

Preconception Assessment

[Disclaimer](#)

See also [Antenatal Care – First Consult](#).

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Background – About Preconception Assessment

- Preconception assessment consists of interventions that aim to identify and modify biomedical, behavioural and social risks to a woman's health or pregnancy outcome through prevention and management.
- The goal of preconception care is to improve pregnancy related health outcomes.

Assessment

Practice Point

Promote preconception care

Utilise opportunities to promote preconception care, including consultations for women's health checks, contraception, or cervical screening.

1. Ask about reproductive life plan:
 - contraception.
 - fertility.
2. Assess lifestyle aspects:
 - **Smoking** – woman and her partner
 - Alcohol and drug use
 - **Weight**, diet, and physical activity

Weight

- A BMI ≥ 30 (or ≤ 18.5) renders a pregnancy higher risk.
 - A high BMI increases the risk of maternal, fetal, and neonatal complications including:
 - gestational diabetes
 - pregnancy-induced hypertension or pre-eclampsia
 - thromboembolic disease
 - obstructed labour
 - caesarean section
 - preterm birth
 - stillbirth.
 - Encourage patient to aim for weight normalisation prior to pregnancy. A 10% reduction in BMI pre-pregnancy can significantly reduce the risk of complications and improve chances of spontaneous conception.
 - See [Obesity in Pregnancy and Pre-pregnancy](#).
- Exposure to toxins through work or hobbies e.g. solvents
 - Hand hygiene
 - Food hygiene and safety

3. Take a detailed history:

➤ Family history

➤ **Medical history**

- Take a medical history. Important pre-existing conditions include:
 - [diabetes](#) – Type 1 or 2
 - cardiac or renal disease
 - hypertension
 - [thyroid disease](#)
 - [epilepsy](#)
 - [asthma](#)
 - abdominal surgeries.
- Consider:
 - [continence and prolapse](#).
 - possibility of female genital mutilation/cutting (FGM/C) – commonly performed in women from Somalia, Sudan, Ethiopia, and Egypt, and in some from the Middle East and Asia.

➤ **Psychosocial history**

Mental health history:

- Schizophrenia
- Major mood changes
- Previous or current trauma and abuse
- Anxiety
- Consider:
 - supports that will be available during pregnancy and post-partum.
 - previous or current trauma and abuse.
 - possibility of [family violence](#).
 - possibility of reproductive coercion.

➤ **Medication**

- Take a medication history.
 - Review all current medications and check safety.
 - To understand the categorisation system for medicines in pregnancy, see Australian TGA – [Prescribing Medicines in Pregnancy Database](#).
- Look for **potential teratogenic effects** in:
 - Concerns about medication include:
 - miscarriage
 - teratogenesis
 - neonatal pulmonary hypertension
 - neonatal withdrawal
 - long-term behavioural or developmental effects.
 - Stop any [category X drug](#).
 - Change:
 - antihypertensives:
 - ACE inhibitors are contraindicated in pregnancy and should be ceased once pregnancy is confirmed.
 - Preference is for methyldopa or labetalol.

See also [Hypertension in Pregnancy and Postpartum](#).

- antidepressants:
 - Only cease or reduce the dose if clinically appropriate after careful discussion with the patient.
 - Consider using sertraline as it is currently the most widely used drug.
 - Paroxetine is contraindicated in pregnancy.
 - Risk of relapse is 50 to 70% if medication is withdrawn inappropriately.
 - [antiepileptics](#) – avoid carbamazepine and valproate.
 - [drugs for hyperthyroidism](#) – preference is for propylthiouracil in first trimester then switch to carbimazole in second trimester.
 - [drugs for diabetes](#) – metformin is acceptable but [type 2 diabetics](#) usually switch to insulin during pregnancy.
- non-prescription medications.
 - vitamins and supplements.
 - complementary medications.
 - recreational drugs.

➤ **Vaccination**

Check vaccination history:

- Rubella and varicella (live vaccines) can be given prior to pregnancy. Advise to avoid pregnancy for at least 28 days post immunisation.
Measles vaccine should be given prior to pregnancy to patients without evidence of receiving two documented doses of valid MMR vaccine or without serological evidence of immunity. Advise to avoid pregnancy for 28 days post immunisation.
- Influenza immunisation can be given either before or during pregnancy.
- Pertussis (DTPa) will be given during pregnancy between 20 and 32 weeks.

See [Immunisation – Pregnancy](#).

➤ **Genetic risk of fetal anomalies**

Ask about personal or family genetic disorders on either side of family e.g.:

- haemoglobinopathies
- Cystic fibrosis (CF)
- Fragile X, spinal muscular atrophy
- Tay-Sachs disease

Be aware that consanguinity and some ancestry e.g., Ashkenazi Jews, confers increased genetic risk.

➤ **Previous pregnancy outcomes**

- Discuss previous pregnancy experience as this may influence patient's choices.
- If the previous birth was by caesarean section, the appropriate management of the next birth can be discussed with the obstetric care provider.
- Identify previous pregnancy outcomes that require early obstetric review, such as:
 - Previous stillbirth or neonatal death
 - Recurrent or mid-trimester pregnancy loss
 - Cervical incompetence
 - Placental abruption
 - Previous delivery for severe fetal or maternal illness

- *Fetal abnormality*
- *Gestational diabetes mellitus on insulin*
- *Pre-eclampsia*
- *Fetal growth restriction*
- *Macrosomia > 4500 g*
- *Shoulder dystocia*
- *Pre-term labour or birth*
- *Anal sphincter tear*
- *Grandmultiparity*
- *Rhesus iso-immunisation*
- *Significant postpartum haemorrhage (> 1000 mL)*

4. Perform a clinical examination:

- Record weight, BMI, and blood pressure.
- Perform [cervical screening](#) and breast examination if indicated or due.
- Consider if there is [female genital mutilation/cutting \(FGM/C\)](#).
- Check **oral cavity** health.

Oral health

If last assessment was > 12 months ago, advise a dental check prior to pregnancy:

- *Poor maternal oral health can affect pregnancy outcomes and dental health of offspring.*
- *There is an association between severe gum disease and pre-term birth, low birth weight, and pre-eclampsia.*

5. Investigate in all patients:

- FBE
- Rubella immunity
- Varicella immunity

6. Investigate if indicated:

- HIV, HBV, HCV, syphilis
- [Cervical screening](#) if due
- Chlamydia and gonorrhoea
- B12 e.g. in vegans
- Urinalysis, and if abnormal, MSU and urinary albumin-creatinine ratio
- Vitamin D
- Ferritin
- **Screening for thalassaemia**
 - *Haemoglobinopathies are the most common genetic defect worldwide.*
 - *Perform FBE, ferritin, haemoglobin electrophoresis – with DNA analysis to follow, if indicated.*
 - *If performed previously, testing does not need to be repeated.*
 - *Consider testing partner at the same time, particularly if they are from Southern Europe, Middle East, Africa, South-East Asia, Indian subcontinent, or Pacific Islands. Write partner details on each request slip to link at the laboratory.*

7. Provide opportunity for **reproductive carrier screening** including cystic fibrosis (CF), fragile X syndrome, and spinal muscular atrophy, even in the absence of family history.

Reproductive carrier screening

- Detects mutations responsible for autosomal recessive and X-linked genetic disorders.
- Currently does not attract Medicare rebate. Costs range between \$350 and \$1000.
- Unless time is limited (e.g. during pregnancy), test female partner first. If there is a positive result, perform partner screening, ensuring partner's details are linked on the request form.
- Three gene panel detects carriers for cystic fibrosis (1 in 25), spinal muscular atrophy (1 in 35), and Fragile X syndrome (1 in 250)
- Expanded carrier screening can also detect carriers of many other genetic conditions. As up to 24% of adults will test positive for at least one recessive disorder, this should only be offered with appropriate genetic counselling.
- Screening is available via an increased number of [genetic testing laboratories](#). Some services offer genetic counselling via phone or online.
- Patients can organise testing themselves (kit sent directly to home) or by having a sample (blood or saliva) collected at a pathology collection centre. Any known family history should be documented on the request form.

Management

1. Educate as required about [changes in fertility with age](#). Women's fecundity decreases gradually but significantly at aged approximately 32 years, with a more rapid decline after age 37 years.
2. If history or examination reveals a **pre-existing medical condition**, arrange appropriate [specialist referral](#), if required. Once pregnant, these patients are high risk and need to be assessed as soon as pregnancy is confirmed.

Pre-existing medical conditions

Examples include:

- Cardiovascular e.g. [hypertension](#), [cardiac disease](#)
 - Endocrine e.g. [diabetes Type 1 and 2](#)
 - Neurological e.g. [epilepsy](#)
 - Psychiatric
 - Renal
 - Respiratory e.g. [asthma](#)
 - Musculoskeletal e.g. [SLE](#)
 - Thyroid ([goitre](#))
3. If personal or family history of a specific inherited disorder, or at high risk of a chromosomal or genetic condition, offer an early [genetic health referral](#).
 4. If reproductive carrier screening ordered, manage as per [Prenatal Screening and Diagnosis of Fetal Anomalies](#).
 5. Provide [general nutritional advice](#) and information about [food safety in pregnancy](#). Recommend supplements:

➤ **Folic acid**

- Advise folic acid supplementation of 0.4 to 0.5 mg per day for at least 1 month prior to pregnancy, and for the first 3 months after conception.
- Some patients will need **higher doses of folate**.

Higher doses of folate

A 5 mg daily dose is recommended where there is a known increased risk of neural tube defect (NTD):

- BMI > 30
- Previous child or family history of NTD
- Patients taking anticonvulsant medication
- Pre-pregnancy diabetes mellitus
- Malabsorption
- 5-methyltetrahydrofolate deficiency

➤ **Iodine**

Women who are pregnant, breastfeeding, or considering pregnancy should have an iodine supplement of 150 micrograms each day.

➤ **Vitamin D, iron, B12 if deficient.**

6. Provide information about **prevention of cytomegalovirus (CMV) and parvovirus.**

Prevention of cytomegalovirus (CMV) and parvovirus

The specific recommended hygiene measures to prevent CMV are:

- Do not share food, drinks, or utensils used by young children (less than 3 years of age).
- Do not put a child's dummy in your mouth.
- Avoid contact with saliva when kissing a child.
- Attention to hand hygiene, when changing nappies or when in contact with urine. Thoroughly wash hands with soap and water for 15 to 20 seconds, especially after changing nappies, feeding a young child, or wiping a young child's nose or saliva.
- Clean toys, countertops, and other surfaces that come into contact with children's urine or saliva, and not sharing a toothbrush with a young child.

7. Encourage healthy lifestyle and regular exercise. If overweight or obese, set realistic goals for weight loss prior to conception. Consider [dietetic referral](#) if underweight or obese. See [Obesity in Pregnancy and Pre-pregnancy](#).
8. If mental health concerns, consider [mental health service referral](#).
9. If indicated, provide advice on <https://www.quit.org.au/> and [alcohol intervention](#).
10. If oral health concerns, arrange [dental referral](#)
11. If concerns about FGM/C, refer to Refugee Health Referrals – [female genital mutilation or circumcision](#).
12. If travel is planned, consider if there will be exposure of the woman or her partner to the [Zika virus](#). Arrange a review appointment to discuss travel health and strategies to avoid infection

Referral

- For medical conditions, arrange appropriate [specialist referral](#) if required.
- If mental health concerns, consider [mental health service referral](#).
- If a woman is underweight or obese, consider [dietetic referral](#).
- If oral health concerns, consider [dental referral](#).
- If concerns about FGM/C, refer to Refugee Health Referrals – [female genital mutilation or circumcision](#).
- For additional genetic counselling, refer for a [genetic health referral](#).

Information

For health professionals

Further information

- Australian Government Department of Health:
 - [Clinical Practice Guidelines Pregnancy Care \(Short-form Guideline\)](#)
 - [Prescribing medicines in pregnancy database](#)
- Centre for Genetics Education – [Folate Before and During Pregnancy](#)
- RACGP – [Guidelines for preventive activities in general practice: The Red Book: Preventive activities prior to pregnancy](#)
- The Royal Australian and New Zealand College of Obstetricians and Gynaecologists:
 - [Pre-pregnancy Counselling](#)
 - [Vitamin and Mineral Supplementation and Pregnancy](#)

For patients

- Better Health Channel:
 - [Alcohol and Pregnancy](#)
 - [Female Genital Cutting or Circumcision \(FGC\)](#)
 - [Iodine](#)
 - [Nutrition: Women's Extra Needs](#)
- Centre of Perinatal Excellence (COPE):
 - [Am I at risk?](#) (emotional and mental health problems)
 - [Preparing for Birth](#)
 - [Preparing for Pregnancy](#)
 - [Types of Support](#) (counselling and psychological support)
- Quitline – [I'm pregnant](#)
- The Royal Women's Hospital:
 - [Food Safety During Pregnancy](#)
 - [Good Nutrition for Pregnancy](#)

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