

# Heavy menstrual bleeding (HMB)

Health  
professional **tool**

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Assessment, investigations & management

## Initial assessment and treatment

Heavy menstrual bleeding (HMB), previously known as menorrhagia, is a common problem affecting 25% of women of reproductive age.

It is the most common presentation of abnormal uterine bleeding in pre-menopausal women. For many women, it is associated with strong pain and has a significant impact on their quality of life.

### Presenting symptoms

- flooding through clothing
- being unable to leave the house on the heaviest days
- having to change pads and tampons frequently (including at night)
- clots greater than a 50-cent piece in size
- bleeding for more than seven days
- cramping pain
- fatigue, pallor or dizziness.

### Key messages

1. Initiate symptomatic treatment at the initial visit.
2. Order pelvic ultrasound scan (USS) to be performed day 5-10 of menstrual cycle.
3. Levonorgestrel-releasing intra-uterine system (LNG-IUS) such as a Mirena® is the most effective medical management option.
4. Uterine-sparing surgical procedures are preferred to hysterectomy.

### Pathophysiology

There can be multiple and diverse causes of HMB.

Common causes include:

- disorders of blood clotting mechanisms (excessive fibrinolytic activity and/or increased prostaglandin production) within the endometrium, for which there is no test (50% of cases)
- fibroids (30%)
- polyps (10%).

Heavy menstrual bleeding is more common in ovulatory (regular) than anovulatory (irregular) cycles.

### PALM-COEIN classification

PALM-COEIN classification of abnormal uterine bleeding (including HMB) include:

#### Structural causes (PALM)

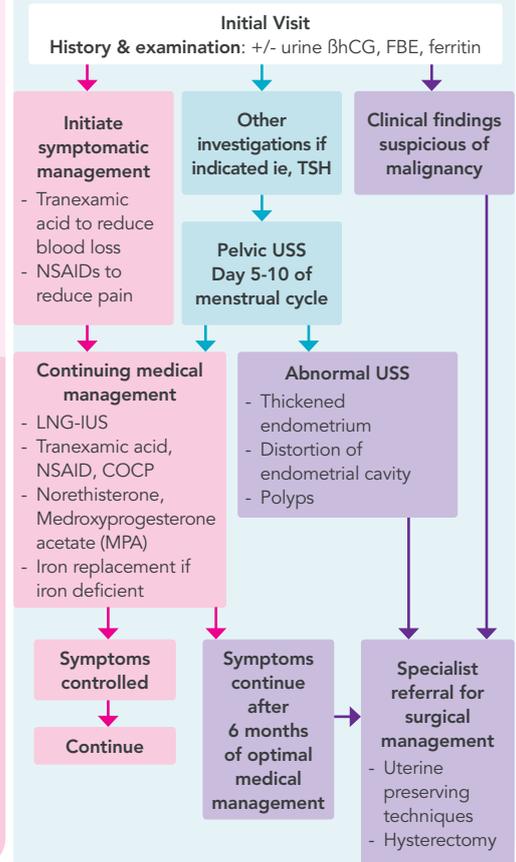
- P** – Polyps  
**A** – Adenomyosis  
**L** – Leiomyoma (fibroids)  
**M** – Malignancy or hyperplasia

#### Non-structural causes (COEIN)

- C** – Coagulopathy  
**O** – Ovulatory  
**E** – Endometrial  
**I** – Iatrogenic  
**N** – Not yet classified

### Initial assessment and treatment

Quality care involves initiation of symptomatic management at the first visit



## History

Thorough history-taking should consider possible causes and other diagnoses and include:

- **general health and family history**
- **sexual and reproductive health**
  - sexual health, pregnancies, births, sexual activity, fertility plans, cervical screening status
- **menstrual history**
  - duration, timing, heaviness and chronicity of the bleeding
  - impact on activities, school, work
  - impact on quality of life
- **symptoms**
  - pelvic pain or pressure, and fatigue
  - symptoms suggesting a bleeding disorder, or hypothyroidism
  - symptoms associated with polycystic ovary syndrome (PCOS) including acne, hirsutism and irregular bleeding
- **other**
  - post-coital or inter-menstrual bleeding (different to HMB and requires investigation)
  - iron deficiency, with or without anaemia
  - risk factors for endometrial cancer
  - medication use such as anticoagulants, eg, Warfarin or products such as fish or krill oil.

## Examination

Unless clinically inappropriate, an examination, (with consent) should include:

- checking for signs of thyroid disease, hyperandrogenism and anaemia
- abdominal palpation to check for pelvic mass, ie, fibroid
- visualisation of the vulva, vagina & cervix to exclude lower genital tract causes of bleeding (cervical swabs and cytology as indicated)
- a bi-manual pelvic examination to identify any palpable mass or abnormal uterine size.

## Risk factors for endometrial malignancy

The risk of endometrial malignancy is increased in women with:

- anovulatory cycles
- polycystic ovary syndrome
- a personal or family history of endometrial or colon cancer
- use of unopposed oestrogen or tamoxifen
- obesity (particularly with comorbid diabetes and/or hypertension)
- increasing age from perimenopause.

## Investigations

- A urine BHCG (if pregnancy cannot be excluded)
- FBE and ferritin to exclude anaemia or iron deficiency
- Pelvic ultrasound – high-quality transvaginal pelvic ultrasound is recommended in days 5-10 of menstrual cycle:
  - if there is possible structural or histological causes of HMB
  - if there is suspected pathology on examination
  - if optimal medical management fails to reduce the bleeding after six months
  - prior to the insertion of an LNG-IUS, or other procedural interventions when there is suspected structural abnormalities.

**Note:** A transvaginal ultrasound is the first-line imaging for the investigation of HMB. Transabdominal ultrasound is not as accurate for assessing the endometrium, but may be performed if transvaginal is not available, appropriate or the woman prefers it.

## Key message

Advise the woman of the importance of having the scan during days 5-10 of her menstrual cycle, when the endometrium will be at its thinnest. This will increase the accuracy and usefulness of the scan, making the need for a repeat scan less likely.

## Other investigations

- Order other investigations based on the clinical picture, ie, thyroid dysfunction, PCOS, or bleeding disorders.
- Endometrial sampling should be considered at the time of insertion of an LNG-IUS for management of HMB.

## Note: Acute heavy bleeding

- Rarely can be catastrophic, resulting in severe anaemia and shock.
- In adolescents, it is usually due to anovulatory cycles and rarely due to coagulation disorders.
- In older women, it is more likely to be associated with a pathological cause, ie, endometrial malignancy.
- Pregnancy needs to be excluded.
- Tranexamic acid should be initiated to stop/reduce the bleeding in the short/long term.

## Informed choice and shared decision-making

The long-term goal of managing HMB is to ensure that women with HMB:

- are offered the least invasive and most effective treatment appropriate to their clinical needs
- have the opportunity to make an informed choice from the range of treatments suitable to their individual situation.

A woman presenting for treatment for HMB should receive:

- consumer-focused/plain language information about
  - her condition
  - treatment options
  - risks and benefits of treatments
  - side effects, complications, failure rates
- consideration of her culture and religion
- the opportunity to ask questions, express concerns or preferences
- written patient information if preferred
- access to an interpreter if required.

## Medical Management

Quality care involves initiation of symptomatic management at the first visit.

### Initiate symptomatic treatment

Do not withhold symptomatic treatment while awaiting the results of investigations ordered to exclude malignancy or other significant pathology. Ongoing treatment can be reviewed once the results are available.

Prescribe medication to:

- decrease blood loss in subsequent menstrual cycles, ie, tranexamic acid
- relieve associated pain in subsequent menstrual cycles, ie, NSAIDs.

### Pharmaceutical treatment

Pharmaceutical treatment for HMB is effective for many women. The choice of therapy will be influenced by:

- whether the bleeding is ovulatory or anovulatory
- associated symptoms, ie, dysmenorrhoea
- whether the woman is trying to conceive
- individual needs and preferences.

## Medical management

If both hormonal and non-hormonal therapy are acceptable, consider treatments in the following order, based on evidence of effectiveness and adverse effects:

1	<b>Levonorgestrel-releasing intra-uterine system (LNG-IUS) such as Mirena®</b>		
	<ul style="list-style-type: none"> <li>• slow-release progestin that thins the endometrium</li> <li>• can reduce bleeding by up to 95% after 12 months</li> <li>• adverse effects such as spotting &amp; breast tenderness can take 3-6 months to settle</li> <li>• systemic adverse effects are usually minimal.</li> </ul>		
2	<b>Tranexamic acid and/or ▶</b>	<b>Non-steroidal anti-inflammatory drugs (NSAIDs) and/or ▶</b>	<b>Combined oral contraceptives</b>
	<ul style="list-style-type: none"> <li>• antifibrinolytic drug that inhibits clot breakdown by preventing activation of plasminogen &amp; plasmin</li> <li>• can reduce bleeding by up to 60%.</li> </ul>	<ul style="list-style-type: none"> <li>• decrease the prostaglandin concentration in the endometrium</li> <li>• reduces inflammation &amp; pain</li> <li>• can reduce bleeding by up to 50%.</li> </ul>	<ul style="list-style-type: none"> <li>• thins the endometrium</li> <li>• can reduce bleeding by up to 60%.</li> </ul>
3	<b>Cyclic norethisterone or ▶</b>		<b>Injected long-acting progestogens</b>
	<ul style="list-style-type: none"> <li>• cyclical progestins reduce endometrial thickness</li> <li>• can reduce bleeding by about 30%.</li> </ul>		<ul style="list-style-type: none"> <li>• thins the endometrium and causes amenorrhoea in up to 70% of women after 12 months</li> <li>• main adverse effect is unpredictable bleeding patterns, (light spotting in 40-50%, heavy bleeding in 1-2%)</li> <li>• with prolonged use it can lead to decreased oestrogen and increased risk of bone loss.</li> </ul>

### Levonorgestrel intra-uterine system

- The LNG-IUS is the most effective medical option for management of HMB, with greater levels of satisfaction compared with other medical treatments.
- It avoids the systemic adverse effects of oral or injectable progestins.
- Should be offered to women whenever it is clinically suitable.
- Nulliparity is not a contraindication to an LNG-IUS.
- Can be inserted by GPs with appropriate training and experience.
- If you are unable to provide this service, refer the patient to a suitably qualified colleague or service.

### The LNG-IUS contraindications include:

- pregnancy
- unexplained vaginal bleeding
- active pelvic infection
- congenital abnormality of the uterus
- significant distortion of the endometrial cavity.

## Specialist referral

When to refer to a gynaecologist:

- significant findings on clinical assessment, ie, suspicious of malignancy
- significant pelvic pathology on ultrasound, ie, fibroids distorting the endometrial cavity or polyps
- a lack of response to medical management (six months of optimal treatment has failed to reduce the heavy menstrual bleeding).

## Surgical management

- When surgical options are being considered, the least invasive procedure appropriate to the woman's clinical situation should be offered.
- For women with HMB of a benign cause, a uterine-preserving procedure should be offered.

## Uterine-preserving surgical techniques

- hysteroscopic resection of fibroids or polyps
- myomectomy
- uterine artery embolisation or MRI-guided focused ultrasound destruction for fibroids
- endometrial ablation.

## Hysterectomy

Can be discussed as a treatment option for benign causes of HMB:

- when other treatment options are ineffective
- when other treatment options are clinically unsuitable
- at the woman's request.

A woman considering a hysterectomy should be given balanced information about the risks and benefits of the procedure before making a decision.

**Short-term complications:** infection, bleeding, bowel or urinary tract injury and general surgical complications.

**Longer-term complications:** (depend partly on the approach to surgery) urinary incontinence, pelvic organ prolapse, early menopause (if the ovaries are removed).

## Key messages

Heavy menstrual bleeding is common. In most women it can be managed with a range of treatment options without the need for hysterectomy.

**This tool has been adapted from the Australian Commission on Safety and Quality in Health Care. Heavy Menstrual Bleeding Clinical Care Standard. Sydney: ACSQHC; 2017**



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