Plain language summary

First Trimester Miscarriage

What is this summary about?

This summary is relevant to all women and their partners who experience a first trimester miscarriage (i.e. in the first 12 weeks of pregnancy).

Who is this summary for?

The National Women and Infants Health Programme (NWIHP) recently developed/updated the National Clinical Practice Guideline (CPG) on First Trimester Miscarriage. This Guideline is for healthcare professionals who care for women/couples in pregnancy and covers all aspects of care for women/couples who experience a first trimester miscarriage. The purpose of this plain language summary (PLS), using non-medical terminology, is to provide an overview of the national guideline.

What is a miscarriage?

Miscarriage is defined as a loss of pregnancy before 24 weeks of pregnancy and can occur in both the first and second trimesters of pregnancy. In this guideline we focus on first trimester miscarriage, which is defined as a pregnancy loss within the first 12 weeks of pregnancy.

Types of first trimester miscarriage

Miscarriage can be divided into:

- Threatened
- Inevitable
- Incomplete
- Complete
- Missed

Threatened miscarriage

This is a medical term to describe vaginal bleeding early in pregnancy which may or may not happen with abdominal pain. Ultrasound scan confirms there is an ongoing pregnancy.

Inevitable miscarriage

Inevitable miscarriage is characterised by a history of vaginal bleeding and examination shows that the neck of the womb (cervix) is open. A pregnancy in the womb may or may not be visualised on ultrasound. Even though no pregnancy tissue may have passed from the womb, miscarriage will definitely happen.

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Incomplete miscarriage

Incomplete miscarriage happens after heavy vaginal bleeding is reported and an ultrasound scan identifies some pregnancy tissue still located within the womb.

Complete miscarriage

A miscarriage is diagnosed as complete when an ultrasound scan shows that there is no pregnancy tissue remaining in the womb.

Missed miscarriage

A missed miscarriage is also known as a silent miscarriage because women may not experience any symptoms of miscarriage (i.e. pain and/or bleeding). In this instance, the pregnancy stops developing and this type of miscarriage is diagnosed using ultrasound.

Pregnancy of uncertain viability

This term is used when ultrasound shows a pregnancy located in the womb, however it is not clear if the pregnancy is one that will develop normally or may miscarry. To clarify the diagnosis, a repeat ultrasound scan should be completed at least 7 days after the initial scan to assess whether the pregnancy develops or not. Doing an ultrasound scan before this time is often inconclusive.

Why does a miscarriage happen?

In most cases of miscarriage, no cause or risk factor is identified.

There are some factors that may increase the risk:

- Increasing age (over 35 years) for women and men
- Alcohol consumption
- Caffeine consumption
- Body mass index (BMI) > 35kg/m^2 or < 18.5 kg/m^2
- Underlying or pre-existing medical conditions, e.g. thyroid disorders, diabetes, or some conditions that affect the blood such as anti-phospholipid syndrome
- Anatomical problems, i.e. issues with the physical structure of the womb and/or cervix
- Genetic causes
- Male factors, e.g. sperm health

What are the symptoms of a miscarriage?

Pain and bleeding are the most common symptoms of miscarriage. Pain can vary in severity from a dull ache to strong abdominal cramps. Bleeding can range from light spotting to heavy bleeding with blood clots. Some women do not experience any symptoms and are diagnosed with a missed miscarriage during ultrasound assessment.

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Women should be advised to attend their local maternity unit/hospital if the following symptoms develop:

- Excessive bleeding (i.e. changing a pad soaked with blood clots every 15 minutes over 1 hour or 4 soaked pads over 1 hour)
- Severe lower abdominal pain
- New onset pain not relieved by over-the-counter pain relief (e.g. paracetamol)
- Shoulder tip pain
- Dizziness or collapse

How is a miscarriage diagnosed?

Women who experience pain and/or vaginal bleeding should be referred to their local early pregnancy unit (EPU) to make a diagnosis and arrange care and follow-up.

EPU is a dedicated outpatient service providing formal ultrasound scans and blood test investigations.

In some maternity units/hospitals, the EPU is also known as an early pregnancy assessment unit (EPAU) or early pregnancy clinic (EPC).

To diagnose a miscarriage, an ultrasound scan is recommended. For pregnancies less than 8 weeks, transvaginal ultrasound is usually required to visualise the pregnancy.

In instances where it is not possible to diagnose a miscarriage (i.e. pregnancy of uncertain viability) a repeat ultrasound scan will be offered at least 7 days after the initial ultrasound scan to assess whether the pregnancy develops or not.

What is the treatment for a miscarriage?

Once miscarriage is diagnosed, and the type of miscarriage identified, management options will be discussed.

The following should be considered when planning management:

- How severe are symptoms (e.g. excessive bleeding, severe pain, dizziness or fainting/collapse)
- How many weeks pregnant the woman is (based on ultrasound scan)
- Ultrasound scan findings
- Medical history (e.g. bleeding risk)
- Surgical history
- History of recurrent miscarriage
- Social supports
- Lives more than 1 hour from the hospital and/or no transportation
- Women's preferences

Women should be counselled about different management options, their success rates and complications, and the need for further follow-up. Management options for miscarriage include conservative (wait and see), medical and surgical treatment.

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Conservative Management – wait and see

Women who are well with mild or no bleeding may opt for a natural approach to manage miscarriage. Women should be advised bleeding patterns are often variable and may be accompanied by abdominal pain.

To confirm if miscarriage is complete, follow-up ultrasound should be completed 2 weeks after bleeding ceases. However, medical review should be arranged if concerning symptoms develop (i.e. changing a pad soaked with blood clots every 15 minutes over 1 hour or 4 soaked pads over 1 hour) or if the woman wishes to change management pathway.

Medical Management

Medical management involves taking medications – mifepristone followed by misoprostol – to induce miscarriage. Mifepristone is a tablet in the presence of a doctor. Misoprostol is taken 24 to 48 hours (ideally 36 hours) later. For misoprostol to work best, women are advised to take misoprostol buccally which means the tablets are placed in the mouth between the gums and the inner lining of the cheek and are left to dissolve for 30 minutes.

After taking the misoprostol tablets, women should be informed that heavy vaginal bleeding (heavier than a period) accompanied with lower abdominal cramps usually occurs and that this bleeding may last up to 7 to 10 days. If no bleeding occurs 48 hours after taking the misoprostol tablets, women should contact their local EPU to discuss options such as repeat medical treatment.

To ensure miscarriage is complete, follow-up is with either a high sensitivity urine pregnancy test or ultrasound scan 3 weeks after initiating medical management.

Surgical Management

Surgical management is often called vacuum aspiration of the uterus (womb). It can be manual (MVA: manual vacuum aspiration) or electrical (EVA: electrical vacuum aspiration). These operations are usually day procedures and can be performed under general or regional (spinal) anaesthetic in the operating theatre or outpatient clinic using local anaesthetic.

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Complications of First Trimester Miscarriage

	Conservative	Medical	Surgical
Feeling faint	1-2 in 100	1-2 in 100	1-2 in 100*
Heavy bleeding requiring blood transfusion	1 in 1000	1 in 1000	1 n 1000
Incomplete emptying of the womb/retained pregnancy tissue requiring further treatment	3-10 in 100	1-10 in 100	1-3 in 100
Infection	1-3 in 100	1-3 in 100	1-3 in 100
Cervical tear/injury	N/A	N/A	1 in 100
Injury to womb/need for further surgery	N/A	N/A	1-4 in 1000
Anaesthesia-related complications	N/A	N/A	< 1 in 1000
Side-effects of misoprostol	N/A	1 in 10	N/A
Diarrhoea		>1 in 10 – 1 in 100	
Nausea and vomiting			
Fever		<1 in 1000 – <1 in 100	

*only if awake during surgery

What is the recommended protocol to manage pregnancy tissue?

Routine histopathological (laboratory) examination of pregnancy tissue is currently recommended where pregnancy tissue is available after a miscarriage. This is usually offered after surgery or inpatient medical management, and in women who meet the criteria for recurrent miscarriage and its investigation.

Women/couples should be informed that fetal tissue is often too small to be visualised by the naked eye or on microscopic examination, and in some instances may not be identified at all. Hospital procedures and policies relating to management of pregnancy tissue must be discussed with women/couples.

Miscarriage in the community

If a woman miscarries in the community and brings pregnancy tissue to their local maternity unit/hospital, this tissue should be examined to identify if any pregnancy or fetal tissue is present, and procedures should be in place for the management of this tissue. With consent, collected pregnancy tissue may be sent for examination in the pathology laboratory.

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Miscarriage in the maternity unit/hospital

Pregnancy tissue collected during inpatient medical and surgical management is usually sent for examination in the pathology laboratory.

Histopathological examination results should be communicated to women/couples in a sensitive and timely manner. Women/couples should be provided with the opportunity to collect pregnancy tissue after examination and arrange their own personal burial/cremation if they wish. If women/couples do not want to collect pregnancy tissue, and fetal tissue is identified, with the woman's consent this tissue should be sensitively managed according to local hospital policy.

What follow-up care is recommended after miscarriage?

Follow-up care after miscarriage should include the following components:

- Appropriate bereavement and psychological support tailored to each woman's/couple's needs.
- Histopathology results should be communicated to women/couples and be documented on the woman's healthcare record for future pregnancy planning.
- Future pregnancy planning and if indicated contraceptive advice should be discussed.
- A reassurance ultrasound scan should be offered by EPU at 8 weeks in a subsequent pregnancy after miscarriage.
- Women who have two or more consecutive miscarriages, should be referred to their local recurrent miscarriage (or pregnancy loss) clinic or gynaecology clinic depending on local service availability.

Where to go for more information?

Miscarriage Association of Ireland: **https://miscarriage.ie/**

Cork Miscarriage Website: **https://www.corkmiscarriage.com/**

Pregnancy Loss Research Group, University College Cork: **https://www.ucc.ie/en/pregnancyloss/**

Pregnancy and Infant Loss Ireland: **https://pregnancyandinfantloss.ie/**

HSE website: **https://www2.hse.ie/conditions/miscarriage/**

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