### DEFINITION
The length of a normal menstrual cycle is 24-38 days, with a variability of 2-20 days. The duration of flow of a normal menses is from 2 to 8 days and the normal amount of blood lost is 5-80 mL. About 20% of women will experience excessive menstrual bleeding at some time in their reproductive lives. Acute excessive bleeding is generally recognized by the woman as a significant problem, but chronic excessive or prolonged bleeding may be accepted by the woman as normal. Chronic heavy bleeding can lead to significant morbidity, from severe anemia to substantial adverse impacts on a woman’s quality of life. There are many different causes for both acute and chronic excessive bleeding in non-pregnant women, including pelvic pathology, systemic diseases, medication and abnormalities in hemostasis. Treatments should be matched to the patient’s underlying pathophysiology and her plans for fertility.

### SUBJECTIVE
Must include:
1. LMP and PMP (dates, duration and flow).
2. Patient reports at least one of the following:
   a. Chronic prolonged (>8 days) or excessive menstrual blood loss.
   b. History of requiring transfusions, biopsy and/or medical or surgical therapy used to control/treat heavy menstrual flow.
   c. Acute excessive or prolonged blood loss.

May include:
1. Family history of excessive menstrual blood loss.
2. Personal history of easy bruising, bleeding gums, postpartum hemorrhage or excessive blood loss with dental or other procedures.
3. Medical problems that cause heavy bleeding, such as thyroid dysfunction, liver disease, renal failure, platelet problems, obesity.
4. Medications that affect bleeding, such as anticonvulsants and anticoagulants.
5. History of previous medical therapies, diagnostic testing and/or procedures used to evaluate and treat her bleeding problems.

Must exclude:
1. Pregnancy-related causes of hemorrhage, such as threatened abortion or ectopic pregnancy.
2. Traumatic causes of acute blood loss.
3. Hemodynamic instability (e.g. shortness of breath, dizziness, loss of consciousness).

### OBJECTIVE
1. Pulse, BP.
2. Orthostatic vital signs if patient mildly symptomatic.
3. Pelvic exam if acute bleeding to assess source of blood loss and rate of bleeding.
4. Pelvic exam if history of excessive blood loss to evaluate for obvious pelvic pathology.

### LABORATORY
Must include:
1. UCG negative, if any risk of pregnancy or symptoms or pregnancy.
2. HemoCue or other rapid assessment of baseline hemoglobin.

May include: See PLAN below.

### ASSESSMENT
Acute and/or chronic heavy and/or prolonged menstrual bleeding.

### PLAN
1. **For acute bleeding:**
   a. Refer to ER if patient is hemodynamically unstable or does not otherwise qualify for outpatient treatment. Call ER to arrange for appropriate transportation.
   b. If patient stable and hemoglobin $\geq 8g/dL$ in healthy women or hemoglobin $\geq 10g/dL$ in women with diabetes or hypertension, may consider outpatient treatment to stop bleeding. Treatment
options include any one of the following:

1) Option 1: Medroxyprogesterone acetate (Provera) 10 mg two tablets orally 3 times a day for 7 days followed by two tablets daily for an additional 21 days.

2) Option 2: Combined oral contraceptives (COC)
   a) One tested regimen is 35 mcg ethinyl estradiol (EE)/1 mg NETA taken three times a day for 7 days, followed by 20 mcg EE/1 mg NETA one tablet daily for 21 days. 
   **(Contraindicated in women with US MEC category 4 conditions for COC, and for women with US MEC category 3 conditions, until MD approval obtained.)**
   b) Another recommended regimen is combined oral contraceptives with 35 mcg EE orally every 12 hours for 2 doses, then 1 tablet daily until she completes the pill pack. 
   **(Contraindicated in women with US MEC category 4 conditions for combination contraceptives and for women with US MEC category 3 conditions, until MD approval obtained.)**

3) Encourage fluid intake.

4) FeSO4 300-325 mg one tab orally up to 3 times a day until hemoglobin normalizes, then once daily for 3 months to rebuild iron stores.

5) Make certain patient has someone to transport her to ER should bleeding persist or worsen.

6) Arrange for patient to return in 3 days for reassessment.

7) If patient has risk factors for endometrial pathology (hyperplasia, cancer), consult MD about need for endometrial assessment. These risk factors include history of infrequent menses, obesity, diabetes, age over 45, intermenstrual bleeding.

8) If excessive bleeding is thought to be related to an underlying medical problem (e.g. hypothyroidism), arrange for patient to get care for that problem.

### 2. Chronic, excessive menstrual blood loss and/or prolonged chronically prolonged menstrual blood loss.

a. Assess for underlying medical problems, which may cause heavy bleeding. Perform physical exam to identify possible pelvic pathology. Order tests and radiologic studies that may identify most likely cause. Consider full spectrum of causes:

   1) GYN causes: endocervical or endometrial polyps, fibroids, anovulatory cycles (including PCOS), endometrial hyperplasia, endometrial or cervical cancer.

   2) Systemic diseases: renal failure, liver disease, thyroid disorders.

   3) Hematologic causes: low platelets, hemophilia, Von Willebrand disease, platelet aggregation disorders.

   a) For patients with history suspicious for abnormal hemostasis, offer PT/PTT, CBC and ristocetin cofactor antigen, von Willebrand antigen and Factor VII levels. Coordinate evaluation and care with hematologist.

   4) Medications: anticoagulants, Dilantin, phenobarbital.

b. To prevent future bleeding episodes, several approaches are available. Some of these therapies can be combined to maximize effectiveness.

1) **To correct the prostaglandin imbalance**, offer one of the following NSAIDS each cycle starting the first day of her flow and continuing until the end of her last heavy flow day for up to 5 days* *(Do not combine with tranexamic acid):
   a) Ibuprofen 800 mg one tab by mouth every 8 hours.
   b) Naprosyn 500 mg orally 2 times a day.
   c) Mefenamic acid 500 mg one tab by mouth of initial dose followed by 250 mg one tab by mouth every six hours.

   *Lower doses or less frequent dosing may result in greater blood loss. Later initiation may diminish effectiveness of therapy. **Avoid use in women with gastric ulcers, renal compromise or asthma.**

2) **To correct excessive fibrinolysis**, offer:
   a) Tranexamic acid (Lysteda) 650 mg 2 tabs by mouth every 8 hours from onset of menses for up to 5 days. **Do not combine with estrogen-containing contraceptives or NSAIDS or use in patients with known hypercoagulable conditions.**
3) **To prevent unopposed estrogen stimulation and to thin the endometrium, offer one of the following:**
   a) Progestin-only birth control pills one tab orally daily.
   b) Medroxyprogesterone acetate (Provera) 2.5-5.0 mg by mouth daily for first 21 days of cycle or continuously (not contraceptive).
   c) Norethindrone (Aygestin) 5 mg by mouth daily for first 21 days of cycle or continuously (not contraceptive).

4) **To synchronize endometrial sloughing in women with anovulatory bleeding, offer one of the following:**
   a) Medroxyprogesterone acetate (Provera) 10 mg by mouth daily cycle days 16-25.
   b) Norethindrone (Aygestin) 5 mg orally once daily for cycle days 16-25.
   c) Combined hormonal contraception taken cyclically (pills, patches, vaginal contraceptive rings).

5) **To suppress endometrial cycling, offer one of the following:**
   a) Mirena IUS (most effective therapy).
   b) Extended cycle COCs or vaginal contraceptive rings.
   c) DMPA 150 mg IM every 11-13 weeks.

   c. Have patient keep menstrual calendar and record the number of sanitary products she uses every 24 hours.
   d. Have patient return for follow up with menstrual calendar and repeat hemoglobin at end of next menses. Further follow-up will be dictated by her clinical response to therapy.

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### PATIENT EDUCATION

1. Explain to patient the importance of taking the correct dose at the specific time of NSAIDS. Help her understand why prior NSAIDs may not have reduced flow.
2. Encourage patient to include iron rich food in her diet.
3. Advise her to take any iron supplement on an empty stomach, if tolerated. This means 1 hour before eating or 2 hours after each meal.
4. Review menstrual calendar instructions.
5. Explain to her why she has such heavy bleeding and help her understand that each of these medical therapies will treat her problem when she uses them, but will not cure her problem. She will need to continue to use medication until menopause, unless she has some correctable underlying medical cause of her bleeding (e.g. thyroid problem).
6. Advise patient about surgical options that may be available should medical therapy fail.
   a. For women with a few fibroids, myomectomy or uterine artery embolization may be appropriate.
   b. For women with bleeding that does not respond to medical therapy, endometrial ablation* and hysterectomy* may be appropriate.
   *Only for women who have completed their families.
7. Encourage patient to keep follow-up appointments.
8. Instruct patient to go to ER if bleeding worsens or she develops signs or symptoms of severe anemia (e.g., dizziness, shortness of breath, etc.).

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### REFER to MD/ER

1. Women who are not hemodynamically stable and those with excessive active bleeding and those with severe anemia should be referred to ER.
2. Women with chronic excessive blood loss but who are currently hemodynamically stable with a hemoglobin <8 g/dL in healthy women or <10 in women with diabetes or hypertension may be referred to MD, if MD approves.
3. Patient with pathology identified on exam.
   a. Friable cervical lesion or cervical polyp.
   b. Uterine myoma (consider ordering ultrasound to assess).
4. Patient requiring cervical or endometrial assessment (e.g. biopsy or hysteroscopy).
5. Patient who does not respond to therapies.
6. Patient who has strong relative contraindications to desired therapy.
7. Woman with history suspicious for abnormality of hemostasis.
### REFERENCES

Table 1

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<th>Duration of Flow</th>
<th>Prolonged</th>
<th>&gt;8.0</th>
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<tbody>
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<td>Normal</td>
<td>4.5-8.0</td>
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<td></td>
<td>Shortened</td>
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<tr>
<td>Volume of monthly blood loss</td>
<td>Heavy</td>
<td>&gt;80</td>
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<td>5-80</td>
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<td>Light</td>
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<td>Regularity of menses, cycle-to-cycle variation over 12 months</td>
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<td>Variation ± 2-20 days</td>
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<tr>
<td></td>
<td>Irregular</td>
<td>Variation &gt; 20 days</td>
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Figure 1

![PALM](Image)  
![COEIN](Image)