NICE National Institute for Health and Care Excellence

NICE Pathways

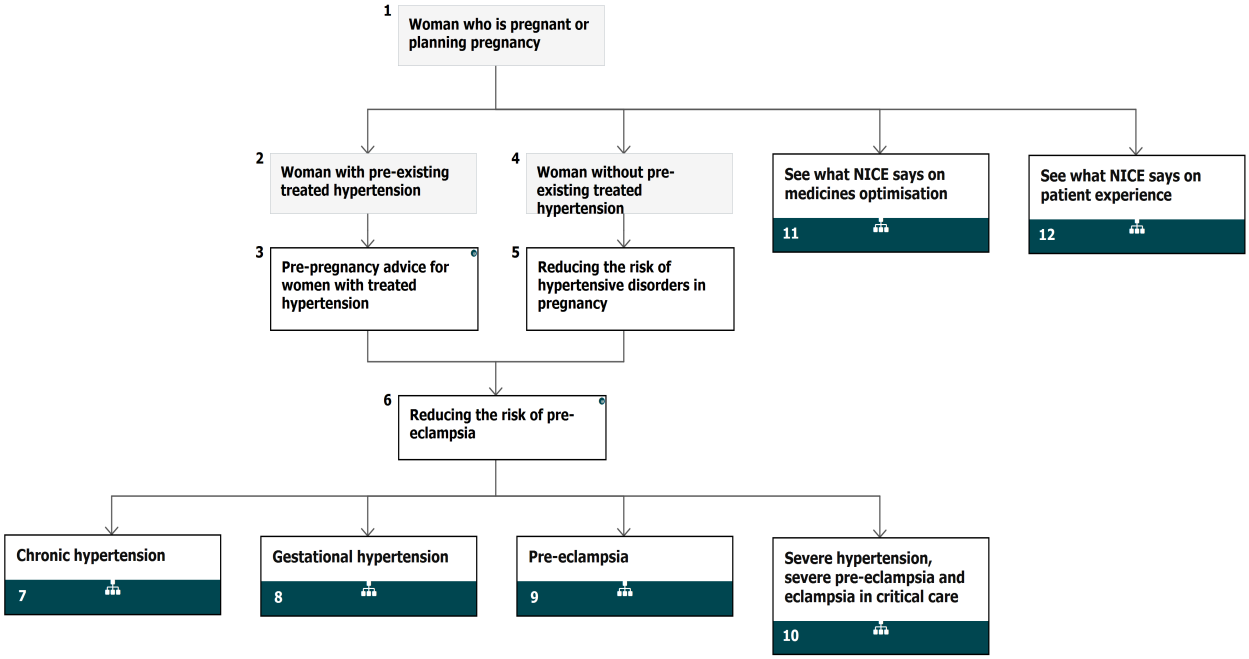
Hypertension in pregnancy overview

NICE Pathways bring together all NICE guidance, quality standards and other NICE information on a specific topic.

NICE Pathways are interactive and designed to be used online. They are updated regularly as new NICE guidance is published. To view the latest version of this pathway see:

http://pathways.nice.org.uk/pathways/hypertension-in-pregnancy
Pathway last updated: 08 June 2017

This document contains a single pathway diagram and uses numbering to link the boxes to the associated recommendations.



1 Woman who is pregnant or planning pregnancy

No additional information

2 Woman with pre-existing treated hypertension

No additional information

3 Pre-pregnancy advice

Women with chronic hypertension should be given advice and treatment in line with NICE's recommendations on hypertension, unless it specifically differs from recommendations in this interactive flowchart.

Tell women who take ACE inhibitors or ARBs:

- that there is an increased risk of congenital abnormalities if these drugs are taken during pregnancy
- to discuss other antihypertensive treatments with the healthcare professional responsible for managing their hypertension, if they are planning pregnancy.

Stop antihypertensive treatment in women taking ACE inhibitors or ARBs if they become pregnant (preferably within 2 working days of notification of pregnancy) and offer alternatives.

Tell women who take chlorothiazide:

- that there may be an increased risk of congenital abnormality and neonatal complications if these drugs are taken during pregnancy
- to discuss other antihypertensive treatment with the healthcare professional responsible for managing their hypertension, if they are planning pregnancy.

Tell women who take antihypertensive treatments other than ACE inhibitors, ARBs or chlorothiazide that the limited evidence available has not shown an increased risk of congenital malformation with such treatments.

Diet

Encourage women with chronic hypertension to keep their dietary sodium intake low, either by reducing or substituting sodium salt, because this can reduce blood pressure.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

1. Pre-pregnancy advice for women with treated hypertension

4 Woman without pre-existing treated hypertension

No additional information

5 Reducing the risk of hypertensive disorders in pregnancy

Lifestyle interventions

Advice on rest, exercise and work for women at risk of hypertensive disorders during pregnancy should be the same as for healthy pregnant women (see what NICE says on antenatal care for uncomplicated pregnancies).

Other pharmaceutical agents

Do not use the following to prevent hypertensive disorders during pregnancy:

- nitric oxide donors
- progesterone
- diuretics
- low molecular weight heparin.

Nutritional supplements and diet

Do not recommend the following supplements solely with the aim of preventing hypertensive disorders during pregnancy:

- magnesium
- folic acid
- antioxidants (vitamins C and E)
- fish oils or algal oils
- garlic.

Do not recommend salt restriction during pregnancy solely to prevent gestational hypertension or pre-eclampsia.

6 Reducing the risk of pre-eclampsia

Antiplatelet agents

Advise women at high risk of pre-eclampsia to take 75 mg of aspirin[1] daily from 12 weeks until the birth of the baby. Women at high risk are those with any of the following:

- hypertensive disease during a previous pregnancy
- chronic kidney disease
- autoimmune disease such as systemic lupus erythematosis or antiphospholipid syndrome
- type 1 or type 2 diabetes
- chronic hypertension.

Advise women with more than one moderate risk factor for pre-eclampsia to take 75 mg of aspirin daily from 12 weeks until the birth of the baby. Factors indicating moderate risk are:

- first pregnancy
- age 40 years or older
- pregnancy interval of more than 10 years
- BMI of 35 kg/m^2 or more at first visit
- family history of pre-eclampsia
- multiple pregnancy.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

2. Antenatal assessment of pre-eclampsia risk

7 Chronic hypertension

See Hypertension in pregnancy / Chronic hypertension

[1] Aspirin does not have UK marketing authorisation for the indication in question at the time of publication (August 2010). Informed consent should be obtained and documented.

8 Gestational hypertension

See Hypertension in pregnancy / Gestational hypertension

9 Pre-eclampsia

See Hypertension in pregnancy / Pre-eclampsia

10 Severe hypertension, severe pre-eclampsia and eclampsia in critical care

See Hypertension in pregnancy / Severe hypertension, severe pre-eclampsia and eclampsia in critical care

11 See what NICE says on medicines optimisation

See Medicines optimisation

12 See what NICE says on patient experience

See Patient experience in adult NHS services / Patient experience in adult NHS services overview

Drug information

It is assumed that prescribers will use a drug's SPC to inform decisions made with individual patients. Drugs for which particular attention should be paid to the contraindications and special warnings during pregnancy and lactation are listed below.

Atenolol is licensed for the treatment of hypertension and is already used widely in UK postnatal obstetric practice, but the SPC (August 2010) advises that anticipated benefit be weighed against the possible risks of its use in the first and second trimesters of pregnancy, and in women who may become pregnant or who are breastfeeding. Informed consent on the use of atenolol in these situations should be obtained and documented.

Captopril is licensed for the treatment of hypertension and is already used in UK postnatal obstetric practice, but the SPC (August 2010) advises that it is contraindicated in the second and third trimesters of pregnancy and in lactation, and that it is not recommended during the first trimester of pregnancy. Informed consent on the use of captopril in these situations should be obtained and documented.

Enalapril is licensed for the treatment of hypertension and is already used widely in UK postnatal obstetric practice, but the SPC (August 2010) advises that it is contraindicated in the second and third trimesters of pregnancy and that it is not recommended during the first trimester of pregnancy or in breastfeeding for preterm infants and for the first few weeks after delivery. Informed consent on the use of enalapril in these situations should be obtained and documented.

Labetalol is licensed for the treatment of hypertension, including during pregnancy and is already used widely in UK obstetric practice, but the SPC (August 2010) advises that it should only be used during the first trimester of pregnancy if the potential benefit outweighs the potential risk, and that breastfeeding is not recommended. Informed consent on the use of labetalol in these situations should be obtained and documented.

Methyldopa is licensed for the treatment of hypertension and is already used widely in UK obstetric practice, but the SPC (August 2010) advises that its use in women who are, or may become, pregnant or who are breastfeeding their newborn infant requires that anticipated benefits be weighed against possible risks. Informed consent on the use of methyldopa in these situations should be obtained and documented.

Metoprolol is licensed for the treatment of hypertension and is already used widely in UK postnatal obstetric practice, but the SPC (August 2010) advises that anticipated benefit be weighed against the possible risks of its use in women who are pregnant or breastfeeding. Informed consent on the use of metoprolol in these situations should be obtained and documented.

Nifedipine is licensed for the treatment of hypertension and is already used widely in UK obstetric practice, but the SPC (August 2010) advises that it is contraindicated in pregnancy before week 20, and that it should not be administered during the entire pregnancy or in women who may become pregnant. It also advises that nifedipine should not be used during breastfeeding. Informed consent on the use of nifedipine in these situations should be obtained and documented.

Glossary

ACE inhibitors

angiotensin-converting enzyme inhibitors

ALT

alanine aminotransferase

ARBs

angiotensin II receptor blockers

AST

aspartate aminotransferase

BMI

body mass index

Chronic hypertension

hypertension that is present at the booking visit or before 20 weeks or if the woman is already taking antihypertensive medication when referred to maternity services; it can be primary or secondary in aetiology

Eclampsia

a convulsive condition associated with pre-eclampsia

HELLP

haemolysis, elevated liver enzymes and low platelet count

Gestational hypertension

new hypertension presenting after 20 weeks without significant proteinuria

Mild

diastolic blood pressure 90–99 mmHg, systolic blood pressure 140–149 mmHg

Moderate

diastolic blood pressure 100–109 mmHg, systolic blood pressure 150–159 mmHg

Severe

diastolic blood pressure 110 mmHg or greater, systolic blood pressure 160 mmHg or greater

Offer birth

offer elective early birth through induction of labour or by elective caesarean section if indicated

Pre-eclampsia

new hypertension presenting after 20 weeks with significant proteinuria

Severe pre-eclampsia

pre-eclampsia with severe hypertension and/or with symptoms, and/or biochemical and/or haematological impairment

SPC

summary of product characteristics

Sources

Hypertension in pregnancy: diagnosis and management (2010 updated 2011) NICE guideline CG107

Your responsibility

The guidance in this pathway represents the view of NICE, which was arrived at after careful consideration of the evidence available. Those working in the NHS, local authorities, the wider public, voluntary and community sectors and the private sector should take it into account when carrying out their professional, managerial or voluntary duties. Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

Contact NICE

National Institute for Health and Care Excellence
Level 1A, City Tower
Piccadilly Plaza
Manchester
M1 4BT

www.nice.org.uk

nice@nice.org.uk

0845 003 7781