

Dumfries &

Galloway

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Better

Preconception Health Toolkit

A guide for staff across all agencies on raising
preconception health with their service users



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Who is this toolkit for?

This toolkit is for staff across all services who work with children, young people and men or women of reproductive age. It has been developed to provide an overview of preconception health including risk indicators and to encourage and enable non-specialist staff to discuss preconception health with their service users.

What is preconception health?

Preconception health describes the health status of any woman or man before a pregnancy is conceived, regardless of pregnancy intention.

There is a clear link between a baby's health and their mother's health before (and between) pregnancies. Healthy women are more likely to have healthy babies who grow into healthy children¹.

Preconception health is not just for women, it is important for men too. There are things men can do for their own health and for the health of their partner and baby.

Why promote preconception health?

By taking actions to optimise health prior to a pregnancy being conceived, the risk of adverse outcomes such as birth defects, premature birth and very low birth weight can be significantly reduced and the health and wellbeing of the mother, father and baby maximised.

Improving the general health of the whole population through increasing knowledge and understanding of healthy lifestyles should be an underlying philosophy of all health, education and social services². Preconception health messages can easily be included with other general healthy lifestyle messages.



1. Royal College of Obstetricians and Gynaecologists (2008) Standards for Maternity Care Royal College of Obstetricians and Gynaecologists; London
2. Royal College of Obstetricians and Gynaecologists (2008) Standards for Maternity Care Royal College of Obstetricians and Gynaecologists; London

The first trimester of pregnancy is when fetal development is most vulnerable to the impact of adverse maternal biological, psychological and social factors. During this early stage of pregnancy, women may not be aware that they are pregnant and traditionally, health promotion for pregnancy begins in the antenatal period, most often from first contact with Maternity Services at around 8 to 12 weeks gestation. It is therefore not uncommon for women and men to unwittingly continue negative health behaviours through this important stage of fetal development.

Who can promote preconception health?

The concept that “every contact is a health improvement opportunity”³ illustrates that all service providers who have contact with women and men of reproductive age can make a significant impact on optimising preconception health. By utilising formal and informal opportunities at every contact to promote health and wellbeing and to support women and men to make healthy lifestyle choices, the health and wellbeing of women and men who plan a pregnancy, as well as those who find themselves with an unintended pregnancy, can be maximised.

At what life stage should preconception health be promoted?

The reproductive capacity for women spans nearly four decades and even longer for men. During this time, reproductive intentions and risks are likely to change; therefore preconception care needs to be delivered across the life course.

What are the preconception health risk indicators for adverse pregnancy outcome?

The following are risk indicators for adverse pregnancy outcome. If present, any practitioner should use this as an opportunity to advise the service user about potential impact on pregnancy outcome and sign post the service user to their GP, Practice Nurse or other relevant health professional for further advice (contact details at end of booklet).

Summary: Risk indicators for adverse pregnancy outcome

- Age
- Chronic health conditions
- Closely spaced pregnancies
- Domestic abuse
- Environmental hazards
- Family history / genetic conditions
- Immunisations
- Infections
- Mental Health problems
- Physical inactivity
- Poor diet
- Previous miscarriage
- Previous preterm birth or low birth weight
- Previous still birth
- Substance or medication use
- Unintended pregnancy
- Weight

Age

Women aged 35+: The risk of having a baby with a chromosomal disorder such as Down's syndrome increases with age. Miscarriage, ectopic pregnancy and complications such as gestational diabetes, pre-eclampsia, placenta praevia and premature birth are also more likely for women aged over 35.

Teenage pregnancy: The additional demands that pregnancy places on the still developing body of an adolescent may present physical risks including placenta praevia, hypertension, premature birth, low birth weight and anaemia. Teenage pregnancy and early parenthood may also present psychological risks to wellbeing. Education, training and employment limitations may increase the risk of poverty for teenage parents and their children.



Chronic health conditions

Women with chronic health conditions (including asthma, cardiovascular disease, diabetes, eating disorders, hypertension, blood clots, lupus, phenylketonuria, renal disease, rheumatoid arthritis, seizure disorders, thrombophilia, and thyroid disease) are at an increased risk for pregnancy-related complications and adverse pregnancy outcomes. Managing chronic health conditions prior to and during pregnancy can reduce negative impact on the health of the mother and baby. Service users should be encouraged to discuss their intentions of becoming pregnant with their GP or specialist prior to conception if possible.

Closely spaced pregnancies

Women who have very closely spaced pregnancies (within 6 months of a previous pregnancy) are more likely to have a preterm or low birth weight baby.

Domestic abuse

Physical, emotional, psychological or sexual abuse often begins or escalates during pregnancy. Domestic abuse during pregnancy puts mother and baby at risk from miscarriage, infection, premature birth, injury or death.

Environmental hazards

Household chemicals, cat litter and cat faeces, unpasteurised milk products, injuries from not wearing seatbelts, hair dyes and perms, computer monitors and some hobbies pose risks to the fetus. Avoiding exposure to hazardous chemicals, limiting screen time, wearing gloves and working in well ventilated areas can reduce these risks.

Family history/genetic conditions

Some health problems and conditions are inherited. Couples with a personal or family history of inherited genetic conditions including heart defects, sickle cell anaemia, thalassaemia, cystic fibrosis, Huntingdon's disease and muscular dystrophy, can be referred for genetic screening and counselling.

Immunisations

Immunising against Hepatitis B, HPV, Influenza, Measles, Mumps, Rubella, Tetanus and Diphtheria during childhood or at an appropriate interval before pregnancy helps protect the mother and fetus.

Infections

Hepatitis C, HIV and Malaria are transmissible to the fetus. Treatment may be available to reduce the risk of transmission for women planning a pregnancy.

Sexually transmitted infections (STIs): Many STIs such as Chlamydia, Genital Warts, Gonorrhoea, Herpes Simplex, Syphilis and Trichomonias Vaginalis can be more troublesome to treat during pregnancy and can adversely affect the fetus. For example some STIs can result in infertility, ectopic pregnancy, miscarriage, physical and developmental disabilities, slowed growth, preterm birth and low birth weight. Testing and early treatment can prevent these adverse outcomes.

Bacterial Vaginosis: there is a small risk of pregnancy-related complications such as premature birth and miscarriage.

Zika Virus: The Zika virus can cause microcephaly (small brain in newborn babies) and is acquired mainly as a result of mosquito bites and occasionally through sexual intercourse. It is recommended that women **avoid becoming pregnant** while travelling in an area with active Zika transmission, and for 8 weeks after their return home. Women with a male partner who has travelled to a high risk area, should use effective contraception to prevent pregnancy AND condoms during vaginal, anal and oral sex to reduce the risk of transmission during travel and for 8 weeks after their return home (6 months if had symptoms compatible with Zika infection). **Pregnant women** should postpone non-essential travel to these areas. **Partners of pregnant women** should use condoms during vaginal, anal and oral sex to reduce the risk of transmission during travel and for the duration of the pregnancy even if they did not develop symptoms.

Mental health problems

Women with previous or existing mental health problems are more likely to experience problems during and after pregnancy. Dealing with the underlying causes of poor mental health and treating mental health problems before pregnancy can help prevent negative pregnancy outcomes for both mother and baby. Some medications used to treat mental health problems increase the risk of adverse pregnancy outcome.



Physical inactivity

Benefits of regular physical activity include the prevention or management of obesity, diabetes, and cardiovascular disease. Physical exercise also promotes psychological wellbeing by reducing feelings of anxiety and depression.

Poor diet

Multivitamin supplementation containing 400micrograms of folic acid in the preconception period can help prevent congenital malformations including neural tube defects, reduce preeclampsia/hypertension risk and reduce premature birth. A diet rich in whole grains, fruits and vegetables is important for maintaining healthy weight and a healthy body. In addition, a healthy diet can lower the risk of low birth weight.

Previous miscarriage

The likelihood of recurrence is low however for women who have experienced 3 or more early losses, referral can be made to a specialist to identify a cause and suitable treatment.

Previous preterm birth or low birth weight

Women who have experienced a previous preterm birth or low birth weight are at increased risk of a subsequent preterm birth or low birth weight. Addressing risk factors such as tobacco, drug or alcohol use may reduce the risk of preterm birth and low birth weight.

Previous stillbirth

Women who have experienced a previous stillbirth may be at increased risk of stillbirth, preterm birth or low birth weight in subsequent pregnancies. Increased surveillance and counselling may reduce these risks.



Substance or medication use

Alcohol: Alcohol use can affect fertility and cause fetal alcohol spectrum disorder, fetal alcohol syndrome and other birth defects. Alcohol use can also contribute to developmental delays and behavioural problems in children. Drinking alcohol has been shown to increase a woman's risk of miscarriage. Heavy drinking (more than 6 units per day) or binge drinking (5 or more units on one occasion) during the first trimester is particularly harmful to the development and life chances of a fetus. No time during pregnancy is safe to drink alcohol, and harm can occur early, before a woman even realises she is pregnant.

Drugs: Taking illegal drugs, even in small amounts, can affect the development of a fetus and how well the placenta functions. Drug use during pregnancy can result in slowed growth and brain development, preterm birth, low birth weight, miscarriage, cot death, Neonatal Abstinence Syndrome and behavioural problems.

Smoking: Smoking during pregnancy significantly contributes to low birth weight, still births, preterm babies, cot death, birth defects and increased risk of long-term developmental and health problems. Breathing second hand smoke from partners or family members can also lead to low birth weight.

Medication: Some medicines can be harmful to a developing fetus. Women who are prescribed teratogenic medicines (medicines which can cause birth defects) should be informed of the risks and provided with appropriate contraception to prevent pregnancy as well as being advised to talk with a GP or specialist before stopping any medication. Additional care should be taken in holiday travel for women at risk of pregnancy taking anti-malarial drugs.

Unintended pregnancy: Unplanned pregnancy can be associated with numerous adverse consequences for mother and baby including delayed entry into prenatal care and an increased risk of harmful prenatal behaviours such as smoking and drinking alcohol. It is good practice to raise awareness of preconception health with service users who are ambivalent about becoming pregnant (and therefore not actively preventing pregnancy).

Weight

Overweight: Being overweight reduces fertility and increases the risk of complications for both pregnant women and their babies. With increasing Body Mass Index (BMI), the risks also become higher and are significantly higher for women with a BMI over 40. For mothers, the risks associated with a high BMI (more than 30kg/m²) include thrombosis, gestational diabetes, high blood pressure and preeclampsia. For babies, the risks of high BMI include neural tube defects, miscarriage, high birth weight, still birth and higher risk of obesity and diabetes in later life. High BMI is also associated with increased complications during labour and birth such as preterm birth, a long labour, shoulder dystocia, an emergency caesarean, a more difficult operation and more complications afterwards for caesarean delivery, anaesthetic complications and postpartum haemorrhage.

Underweight: Women who are underweight before pregnancy (body mass index less than 18.5kg/m²) are at significantly greater risk of having premature, low birth weight babies.



What health enhancing behaviours should I be promoting to women and men of child bearing age? (*women only)

- Planning pregnancy and parenthood
- Taking appropriate contraception to prevent unplanned pregnancy
- Talking with GP or specialist about any medication, family history or previous adverse pregnancy outcomes in advance of becoming pregnant
- Stopping smoking and avoiding exposure to second hand smoke
- Reducing alcohol consumption
- Stopping illicit drug use
- Managing weight
- Seeking support if a partner is violent*
- Being physically active
- Ensuring immunisations are up to date*
- STI testing if change of sexual partner or partner has other partners
- Leaving a minimum 18 month gap between pregnancies*
- Regular smears*
- Eating a balanced diet: see below for further information including vitamin supplements



What about diet and vitamin supplements?

It is best to get vitamins and minerals from the food you eat, but taking a vitamin and mineral supplement can be helpful, particularly if you do not eat a varied and balanced diet or are vegetarian or vegan. Health professionals can provide advice on suitable supplements for you. It is recommended that you take 400 micrograms (mcg) of folic acid supplement each day from **3 months before pregnancy** and continue until you reach your 13th week of pregnancy. In addition you should consider taking a supplement containing 10mcg of vitamin D which is recommended throughout pregnancy and during breastfeeding. Higher doses of both may be recommended if you are overweight or have other risk factors.

Do not take vitamin A supplements or supplements containing vitamin A when you are pregnant as too much can be harmful to the fetus.



Tips for raising the issue of preconception health



It is normal for practitioners to feel concerned about raising preconception health with service users but by using the information available and being willing to initiate a discussion, any challenges can be overcome. Brief advice on preconception health can be described as:

- A structured conversation about pregnancy intentions with women and men of reproductive age which seeks to support the service user to think about their preconception health.
- Non-confrontational. Motivational interviewing does not challenge service users' views about their behaviour. Instead the practitioner listens to the service user's point of view and aims to understand barriers and support identification of opportunities.
- Typically short, though time taken will vary depending on the wishes of the service user, their current health status, their readiness to make changes, their pregnancy intentions, the time available and the skills of the practitioner.
- Having numerous entry points (e.g. not thinking about pregnancy intentions, planning a pregnancy, trying to get pregnant, previous adverse pregnancy outcome, subsequent pregnancy, chronic health condition, issuing medication etc). These are useful to be aware of when you raise the issue in an opportunistic (e.g. in response to a particular sign, comments, symptom or event) or planned way (systematically raising the issue with all or a specific client group).
- Encouraging men to take equal responsibility and to support their partner to be healthy.

What else can I do to help raise awareness of preconception health?

In addition to raising the issue of preconception health with service users, you could:

- Add a statement about preconception health to your website
- Add a statement about preconception health to any leaflets or resources you produce.

You could use any of the information within this Toolkit or simply include a short statement like this one:

“Preconception health describes your health status before a pregnancy is conceived, regardless of whether you are planning a pregnancy or not. We know that healthy men and women are more likely to have healthy babies who grow into healthy children. We can support you to assess your preconception health and signpost you for further advice”.

Where can I find out more about preconception health?

The following Health Professionals may be able to offer further information, advice and support around preconception health:

- **General Practitioner (GP) or Practice Nurse**

Find a GP at www.nhsdg.scot.nhs.uk. Your GP or Practice Nurse may refer you to Maternity Services, Gynaecology or another appropriate health professional.

- **Sexual Health D&G**

Telephone 03457 02 36 87 to book an appointment

The following websites offer further information and advice about preconception health:

www.cdc.gov/preconception/index.html

A comprehensive American website with tools and research links

www.nhsinform.co.uk/health-library/articles/p/preconception/introduction

Preconception health information from NHS Inform

<http://www.nhs.uk/Conditions/pregnancy-and-baby/pages/pregnancy-and-baby-care.aspx>

Pregnancy and baby guide including pre-pregnancy advice

<https://www.healthystart.nhs.uk/>

See who qualifies to get free vouchers every week to spend on milk, plain fresh and frozen fruit and vegetables, infant formula milk and free vitamins.

<https://www.nhs.uk/smokefree>

Support to quit smoking

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