], and a systolic BP of 110-140mmHg [12]
- Consider eclampsia prophylaxis with magnesium sulphate, in woman with severe pre-eclampsia
- Consider betamethasone 11.4mg intramuscular (IM) twice, 24 hours apart for fetal lung maturation if pre-eclampsia presents before 34 weeks gestation
- Educate woman as to signs and symptoms of pre-eclampsia and provide the pre-eclampsia patient information sheet (appendix 2)
- Consult anaesthetist for woman with severe pre-eclampsia and woman with thrombocytopenia (platelets <100)
- Assess woman's ongoing clinical symptoms and signs as inpatient or outpatient with regular blood and urine tests as indicated (see table 2)
- Consult neonatologist if ≤ 34 weeks gestation
- Consider consultation with obstetric physician for woman with pre-term pre-eclampsia
- Counsel woman with pre-eclampsia and document clear criteria for delivery. Immediate versus expectant management of pre-eclampsia 34-37 weeks gestation is associated with fewer episodes of severe maternal hypertension but more neonatal intensive care unit (NICU) admissions related to prematurity without increased neonatal morbidity. This should be discussed with woman to allow shared decision making on timing of delivery[1,13]

HYPERTENSION – MANAGEMENT IN PREGNANCY cont'd

- Recommend birth (after discussion of risks and benefits) to woman with pre-eclampsia at ≥37 weeks gestation since there is no maternal or neonatal benefit in prolonging gestation[3]
- Recommend birth to woman with uncomplicated chronic hypertension at 39 weeks gestation since the risks of stillbirth increases substantially in ongoing pregnancies[4]
- Recommend birth by 39+6 weeks for gestational hypertension if blood pressure is well controlled and there is no evidence of pre-eclampsia or fetal compromise [12]
- Arrange consultation with consultant obstetrician after 37 weeks for woman with gestational hypertension to discuss indications for birth

TABLE 1: ANTI-HYPERTENSIVE DRUGS IN PREGNANCY

Drug	Dose	Action	Contraindications	Practice points
Methyldopa	250-750mg TDS	Central	Depression	Slow onset of action over 24 hours, dry mouth, sedation, depression, blurred vision
Labetalol	100-400mg TDS	β-blocker with mild α vasodilator effect	Asthma, chronic airway limitation	Bradycardia, bronchospasm, headache, nausea, scalp tingling which usually resolves within 24-48 hours
Nifedipine	30 - 60mg SR BD	Calcium-channel antagonist	Aortic stenosis	Severe headache associated with flushing, tachycardia, peripheral oedema, constipation
Prazosin	0.5-5mg TDS	Centrally acting alpha blocker		First dose effect - orthostatic hypotension
Hydralazine	25-50mg TDS	Vasodilator		Flushing, headache, nausea, lupus-like syndrome

NB: nifedipine immediate release requires Special Access Scheme (SAS)

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TABLE 2: ANTENATAL MANAGEMENT OF HYPERTENSION

DIAGNOSIS	TEST	FREQUENCY
Chronic hypertension	Urinalysis + PCR	Each visit
	Pre-eclampsia bloods: - FBC - Urates - UEC - LFTs - sFlt-1 ≤ 36+6 weeks gestation	Sudden increase in BP or new proteinuria
	Ultrasound for fetal growth, Amniotic Fluid Index (AFI) and UA Doppler	Every 4th week from 28 weeks
Gestational Hypertension	Urinalysis	Weekly
	Pre-eclampsia bloods: - FBC - Urates - UEC - LFTs - sFlt-1 ≤ 36+6 weeks gestation	Weekly
	Ultrasound for fetal growth, AFI and UA Doppler	At diagnosis, then every 4th week
Pre-eclampsia	Urinalysis	At diagnosis, if non-proteinuric repeat daily if inpatient, or twice weekly if outpatient
	Pre-eclampsia bloods: - FBC - Urates - UEC - LFTs	Twice weekly, more frequently if unstable
	Ultrasound for fetal growth, AFI and UA Doppler	At diagnosis then every 2 weeks unless abnormal ultrasound result
	CTG	Twice weekly

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Intrapartum[12]

- Continue oral antihypertensives at the onset of labour, although IV agents may be necessary due to the impact of delayed motility
- Minimise risk of pulmonary oedema for woman with pre-eclampsia by limiting oral fluid intake to 60-80 mL/hr (caution with IV fluid volume)

Postpartum

- Admit woman with severe pre-eclampsia to the acute care unit (ACU) for the first 24 hours postpartum. The woman may initially have worsening oedema, thrombocytopaenia, liver and renal dysfunction, and worsening hypertension
- Continue antihypertensives
- Wean antihypertensive agents when BP consistently <120/70mmgHg
- Prescribe an alternative medication for woman taking methyldopa (if feasible) within 24 hours of delivery
- Review woman who is discharged on antihypertensive medication within one week, usually with general practitioner[12] or PDSU if baby in NCC
- Arrange a consultation after six weeks postpartum with Medical Complication in Pregnancy Clinic for woman with early onset pre-eclampsia (≤34 weeks gestation) for assessment of underlying conditions
- Reassure woman taking antihypertensive medications that the following are not known to have any adverse effects on her neonate(s) receiving breastmilk: labetalol, nifedipine, enalapril, captopril, metoprolol. There is insufficient data for Angiotensin II Receptor Blockers (ARBs), amlodipine, ACE inhibitors other than enalapril and captopril
- Advise woman regarding long term health implications of pre-eclampsia and the importance of annual BP checks and assessment for cardiovascular risks

6. DOCUMENTATION

- Medical record

7. EDUCATIONAL NOTES

- Hypertension in pregnancy is defined as systolic BP≥140 mmHg and/or diastolic BP≥ 90 mmHg (Korotkoff 5). These measurements should be confirmed by repeated readings over several hours[12]
- Accurate BP measurement is important as the level of BP may result in changes in clinical management.
- Women who are considered high risk for pre-eclampsia may benefit from aspirin and also possibly calcium prophylaxis where a low calcium diet is identifies[12]
- Aspirin should be given at a dose between 100 and 150 mg/day, started before 16 weeks' gestation, possibly taken at night, and continued until delivery; ≈70 women need to be treated to prevent 1 case of preeclampsia, particularly severe preeclampsia. Implementation of this practice is associated with improved outcomes it is possible that initiating aspirin later than 16 weeks' gestation may also be of benefit, but we recommend earlier commencement. Recent analyses question: (1) whether aspirin needs be started before 16 weeks or still has benefit if started later, (2) the magnitude of effect (ranging from 50% to only 10% risk reduction), and (3) what dose is most beneficial, at least 100 mg seeming to be required[12]
- In a Cochrane review of 13 studies of good quality (involving 15,730 women), there was a reduction in the average risk of pre-eclampsia associated with calcium supplementation (13 trials, 15,730 women: RR 0.45, 95% CI 0.31 to 0.65). The effect was greatest for women with low baseline calcium intake (eight trials, 10,678 women: RR 0.36, 95% CI 0.20 to 0.65) and those selected as being at high risk (five trials, 587 women: RR 0.22, 95% CI 0.12 to 0.42)[7]

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- In a Cochrane review of antiplatelet agents (largely low dose aspirin) for preventing pre-eclampsia, seventy four trials (40,015 women) were included. There was a 18% reduction in risk of pre-eclampsia associated with the use of antiplatelet agents (60 trials, 36,716 women, relative risk (RR) 0.82, 95% confidence interval (CI) 0.77 to 0.88, number needed to treat (NNT) 61 (45, 92)). There is no statistical difference in the RR based on maternal risk of pre-eclampsia[8]
- Although not standard practice at all hospitals, screening at 11-13 weeks for women at risk of pre-term pre-eclampsia who would benefit from aspirin can be better performed using maternal history, mean arterial pressure, uterine artery pulsatility index, and PlGF than by traditional screening with maternal risk factors alone[9]
- The earlier in pregnancy the diagnosis of gestational hypertension (after 20 weeks), the more likely it is to progress to pre-eclampsia[13]
- Oedema is not included in the diagnostic features of pre-eclampsia. It is a common feature of normal pregnancy and severe pre-eclampsia may be present in the absence of any oedema. Nevertheless, rapid development of generalised oedema should alert the clinician to screen for pre-eclampsia. Be wary of pulmonary oedema
- Dipstick testing for proteinuria is a screening test with very high false positive and negative rates. If in doubt, perform urine protein/creatinine ratio. The presence of urinary tract infection should also be excluded[1,13,14]
- Bed rest for pre-eclampsia has no significant maternal or fetal benefit. However, admission to hospital allows close supervision of both woman and fetus as progress of the disorder is unpredictable. Outpatient monitoring may be appropriate in milder cases after a period of initial observation[1]
- 25-30% of women managed expectantly with early onset pre-eclampsia will develop severe morbidity which may include Haemolysis Elevated Liver Function and Low Platelet Level (HELLP) syndrome, abruption, pulmonary oedema and eclampsia[1]
- sFlt-1 is an antagonist to PlGF and vascular endothelial growth factor and it is associated with vasoconstriction and endothelial damage that are associated with the maternal features of pre-eclampsia. In pre-eclampsia sFlt-1 is increased and PlGF is reduced. The PROGNOSIS study validated a sFlt-1:PlGF ratio in women between 24 and 37 weeks with suspected preeclampsia. A ratio of ≤38 is an excellent rule out test for development of pre-eclampsia within the next 1 week. [10]
- Subsequent analysis has demonstrated that in such women pre-eclampsia can be excluded 4 weeks with a negative predictive value of 94% and that particularly for women with an initial sflt-1/PlGF of between 39 and 85 retesting in 1 to 2 weeks can further assist with stratifying the risk[11]

Rare disorders and Pre-eclampsia[1]

- Other rare disorders may present with some of the features of pre-eclampsia: acute fatty liver of pregnancy, haemolytic uremic syndrome, thrombotic thrombocytopenic purpura or exacerbation of systemic lupus erythematosus
- Pre-eclampsia presenting before 20 weeks gestation usually indicates a predisposing factor such as: hydatidiform mole, multiple pregnancy, fetal triploidy, severe renal disease or antiphospholipid antibody syndrome
- Although a very rare disorder, undiagnosed pheochromocytoma in pregnancy is potentially fatal and may present as pre-eclampsia. Measure fasting plasma free metanephrines/normetanephrines or 24 hour urinary catecholamines in the presence of very labile/severe hypertension
- Other rare disorders also to consider are Conn syndrome and renal artery stenosis

HYPERTENSION – MANAGEMENT IN PREGNANCY cont'd

Recurrence of pre-eclampsia and long-term health implications

- Women with early onset (≤34 weeks gestation) have the highest incidence of recurrence of pre-eclampsia in a future pregnancy, approximately 25%[1]
- Women with later onset pre-eclampsia have an approximate 15% recurrence risk
- For future pregnancies: recommend pre-pregnancy or early pregnancy assessment regarding prophylactic treatment (aspirin, started before 16 weeks [12] and consider calcium)
- Women who have had pre-eclampsia or gestational hypertension are at higher risk of cardio-vascular disease, stroke and venous thromboembolism in later life. They should have annual blood pressure checks and assessment for vascular risk factors[1,14]

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- Eclampsia Management
- Magnesium Sulphate for Eclampsia or Eclampsia Prophylaxis
- Hydralazine – Administration of IV Hydralazine
- Severe and/or Urgent Hypertension in Pregnancy Guideline
- Labetalol – Intravenous Labetalol for Management of Severe/Urgent Hypertension
- Pre-Eclampsia – intrapartum care
- Corticosteroids for Woman at Risk of Preterm Birth or With a Fetus at Risk of Respiratory Distress - Antenatal
- Postpartum Haemorrhage – Prevention and Management

9. Risk Rating

- High

10. Standard

- Recognising and responding to clinical deterioration - Standard 8
- Communicating for safety – standard 6
- Comprehensive Care – standard 5
- Medication safety – standard 4

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…./Appendices

Appendix 1

Low dose aspirin (150mg) in pregnancy

You have been given this factsheet because you have been advised to take a low dose of aspirin (150mg) once a day from 12 to 36 weeks of pregnancy

This information sheet is about the use of low dose aspirin (150mg) only.

What is low dose aspirin?
Aspirin is a blood-thinning medication. It is known as a non-steroidal anti-inflammatory (NSAID). Aspirin is often used to treat pain, fever or inflammation.
You have been advised to take **a low dose of 150mg once a day**.

Taking a low dose of aspirin may help to reduce the risk of:
- developing hypertension (high blood pressure) and pre-eclampsia (high blood pressure and effects on other organs including the placenta)
- giving birth to your baby prematurely (before 37 weeks)
- your baby being smaller than expected

Your midwife, general practitioner (GP), or obstetrician (a doctor who specialises in the care of pregnant women) may recommend that you take low dose aspirin if:
- you had hypertension (high blood pressure) during a previous pregnancy
- you have chronic kidney disease
- you have an auto-immune disease e.g. lupus or antiphospholipid syndrome
- you have type 1 or 2 diabetes
- you have chronic hypertension
- you have previously given birth to a baby who was much smaller than expected

Low dose aspirin may also be recommended if two or more of the following apply to you:
- this is your first pregnancy.
- you are aged 40 years or older.
- it is more than 10 years between this pregnancy and the birth of your last baby.
- your body mass index (BMI) is 35 or more at your booking appointment.
- there is a family history of pre-eclampsia.
- this is a multiple pregnancy e.g. twins or triplets

Your doctor may also advise you take low dose aspirin for other reasons, which they will discuss with you.

Is low dose aspirin safe to take in pregnancy?
- Low dose aspirin is not known to be harmful to you or your baby during pregnancy. However, aspirin can affect (and be affected by) other medication, including 'over the counter' medicines and herbal remedies. Please discuss any other medications you are taking with your midwife or doctor.
- You should only take low dose aspirin if your midwife or doctor has advised you to. It is available 'over the counter'.
- Taking low dose aspirin does not change any of your choices for pain relief in labour. You can stop taking your low dose aspirin once your baby is born.

Adapted from Version 2 January 2020 NHS University Hospital Southampton Patient information factsheets *Low dose aspirin (150mg) in pregnancy*

Side effects

- Mild indigestion. This is a common side effect and is known to affect more than 1 in 100 people. If you take your aspirin either with or just after food, it will be less likely to upset your stomach. Avoid taking aspirin on an empty stomach. If you also take indigestion remedies, take them at least two hours before or after you take your aspirin.
- Bleeding tendency: There is NO evidence to suggest low dose aspirin causes any increase in bleeding during pregnancy or at the time of birth.

If you have any questions or concerns about taking low dose aspirin, please speak to your doctor or midwife. Please read the information leaflet included with your aspirin for more information about the rarer complications.

Allergies/Caution

Please tell your doctor if:

- you are allergic to aspirin (or other NSAIDS)
- you have severe asthma, chronic kidney problems, stomach ulcers
- you have been previously advised not to take aspirin or other NSAIDs

Caution should be taken if you have low platelets or a history of bleeding disorders.

As with any medicine, you should seek urgent medical assistance if you experience serious side effects such as wheezing, swelling of the lips, face or body, rashes or other indications of an allergic reaction.

Further information

If you would like more information about taking low dose aspirin in pregnancy, your midwife or doctor will be happy to answer your questions and advise you.

Useful links

Best Use of Medicines in Pregnancy website:
www.medicinesinpregnancy.org/Medicine--pregnancy/Aspirin/

Appendix 2

Pre-eclampsia

What is pre-eclampsia?

- Pre-eclampsia is a common complication of pregnancy.
- The disorder has been known by various names over the years, including Toxemia and Pregnancy Induced Hypertension (PIH). These are all the names for the same disorder, but pre-eclampsia is now considered the most appropriate name.
- Most commonly, pre-eclampsia is first picked up by an increase in blood pressure, but it is a complex disorder which may affect your kidneys, liver and/or blood clotting, or your baby's growth.
- It can be quite a mild problem or a serious one.
- About 1 in 10 women having their first baby will need to come into hospital (either just for half a day or for much longer) for tests for pre-eclampsia at some stage in their pregnancy.
- Pre-eclampsia may occur in any pregnancy, but it is most common in first pregnancies.
- It usually occurs in the second half of the pregnancy, but, can sometimes develop in the days after the baby is born.

My blood pressure was high at my check up today. Does that mean I have pre-eclampsia?

- Not necessarily, but it does mean you need to have some tests to find out if you and your baby both are okay.
- Sometimes women have one or two high blood pressure readings and never have a problem again. Pre-eclampsia is the most common cause of high blood pressure in pregnancy, but there are many other reasons that you may develop high blood pressure.
- If you had high blood pressure, kidney disease, diabetes, or lupus before the pregnancy there is an increased chance that you may develop pre-eclampsia.

What tests will I have?

- You will need to have a series of blood pressure readings over a period of time
- You will also have some blood tests to check if your kidneys, liver, and blood clotting are affected by pre-eclampsia. Minor changes, although not affecting your health, can confirm the diagnosis and be used to monitor the disorder.
- Testing your urine for protein is also helpful in monitoring your kidney function and you will be asked to test this more often.
- Regular weight checks can be used to keep a watch on any swelling due to pre-eclampsia, however some swelling is very common in pregnancy, especially in the hands and feet and does not mean there is a problem.
- As pre-eclampsia can sometimes (but not always) affect the growth of your baby it is also important that we assess your baby's wellbeing. You should notify your midwife, doctor, or the delivery suite immediately of any change or reduction in your baby's movements. Another way we often keep a check is with a Cardiotocograph (CTG) which is a tracing of your baby's heartbeat, and through an ultrasound.

But I don't feel sick.

Very often women with pre-eclampsia do not have any symptoms and feel quite well. Sometimes, however, you may experience:

- headaches - that do not go away with simple pain killers
- blurred vision - flashes of light and dots before the eyes
- pain in the upper abdominal rib area, which sometimes can be confused with heartburn
- generally feeling very unwell.

You should tell your midwife, doctor or call the delivery suite about any of these signs or symptoms.

Adapted from Version 2 January 2020 NHS University Hospital Southampton Patient information factsheets *Low dose aspirin (150mg) in pregnancy*

What happens now?
Your care will focus on close observation of you and your baby. This will either happen in hospital, pregnancy day stay unit (PDSU) or clinic. Your high blood pressure can usually be controlled with medication, however there is no treatment for pre-eclampsia other than delivering the baby. This depends on how far along in your pregnancy you are and how seriously you and your baby are affected by the condition. Pre-eclampsia tends to get worse as the pregnancy progresses, either gradually or sometimes suddenly. Often early delivery of the baby is needed.

How will my baby be born?
Most commonly you will still be able to have a vaginal birth, although your labour may be induced. Whilst caesarean birth is always a possibility, it is usually only necessary when pre-eclampsia is very severe or early.

What happens after my baby is born?
Pre-eclampsia is a problem of pregnancy and usually gets better quickly after the birth. Sometimes in the first few days after birth symptoms persist before you get better. Sometimes your blood pressure can take a few weeks to settle down and your doctor may decrease your medication slowly after you have gone home.

What about my next pregnancy?
While you have more chance of having pre-eclampsia again than someone who has not had it, the risk is low. Please inform the midwife or doctor caring for you in your next pregnancy that you developed pre-eclampsia previously and they will discuss possible option of low dose aspirin with you

Symptoms of worsening pre-eclampsia:
If these symptoms occur, please notify your Midwifery Group Practice (MGP) midwife, the hospital, or your private obstetrician immediately:

- Persistent headache
- Blurred vision or “spots”, “stars” or “zig zags” that last for more than a few minutes
- Pain in the upper abdominal rib area
- Heartburn
- Reduced or changed fetal movements
- Pain or constant tightness of your uterus
- Vaginal bleeding
- Generally feeling very unwell

Phone numbers:

Delivery Suite Triage (24 hours)	0439 869 035
MGP midwife (24 hours)	contact number provided by midwife

Adapted from Version 2 January 2020 NHS University Hospital Southampton Patient information factsheets *Low dose aspirin (150mg) in pregnancy*