

AUB • Abnormal Uterine Bleeding

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THE STORY IN ONE SENTENCE

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“Use PALM-COEIN to organize causes: Polyp (a small bump on the lining), Adenomyosis (lining tissue burrowing into muscle), Leiomyoma (fibroid—a benign muscle knot), Malignancy (cancer), Impaired blood clotting (Coagulopathy) (bleeding disorder stopping vessel sealing), Ovulatory dysfunction (ovary skips releasing an egg so hormones run wild), Endometrial (the lining itself becomes inflamed or overgrown), Caused by medical care (Iatrogenic) (medicines or devices causing bleeding), Not-yet-classified—then treat the root problem.”

Normal anatomy — the body's job

In a normal cycle, estrogen rises during the first half and builds the endometrium (the lining inside the uterus). Around day 14, your ovary releases an egg (ovulation), and the empty follicle (corpus luteum) starts making progesterone. Progesterone stabilizes the lining and prepares it for a fertilized egg. If no pregnancy happens, both hormones drop and the lining sheds neatly—that is your period.

BODY'S JOB

This estrogen-then-progesterone cycle repeats every 21 to 35 days. Bleeding lasts 2 to 7 days, and you lose less than 80 milliliters (about 5 tablespoons) of blood each time. Vessels seal quickly with platelet plugs (tiny cell clumps) and a fibrin net (like a microscopic mesh made of protein threads), the lining regrows, and the whole process stays predictable and controlled.

1. Day 1–14: Estrogen rises and tells the endometrium to grow thicker—preparing a soft landing spot for a fertilized egg.

2. Day 14 (ovulation): Your ovary releases an egg. The empty follicle left behind (corpus luteum) starts making progesterone.
3. Day 15–28: Progesterone takes over and stabilizes the lining—stopping runaway growth and keeping blood vessels sealed and orderly.
4. If no pregnancy: Both estrogen and progesterone drop sharply, signaling the lining to shed in a controlled bleed (menstruation).
5. Vessels seal within minutes using platelet plugs (tiny cell clumps) and fibrin nets (protein threads that weave a mesh over the wound), stopping blood flow after 2–7 days.
6. The cycle resets, and a fresh lining starts to build again under rising estrogen.

What breaks

One upstream break—a hormone imbalance, a growth, a clotting problem, or cancer—explains why bleeding becomes heavy, long, or random.

CLINICAL TERM

Anovulation (no egg released) leaves estrogen unopposed—progesterone never arrives to stabilize the lining, so it grows thick and fragile, then sheds in big, unpredictable chunks. Structural problems—a polyp (small growth on the lining), adenomyosis (lining burrowing into muscle), a leiomyoma (fibroid—a benign muscle tumor), or malignancy (endometrial or cervical cancer)—distort the lining and tear blood vessels. Impaired blood clotting (Coagulopathy) (a bleeding disorder like von Willebrand disease, a low platelet count (thrombocytopenia), or anticoagulant use) stops the platelet plug and fibrin net that normally seal vessels, so even a normal cycle turns into a flood. Caused by medical care (Iatrogenic) causes (hormonal contraceptives, intrauterine devices, anticoagulants) or chronic endometritis (inflammation of the lining) also disrupt normal shedding and vessel sealing. The result: heavy menstrual bleeding (more than 80 mL per cycle), prolonged bleeding (more than 7 days), intermenstrual bleeding (bleeding between periods), or postcoital bleeding (bleeding after sex), because the lining sheds chaotically or vessels stay open too long.

How the body compensates

Your cardiovascular system hides blood loss for a while by speeding up your heart and squeezing blood vessels in your arms, legs, and skin to keep blood pressure normal—so you

can look stable on the outside even as anemia gets worse inside. Then, suddenly, compensation fails and shock hits.

1. At first, your body keeps blood pressure and oxygen delivery steady by making your heart beat faster (tachycardia) and narrowing vessels in your arms, legs, and skin (peripheral vasoconstriction) to shunt blood toward your brain, heart, and kidneys.
2. That compensated phase is dangerous because normal vital signs hide the fact that you are losing blood and heading toward collapse—this is why you must watch trends (falling hemoglobin, rising heart rate, worsening fatigue), not just snapshots.
3. The crash point to watch for is hemodynamic instability: fainting (syncope), low blood pressure (systolic below 90 mmHg), severe a fast heart rate (tachycardia) (heart rate over 120), or orthostatic vital signs (pressure drops or pulse jumps when you stand)—from sudden massive bleeding or silent progression to severe anemia.
4. Chronic heavy bleeding also risks missing endometrial hyperplasia (overgrown lining—precancer) or cancer, especially in women over 35, obese, with PCOS, or taking unopposed estrogen.
5. A patient with normal vital signs but ongoing heavy bleeding and dropping hemoglobin is not truly stable—she is sliding downhill in compensated shock.
6. Early recognition and treatment of the root cause—hormone therapy (combined oral contraceptives, progestins, or levonorgestrel IUD) to control anovulatory bleeding, hysteroscopy (looking inside the uterus with a camera) with polypectomy (removing polyps) or myomectomy (removing fibroids) to remove growths, endometrial ablation (burning the lining) or hysterectomy (removing the uterus) for refractory cases, or hematology consultation to manage impaired blood clotting (coagulopathy)—stops bleeding before it becomes life-threatening or cancer is missed.

Domino effect

1. Anovulation, a structural lesion, a clotting disorder, or cancer breaks normal shedding or vessel sealing. — Anovulation leaves estrogen unopposed—progesterone never arrives to lock the lining, so it grows thick and fragile and sheds in chaotic chunks (common in adolescence, perimenopause, PCOS, thyroid disorders). Structural lesions (polyp, submucosal fibroid, adenomyosis) warp the surface and tear or expose blood vessels. Impaired blood clotting (Coagulopathy) (von Willebrand disease, a low platelet count (thrombocytopenia), anticoagulant therapy) stops the platelet plug and fibrin net that normally seal vessels in minutes. Endometrial or cervical cancer creates abnormal, fragile tissue that bleeds irregularly and heavily.

2. Heavy menstrual bleeding (more than 80 mL per cycle—soaking through a pad or tampon every 1–2 hours, passing clots larger than a quarter), prolonged bleeding (more than 7 days), or intermenstrual bleeding happens. — Unopposed estrogen causes prolonged, unpredictable shedding of thick, weak lining. Structural problems create rough surfaces that bleed continuously. Impaired blood clotting (Coagulopathy) prevents the platelet-fibrin seal that stops flow. Cancer tissue bleeds from abnormal, leaky vessels.
3. Iron-deficiency anemia develops as blood loss outruns dietary iron absorption and bone marrow red-cell production. — Each milliliter of blood carries 0.5 milligrams of iron (mostly in hemoglobin). Chronic heavy bleeding drains iron stores (ferritin drops first, then serum iron, then hemoglobin) faster than your gut can absorb iron from food (even with supplements) and your marrow can make new red blood cells—so hemoglobin and hematocrit fall.
4. Fatigue, shortness of breath with activity (dyspnea on exertion), dizziness, headache, pale skin and conjunctiva (pallor), and sometimes pica (craving ice or non-food items) appear as tissues run low on oxygen. — Low hemoglobin means your blood carries less oxygen (each hemoglobin molecule binds four oxygen molecules). Muscles, brain, and organs cannot meet their energy needs—especially during exercise—so you feel tired, weak, and breathless. Pica reflects severe iron depletion affecting brain chemistry.
5. Compensatory a fast heart rate (tachycardia) (fast heart rate) and peripheral vasoconstriction (narrowed vessels in arms, legs, skin) try to keep oxygen delivery to vital organs normal. — Your cardiovascular system compensates by speeding your heart (more beats per minute pushes more blood) and narrowing vessels in your skin and limbs (shunting blood toward brain, heart, kidneys)—keeping critical organs fed even as total oxygen-carrying capacity drops.
6. If bleeding continues or a sudden massive bleed occurs, compensation fails and hypovolemic shock (shock from low blood volume) hits—severe a fast heart rate (tachycardia) (heart rate over 120), low blood pressure (hypotension) (systolic below 90 mmHg), fainting (syncope) (fainting), cold clammy skin, confusion, and organ poor blood flow (hypoperfusion) (not enough blood reaching tissues). — Once circulating volume drops below a critical threshold (losing roughly 30–40 percent of blood volume), your heart cannot pump enough blood to maintain pressure—even at maximum speed and vasoconstriction. Oxygen delivery collapses, cells switch to anaerobic metabolism (making energy without oxygen—much less efficient), lactic acid builds up (causing too much acid in the blood (acidosis)), and organs begin to fail (acute kidney injury, altered mental status, myocardial starved blood flow (ischemia)).

7. Missed or delayed diagnosis of endometrial hyperplasia (precancerous overgrowth) or endometrial cancer allows disease to progress—especially in women over 35, obese, with diabetes, PCOS, or taking tamoxifen or unopposed estrogen. — Chronic anovulation floods the endometrium with estrogen without progesterone to trigger shedding and oppose growth—cells pile up and can develop atypia (abnormal changes) and cancer. Current guidelines (ACOG, SGO) say any woman ≥ 45 years with abnormal uterine bleeding, or any woman with risk factors (obesity, PCOS, anovulation, diabetes, family history of Lynch syndrome, tamoxifen use), needs endometrial sampling (office biopsy or dilation and curettage) to rule out hyperplasia and cancer before assuming a benign cause.
8. Tracing back to the one broken step upstream—anovulation, a structural lesion, a clotting disorder, or cancer—guides the right treatment to stop bleeding at the source and prevent recurrence. — Treating symptoms alone (transfusing blood without fixing the cause) lets the cycle repeat and risks missing cancer. Hormonal therapy (combined oral contraceptives for cycle control, oral or intrauterine progestins to oppose estrogen, tranexamic acid to enhance clotting) restores normal cycles in anovulatory bleeding. Surgical options (hysteroscopic polypectomy, myomectomy, endometrial ablation, hysterectomy) remove structural causes. Hematology manages impaired blood clotting (coagulopathy) with desmopressin (DDAVP for von Willebrand disease), factor replacement, or platelet transfusion. Oncology treats hyperplasia (progestin therapy, hysterectomy if atypical) and cancer (hysterectomy with staging, radiation, chemotherapy per NCCN guidelines).

Symptoms · what the patient feels, and why

- Heavy menstrual bleeding (soaking through one or more pads or tampons every hour, passing clots bigger than a quarter, or losing more than 80 mL per cycle): When you don't ovulate, estrogen keeps building up the uterus lining with no progesterone to balance it. That lining gets thick and fragile, so it floods when it finally breaks down. A growth inside the uterus—like a polyp (small grape-like bump), fibroid (muscle knot), adenomyosis (lining growing into muscle), or cancer—tears open big blood vessels. If you have a clotting disorder, your blood can't form the tiny plugs that normally seal vessels during your period.
- Prolonged menstrual bleeding (periods lasting more than 7 days): When you don't ovulate, your body never makes the progesterone burst that normally tells the lining to stop shedding after a few days, so bleeding drags on and on. Structural problems—like fibroids or polyps—create rough, uneven surfaces that keep bleeding. A clotting disorder stops your vessels from sealing on time.

- Intermenstrual bleeding (bleeding between periods): Estrogen without progesterone makes random patches of lining break down whenever they feel like it. Polyps and fibroids have fragile surface blood vessels that bleed on their own. Endometrial hyperplasia (the lining grows too thick and cells look abnormal) or cancer sheds in unpredictable bursts. Hormonal birth control or an IUD can thin the lining so much that tiny vessels leak through (breakthrough bleeding).
- Fatigue and weakness: Losing blood month after month drains your iron stores. Without iron, your body can't make enough hemoglobin (the protein in red blood cells that carries oxygen). Low hemoglobin means your muscles and brain get less oxygen, so normal activities—like climbing stairs or thinking clearly—feel exhausting.
- Shortness of breath with activity (dyspnea on exertion): Low hemoglobin can't carry enough oxygen to meet the extra demand when you move or exercise. Your brain notices the oxygen shortage and tells you to breathe faster and deeper to compensate.
- Pale skin and mucous membranes (pallor, especially inside eyelids and under nails): Hemoglobin gives blood its red color. When you have less hemoglobin flowing through the tiny vessels (capillaries) under your skin and inside your eyelids, those areas look pale instead of pink.
- Fast heart rate (tachycardia, often above 100 beats per minute at rest): Your heart speeds up to pump more blood every minute. That way, even though each drop of blood carries less oxygen (because hemoglobin is low) or there's less blood overall (because you lost volume), your organs still get enough oxygen.
- Dizziness, lightheadedness, or fainting (syncope): Sudden heavy bleeding drops the amount of blood circulating in your body (volume). Lower volume means lower blood pressure. When pressure falls, less blood reaches your brain (cerebral poor blood flow (hypoperfusion)). This is worse when you stand up because gravity pulls blood away from your head (orthostatic low blood pressure (hypotension)), and your brain briefly runs short on oxygen.
- Easy bruising, tiny red spots on skin (petechiae), or bleeding from gums or nose: A clotting disorder—like von Willebrand disease (missing a key clotting protein), low platelet count (not enough blood-clotting cells), or taking a blood thinner—stops your vessels from sealing properly all over your body, not just in the uterus.
- Pelvic pain or pressure: Large fibroids or adenomyosis stretch and distort the uterus like a balloon blown too big. Endometrial hyperplasia or cancer can trigger cramping or a constant ache in the pelvis as the lining swells or breaks down irregularly.

Focused exam

- Ask how many pads or tampons get soaked through in a day. Ask if clots are bigger than a quarter (about one inch across). Ask how many days the bleeding lasts.: Heavy bleeding means soaking through one pad or tampon every hour for several hours in a row, passing clots bigger than a quarter, or bleeding that lasts more than seven days. We count pads and look at clot size because 'heavy' feels different to different people. The bleeding is heavy because the lining inside the uterus (endometrium, the tissue that sheds during a period) is coming off in a messy, uneven way instead of peeling away smoothly. Or the tiny blood vessels in the uterus are not closing up properly after the lining peels away, so they keep leaking blood.
- Pelvic exam: gently press on the lower belly from the outside and place gloved fingers inside the vagina to feel the uterus, ovaries, and tubes. Check for lumps, tender spots, or a uterus that feels bigger or bumpier than normal.: Abnormal bleeding can be caused by something growing inside or on the uterus. Examples are fibroids (smooth, non-cancerous muscle tumors that can grow in the wall or stick out into the hollow space inside), polyps (small finger-like bumps that grow from the lining), or adenomyosis (the lining has burrowed into the muscle wall of the uterus and causes swelling and bleeding). The doctor's hands can feel if the uterus is lumpy, tender, or larger than it should be.
- Pregnancy test: urine or blood test that detects hCG (human chorionic gonadotropin, a hormone made only when you are pregnant).: If you are pregnant, bleeding could mean a miscarriage (the pregnancy is ending on its own), an ectopic pregnancy (the fertilized egg is growing in the wrong place, usually in a tube instead of the uterus), or leftover tissue from a pregnancy that did not finish leaving the body. These all need completely different treatment than other causes of abnormal bleeding. Always rule out pregnancy first in anyone who could possibly be pregnant.
- Look for easy bruising, bleeding gums, frequent nosebleeds, or a personal or family history of bleeding problems (heavy bleeding after surgery, dental work, or childbirth).: Sometimes heavy menstrual bleeding is the first clue that the blood does not clot the way it should. This is called a impaired blood clotting (coagulopathy) (a disorder where the blood has trouble forming clots to stop bleeding). The most common inherited bleeding disorder is von Willebrand disease, which affects a sticky protein that helps platelets (tiny blood cells that plug holes in vessels) clump together. Up to one in five teenage girls with heavy periods has an underlying bleeding disorder. If the blood cannot clot normally, even a normal period will bleed too much and too long.

- Vital signs: measure heart rate and blood pressure while lying down, then measure again after standing up for one minute. Look for a drop in the top number (systolic blood pressure) by 20 points or more, or a jump in heart rate by 20 beats per minute or more.: When you lose a lot of blood month after month, the body runs low on red blood cells (the cells that carry oxygen to every tissue). The heart tries to make up for the low oxygen by beating faster (tachycardia) and pumping harder. When you stand up, gravity pulls blood into the legs. If there is not enough blood volume to fill the vessels, blood pressure drops (orthostatic low blood pressure (hypotension)). This tells us the bleeding has caused serious anemia (low red blood cell count) that the body is struggling to handle.
- Check skin color, the inside of the lower eyelids (conjunctiva), and the nail beds. Look for paleness or a pale pink color instead of healthy pink.: When you lose blood over and over, the body cannot make new red blood cells fast enough to replace them. Red blood cells contain hemoglobin, the molecule that carries oxygen and gives blood its red color. Without enough hemoglobin, the skin, the inside of the eyelids, and the nail beds look pale instead of rosy pink. This pale appearance (pallor) is a visible sign of anemia from chronic blood loss.

Diagnostics · every test answers a question

- Complete blood count (CBC) with red blood cell indices → Is the patient anemic (low on red blood cells) from losing too much blood? How severe is the anemia? Is there a pattern that points to iron deficiency?
- Serum ferritin → Are the body's iron storage reserves empty from repeated blood loss?
- Thyroid-stimulating hormone (TSH) → Is the thyroid gland (the small gland in the neck that controls the body's metabolic speed) working properly? Thyroid problems can disrupt the hormonal signals that control the menstrual cycle and cause failure to ovulate (anovulation).
- Prothrombin time (PT), activated partial thromboplastin time (aPTT), and von Willebrand panel (if heavy bleeding started at the very first period, or if bleeding disorders run in the family, or if there is easy bruising or nosebleeds) → Does the patient have a blood clotting disorder (coagulopathy) that prevents normal clot formation to stop bleeding?
- Transvaginal or pelvic ultrasound → Is there something structural inside or on the uterus that is causing the bleeding? Examples are a polyp, fibroid, adenomyosis, or a thickened lining.
- Endometrial biopsy → Is the lining of the uterus normal, overgrown (hyperplasia), or cancerous? This test is done in women age 45 or older with abnormal bleeding, or in younger women who have risk factors such as obesity, polycystic ovary syndrome (PCOS), or long-term estrogen exposure without progesterone to balance it.

- Saline infusion sonohysterography or hysteroscopy (if the first ultrasound suggests something abnormal inside the uterus) → Can we see the inside of the uterine cavity more clearly? Can we confirm or remove polyps, fibroids that bulge into the cavity, or scar tissue (adhesions)?
- Pregnancy test (quantitative serum beta-hCG if the urine test is unclear or if ectopic pregnancy is suspected) → Is the patient pregnant? Is the pregnancy growing in the right place (inside the uterus) or the wrong place (ectopic, usually in a fallopian tube)?

Treatment logic

- Acute management for life-threatening bleeding: intravenous fluids, packed red blood cell transfusion if hemoglobin is below 7 g/dL or if the patient has severe symptoms (chest pain, shortness of breath, confusion, severe dizziness) at any hemoglobin level, high-dose intravenous conjugated estrogen (25 mg IV every 4 to 6 hours for up to 24 hours), or intravenous tranexamic acid (10 mg per kilogram, up to 1 gram, every 6 to 8 hours). → IV fluids restore blood volume (the amount of fluid inside the blood vessels) so the heart has enough volume to pump and blood pressure stays up. Transfusion immediately increases the number of red blood cells that carry oxygen, relieving symptoms of severe anemia. High-dose IV estrogen floods the fragile, disorganized lining of the uterus with hormone. This helps the lining grow a new surface layer (re-epithelialization) quickly and promotes clotting, so bleeding slows. Tranexamic acid blocks plasmin (an enzyme that dissolves clots), so the clots that have already formed stay in place and seal the bleeding vessels longer.
- First-line hormonal therapy for non-acute abnormal uterine bleeding: combined oral contraceptive pills (contain both estrogen and progestin, taken daily), progestin-only pills (medroxyprogesterone acetate 10 mg daily for 10 to 14 days each month, or norethindrone 5 mg daily), or a levonorgestrel-releasing intrauterine device (LNG-IUD, a small T-shaped device placed inside the uterus that releases progestin locally). → These hormones restore the normal cycle of signals the uterine lining needs. Normally, in the first half of the cycle, estrogen builds the lining. At mid-cycle, you ovulate and form a corpus luteum (a temporary gland on the ovary that releases progesterone). Progesterone stabilizes the lining and organizes the shedding. Without ovulation, there is no corpus luteum, no progesterone, and estrogen keeps stimulating the lining to grow. Progestin (synthetic progesterone) opposes estrogen's growth signal, strengthens the blood vessels in the lining, and prevents chaotic, heavy shedding. The LNG-IUD releases progestin directly to the lining, making it very thin so there is almost nothing to shed. Menstrual blood loss drops by 90 percent or more with the LNG-IUD.

- Tranexamic acid (oral, 1300 mg three times daily during menstruation only, for a maximum of five days per cycle) for women who ovulate regularly but have heavy menstrual bleeding and a normal uterus on imaging. → Tranexamic acid blocks plasmin, the enzyme that breaks down fibrin clots in the uterine lining. When clots last longer, the blood vessels stay sealed longer and less blood leaks out. Menstrual blood loss decreases by about 40 to 50 percent. This is a non-hormonal option for women who ovulate normally but still bleed heavily.
- Nonsteroidal anti-inflammatory drugs (NSAIDs): ibuprofen 600 to 800 mg three times daily, or naproxen 500 mg twice daily, taken during menstruation only. → NSAIDs block cyclooxygenase (COX) enzymes, which make prostaglandins. Prostaglandins are chemicals that cause the uterus to contract and blood vessels in the lining to widen (vasodilation). By blocking prostaglandins, NSAIDs reduce menstrual flow by about 20 to 30 percent and also reduce cramping (dysmenorrhea, painful periods).
- Surgical management: hysteroscopic resection of polyps or submucosal fibroids (fibroids that bulge into the uterine cavity), endometrial ablation (destroying the lining of the uterus using heat, cold, or radiofrequency energy), or hysterectomy (removing the uterus completely through the vagina or through small cuts in the belly). → Hysteroscopic resection physically removes polyps or fibroids that distort the inside of the uterus and disrupt normal shedding. Endometrial ablation destroys the deepest layer of the lining (the basal layer) so the lining cannot grow back. Bleeding stops or becomes very light. Hysterectomy removes the entire uterus, so menstruation stops permanently and abnormal uterine bleeding is cured. Hysterectomy is definitive for structural causes like large fibroids, adenomyosis, or hyperplasia that does not respond to medical management.
- Iron supplementation: oral ferrous sulfate 325 mg (containing 65 mg of elemental iron) once or twice daily, or intravenous iron (such as iron sucrose or ferric carboxymaltose) if oral iron upsets the stomach or is not absorbed well. → Iron replacement gives the bone marrow the raw material it needs to build new hemoglobin and make new red blood cells. Hemoglobin level rises and oxygen delivery to tissues improves. Symptoms of anemia such as fatigue, shortness of breath, fast heart rate, and dizziness get better. Oral iron can take several weeks to months to replenish stores. IV iron works faster and is used when hemoglobin is very low or oral iron is not tolerated.
- Packed red blood cell transfusion if hemoglobin is below 7 g/dL, or if the patient has severe symptoms (chest pain, shortness of breath, confusion, severe dizziness, or signs of heart strain on ECG) at any hemoglobin level. → Transfusion immediately increases the number of red blood cells in the bloodstream, relieving symptoms of severe anemia. Each unit of packed red blood cells typically raises hemoglobin by about 1 g/dL. The heart does not have to work as hard because there are more red blood cells to carry oxygen. Transfusion is life-saving when anemia is so severe that tissues are not getting enough oxygen.

Medications

First: Stabilize with IV fluids, transfuse packed red blood cells, high-dose IV estrogen or tranexamic acid for acute heavy bleeding. Second: Hormonal control with combined OCPs (birth control pills with estrogen plus progestin), progestin-only therapy, or levonorgestrel IUD (a small T-shaped device placed in the uterus that releases a hormone). Third: Tranexamic acid for ovulatory AUB (abnormal uterine bleeding—heavier or longer periods than normal) with heavy menses. Fourth: NSAIDs (drugs like ibuprofen that block inflammation and pain) reduce menstrual flow by 25 to 35 percent. Fifth: Surgical options include hysteroscopic resection (cutting out problem tissue through the cervix using a thin scope), endometrial ablation (destroying the lining of the uterus), or hysterectomy (removing the uterus). Sixth: Treat iron-deficiency anemia (low red blood cells from losing too much iron in blood) with oral or IV iron. ·

Every treatment fixes a specific broken step in AUB. Acute heavy bleeding happens when vessels in the uterus lining stay open and pour blood out—tranexamic acid stops the body from breaking down clots (like patching holes in a dam), and high-dose estrogen rapidly thickens the uterine lining so it seals off the bleeding vessels. Anovulation (not releasing an egg each month) means estrogen keeps growing the lining with no progesterone to stabilize it, so the lining gets thick and bleeds irregularly—giving progestin or OCPs mimics a normal cycle and thins the lining. Ovulatory heavy menses (heavy periods even with normal ovulation) are driven by high prostaglandins (chemicals that make vessels leak and the uterus contract hard)—tranexamic acid or NSAIDs block prostaglandins and reduce flow. Structural lesions like fibroids (muscle tumors) or polyps (overgrown tissue bumps) distort the uterus and must be removed surgically. Anemia develops because the gut cannot absorb iron fast enough to replace what bleeds out every month—giving oral or IV iron refills the tank. Never use one drug for every AUB. Match each treatment to the exact cause: anovulatory versus ovulatory, structural versus functional, acute life-threatening bleeding versus chronic heavy periods.

Red flags

- Fainting, severe dizziness, or blood pressure below 90/60 mmHg — means sudden heavy bleeding has dropped your blood volume so low that your body is going into shock (hypovolemic shock). You need IV fluids, possibly a blood transfusion, and hospital admission right away.
- Any vaginal bleeding more than 12 months after your last period (postmenopausal bleeding) — endometrial cancer until proven otherwise. Requires urgent endometrial biopsy or transvaginal ultrasound within days.

- Hemoglobin below 7 g/dL or severe anemia symptoms (chest pain, shortness of breath at rest, confusion) — your oxygen delivery is dangerously low. Requires blood transfusion and hospital admission.
- Positive pregnancy test with abnormal bleeding — ectopic pregnancy (pregnancy growing outside the uterus, often in a tube) or miscarriage must be ruled out immediately with a blood test (quantitative β -hCG) and ultrasound. An ectopic can rupture and cause life-threatening internal bleeding.
- Bleeding that will not stop despite medicine, or signs your circulation is failing (cold skin, rapid weak pulse, confusion) — may need an emergency procedure: D&C (scraping the lining out), uterine artery embolization (blocking the vessels that feed the uterus), or hysterectomy (removing the uterus).

Nursing priorities

1. Check vital signs immediately including blood pressure lying down and standing up, heart rate, and oxygen saturation, and repeat every 15 to 30 minutes if bleeding is heavy. — Blood pressure below 90/60 mmHg, heart rate above 100 beats per minute (tachycardia), or a drop in systolic blood pressure of 20 mmHg or more when standing (orthostatic low blood pressure (hypotension)) means the patient has lost enough blood volume to cause shock and needs immediate IV access and fluids before organs fail from lack of oxygen.
2. Start two large-bore IV lines (18-gauge or bigger) and give isotonic crystalloid fluids like normal saline or lactated Ringer solution wide open if the patient shows any signs of shock. — Large IV lines let you give fluids and blood products fast to replace lost blood volume, and isotonic fluids expand the blood volume quickly to keep blood pressure high enough to deliver oxygen to the brain, heart, and kidneys before permanent organ damage happens.
3. Draw blood for complete blood count (CBC measures red cells, hemoglobin, and platelets), type and crossmatch (prepares matched blood for transfusion), coagulation studies (PT/INR and aPTT measure clotting ability), and beta-hCG pregnancy test in all women of childbearing age. — Hemoglobin below 7 g/dL means severe anemia requiring transfusion, platelet count below 50,000 or abnormal clotting times may explain why bleeding will not stop, and a positive pregnancy test completely changes the diagnosis to pregnancy complication needing obstetric emergency care instead of hormonal treatment.
4. Count and weigh all blood-soaked pads, linens, and clots to measure exact blood loss every hour, and report immediately if the patient soaks through more than one pad per hour. — One fully soaked pad holds about 5 mL of blood, so soaking one pad per hour means losing 120 mL per day which will cause severe anemia within days, and soaking more than one pad per hour signals life-threatening bleeding (hemorrhage) requiring emergency medications like IV estrogen or tranexamic acid to stop the bleeding.

5. Keep the patient on bedrest with the head of the bed flat or legs elevated if blood pressure is low, and help with all movement to prevent falls. — When blood volume is low from bleeding, gravity pulls the remaining blood into the legs when standing, leaving too little blood to reach the brain which causes fainting (syncope) and dangerous falls, and lying flat keeps blood flowing to vital organs until volume is replaced.
6. Administer tranexamic acid 10 mg per kilogram IV over 10 minutes or 1,300 mg by mouth three times daily as ordered, and watch for signs of blood clots like chest pain, leg swelling, or sudden shortness of breath. — Tranexamic acid stops the body from breaking down clots (inhibits fibrinolysis) so clots in the uterus stay in place and stop bleeding, reducing blood loss by about 40 percent, but it can rarely cause dangerous clots in blood vessels (thromboembolism) especially in patients with clotting disorders or who smoke.
7. Monitor for signs of worsening anemia including increasing fatigue, worsening shortness of breath, confusion, chest pain, or pale nail beds and inside of eyelids, and notify the provider immediately if any appear. — When hemoglobin drops, red blood cells cannot carry enough oxygen to organs, so the heart beats faster and breathing gets faster trying to compensate, but eventually the heart muscle itself runs out of oxygen causing chest pain (angina) and the brain gets confused from low oxygen (hypoxia), signaling need for urgent blood transfusion.
8. Prepare for possible blood transfusion by verifying patient identification matches blood bank labels exactly, staying with the patient for the first 15 minutes of transfusion, and watching for transfusion reactions like fever, chills, back pain, dark urine, or trouble breathing. — Transfusion reactions happen when the immune system attacks transfused blood, causing the worst reactions in the first 15 minutes, and catching reactions early by stopping the transfusion immediately prevents kidney failure from destroyed red blood cells (hemolysis) and life-threatening allergic shock (anaphylaxis).

Sources

- ACOG Practice Bulletin No. 128: Diagnosis of Abnormal Uterine Bleeding in Reproductive-Aged Women (reaffirmed 2023)
- FIGO Menstrual Disorders Committee: PALM-COEIN Classification System (2018)
- American College of Physicians: Evaluation and Management of Abnormal Uterine Bleeding (2021)
- CDC Heavy Menstrual Bleeding Guidelines (2023)

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