

**Children's Hospital and Health System, Inc.**  
**Patient Care Treatment Guideline**  
**CW Urgent Care**

**SUBJECT: Acute Abnormal Uterine Bleeding**

**Purpose:** To evaluate and initiate treatment of acute abnormal uterine bleeding (AUB).

**Females with a known bleeding disorder and/or pregnancy should be sent immediately to the ED for further evaluation.**

**Definition:** AUB is abnormal endometrial bleeding in the absence of pelvic pathology. It is defined by:

- Bleeding lasting > 7 days  
OR
- Saturating > 7 pads/regular tampons in a 24 hour period (1 super tampon = 2 regular tampons)  
OR
- Bleeding that is occurring more frequently than every 21 days

**Etiology:** During the normal ovulation cycle, the body produces estrogen and progesterone. Estrogen causes thickening of the endometrial lining whereas progesterone functions to stabilize the endometrial lining. When fertilization does not occur, there is a rapid drop in progesterone as well as estrogen. This results in the bleeding known as menstruation. For young gynecological aged adolescents, the normal interval between menstrual cycles is 21-45 days; periods should typically last 3-7 days.

In the adolescent population, 95% of AUB cases are attributed to anovulation. Anovulation is most commonly caused by lack of maturity in the hypothalamic-pituitary-ovarian axis. In the absence of ovulation, the endometrium experiences continued estrogen stimulation that is unopposed by progesterone. In adolescents, this results in the endometrial lining becoming excessively thickened and unstable and it begins to break down irregularly. Additional causes of anovulation include: systemic illness, poor nutritional status, hypothyroidism, primary ovarian insufficiency, hyperprolactinemia and PCOS.

Anovulation is most common during the first two years of menarche. The typical onset of menarche varies depending on race and familial history. For example, African American females have a mean age of menarche of 12.2 years, whereas Caucasian females have a mean age of menarche of 12.9 years. Adolescents with later onset of menarche tend to be more prone to AUB and have longer durations of anovulation.

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**Differential Diagnosis:**

- Polycystic ovarian disease
- STIs
- Complications related to pregnancy
- Pelvic Inflammatory Disease/Endometritis
- Thyroid disorders
- Hypothalamic disorders
- Pituitary disorders
- Tumors releasing estrogen
- Coagulopathies
- Medication induced side effects (i.e. aspirin, valproic acid, platelet inhibitors, risperidone)
- Trauma

## **Guideline**

**Subjective Data/History:**

- Age of Menarche
- Character and duration of flow
  - Size/amount of tampons/pads used, frequency of changing feminine hygiene products, intervals between cycles, breakthrough bleeding, color, clots
- History of painful bleeding – Anovulatory cycles are usually painless. Causes of painful uterine bleeding in teens include primary dysmenorrhea, pregnancy complications and infection
- History of non-menstrual bleeding (easy bruising, dental bleeds, epistaxis)
- Sexual history
  - Number of partners, contraception (use, type and adherence), history/possibility of pregnancy, history/possibility of STIs, vaginal discharge, pelvic pain, post-coital bleeding
  - *Consider documenting this information in a sensitive note*
- Family history of bleeding disorders
- Comprehensive medical history and review of systems
  - Symptoms of anemia (i.e. fatigue, weakness, dizziness, syncope, headaches, shortness of breath)
  - Symptoms of hypothalamus/pituitary/thyroid disorder (i.e. weight changes, temperature intolerances, mood changes)
- Consider the possibility of a bleeding disorder in adolescents who present with extremely heavy or prolonged flow at the onset of menstruation

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**Objective Data/Physical Exam:**

- Vital Signs including postural changes in heart rate and blood pressure (See Appendix A: Orthostatic Vitals)
  - Consider any weight changes or presence of fever
- Skin assessment (i.e. pallor, petachiae, bruising)
- Signs of anemia (i.e. pallor, tachycardia/irregular heartbeat, weakness)
- Abdominal exam to assess for hepatosplenomegaly, uterine enlargement and masses
- Breast exam to assess for galactorrhea and Tanner Stage (See Appendix B: Female Tanner Stages)
- Genital exam ALWAYS INDICATED
  - External Visual Exam: Tanner Stage, external causes for bleeds (i.e. lesions, irritation)
- Note vaginal discharge or amount/quality of bleeding with Valsalva
  - *May consider bimanual exam:* Assessment of adnexal and uterine size, abdominal, ovarian or cervical motion tenderness, presence of mass

**Diagnostic Studies:** *There is no direct correlation between symptomatology and severity of blood loss. This means that an individual without any outward symptoms could potentially have critical lab values that require immediate treatment.*

- CBC – in all actively bleeding patients
- Urine pregnancy – in all patients
- STI testing when appropriate
- Other testing that may be considered outside of urgent care based on the differential include, but are not limited to: TSH, LH, FSH, testosterone, prolactin, PT/PTT, ESR, and Von Willebrand screening

**Treatment:** (See Appendix C: AUB Treatment)

*The treatment goal in Urgent Care is to establish hemodynamic stability. While the goal in primary care is to not only establish hemodynamic stability but also correct anemia, restore normal patterns of ovulation, and prevent recurrence of abnormal bleeding.*

- Mild Bleeding without anemia (Hgb > 12)
  - Initiate NSAIDs to control bleeding.
    - Caution to avoid NSAID use if bleeding disorder strongly suspected
    - NSAIDs reduce the volume of menstrual blood loss by causing a decline in the rate of prostaglandin (PGE2 and PGF2 alpha) synthesis in the endometrium, leading to vasoconstriction and reduced bleeding

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## UC EVIDENCE BASED GUIDELINE: AUB

- Ibuprofen 400-600mg every 6 hours OR Naproxen sodium 500mg every 12 hours for duration of bleeding, maximum 7 days (verify dose based on patient's weight).
- Follow up 1 week as long as bleeding stops PMD, CW Adolescent, CMG Teen
- Mild Anemia (Hgb 10-12 gm/dl)
  - Initiate oral contraceptive pill (OCP).
  - Consult with CMG Teen or CW Adolescent Medicine on OCP type and frequency.
  - See Appendix D: Contraindications to Estrogen Therapy
  - Follow up 1 week as long as bleeding stops PMD, CW Adolescent, CMG Teen
- Moderate Anemia (Hgb 8-10 gm/dl)
  - Assess whether outpatient treatment is appropriate
    - Bleeding slowing per history/on exam
    - Pt family reliable/no identifiable barriers to care
    - No orthostatic vital changes
  - Initiate oral contraceptive pill (OCP).
  - Consult with CMG Teen or CW Adolescent Medicine on OCP type and frequency.
  - See Appendix D: Contraindications to Estrogen Therapy
  - Iron Supplementation: it may be necessary to initiate iron supplementation if the CBC is suggestive of iron deficiency anemia (microcytic hypochromic RBCs).
    - Dosing: 3-6mg/kg/day depending on severity of anemia 3mg/kg once a day dosing; 6mg/kg divided BID
    - Max Dose: 150 mg/day elemental iron
  - Follow up 48 hours with CBC at time of visit
- Severe Anemia (Hgb < 8mg/dl)
  - Refer to ED

**Any increase in bleeding, patient to contact PMD or other medical provider.**

### **Education of Patient/Family:**

- OCPs: AUB typically resolves within 3 days of initiating OCPs.
  - Withdrawal bleeding is normal after stopping OCPs.
- Iron supplementation:
  - Iron supplementation can lead to minor GI side effects, which tend to occur with higher doses of iron.
  - Liquid iron can cause temporary teeth staining. To prevent this, the patient should brush his/her teeth after taking.
  - The iron supplement will absorb better when taken on empty stomach with juice rather than milk or other fluids.

### **Follow-up:**

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- Follow up within 2 weeks with adolescent medicine or primary care provider if patient's hemoglobin is greater than 12mg/dl.
- Follow up as directed based on Adolescent Medicine's recommendation for patients with hemoglobin levels between 8-12mg/dl.

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Amy Romashko, MD  
Medical Director, CHW Urgent Care

*This guideline is designed to serve as a reference for clinical practice and does not represent an exclusive course of treatment nor does it serve as a standard of medical care. Providers should apply their professional judgment to the management of individual patient conditions and circumstances. Children's Hospital and Health System (CHHS) does not make any representation with respect to any sort of industry recognized standard of care for the particular subject matter of this clinical guideline. Additionally, CHHS form documents are subject to change, revision, alteration, and/or revocation without notice.*

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References

- American College of Obstetricians & Gynecologists. (2013). ACOG committee opinion no. 557: Management of acute abnormal uterine bleeding in nonpregnant reproductive-aged women. *Obstetrics & Gynecology*, *121*(4), 891-896.
- American College of Obstetricians & Gynecologists. (2015). ACOG committee opinion no. 651: Menstruation in girls and adolescents: Using the menstrual cycle as a vital sign. *Obstetrics & Gynecology*, *126*, 143-146.
- Bohart, J. (2013). Emergency department management of vaginal bleeding in the nonpregnant patient. *Emergency Medicine Practice*, *15*(8), 1-20.
- De Silva, N.K. (2020). Abnormal uterine bleeding in adolescents: Evaluation and approach to diagnosis. *UpToDate*. Retrieved from <http://www.uptodate.com>
- Emans, S.J. & Laufer, M.R. (2012). Pediatric & adolescent gynecology. (6<sup>th</sup>) ed. Philadelphia, PA: Lippincott Williams Wilkins
- Kaunitz, A.M. (2020). Abnormal uterine bleeding: Management in premenopausal women. *UpToDate*. Retrieved from <http://www.uptodate.com>
- Madsen, K.P., Schmidt-Dalton, T.A., Sweet, M.G., & Weiss, P.M. (2012). Evaluation and management of abnormal uterine bleeding in premenopausal women. *American Family Physicians*, *85*(1), 35-43.
- Zucker, M., Hughes, R., Culyba, A., Zinna, L, Boyle, J., Jacobstein, C., ... Lavelle, J. (2017). Evaluation/treatment of acute abnormal uterine bleeding. Children's Hospital of Philadelphia. Retrieved from <http://www.chop.edu/clinical-pathway/uterine-bleeding-acute-abnormal-clinical-pathway>.

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UC EVIDENCE BASED GUIDELINE: AUB

*Treatment information also provided by Melissa Vukovich, Nurse Practitioner, CMG Teen Health Clinic, (personal communication, May 2020).*

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**Appendix A: Orthostatic Vitals**

**ASSESSMENT**

# Measuring Orthostatic Blood Pressure




Patient \_\_\_\_\_

Date \_\_\_\_\_

Time \_\_\_\_\_  AM  PM

- ① Have the patient lie down for 5 minutes.
- ② Measure blood pressure and pulse rate.
- ③ Have the patient stand.
- ④ Repeat blood pressure and pulse rate measurements after standing 1 and 3 minutes.

A drop in BP of  $\geq 20$  mm Hg, or in diastolic BP of  $\geq 10$  mm Hg, or experiencing lightheadedness or dizziness is considered abnormal.

POSITION	TIME	BP	ASSOCIATED SYMPTOMS
Lying Down 	5 Mins.	BP ____ / ____ HR _____	
Standing 	1 Min.	BP ____ / ____ HR _____	
Standing 	3 Mins.	BP ____ / ____ HR _____	

CDC's STEADI tools and resources can help you screen, assess, and intervene to reduce your patient's fall risk. For more information, visit [www.cdc.gov/steady](http://www.cdc.gov/steady)



Centers for Disease  
Control and Prevention  
National Center for Injury  
Prevention and Control

2017

**STEADI** Stopping Elderly Accidents,  
Deaths & Injuries

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**Appendix B: Female Tanner Stages**

**Pubic Hair**

**Development:**

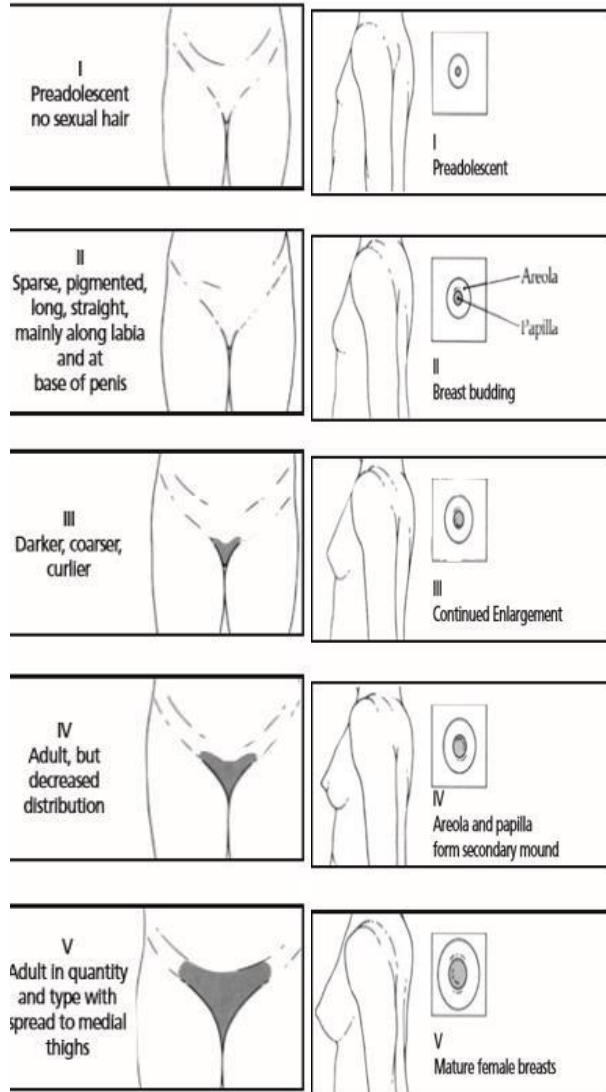
*Stage I:* Preadolescent, vellos hair develops over the pubes but not over the anterior wall. There is no sexual hair.

*Stage II:* Sparse, long, pigmented down hair, which is only straight. Located mainly along labia.

*Stage III:* Darker, coarser, and curlier hair develops. Hair is more diffuse and spreads over junction of pubes.

*Stage IV:* Hair distribution is similar to that of an adult, but overall quantity of hair is less. No hair present on the medial surface of thighs.

*Stage V:* Hair is adult in quantity and type. There is hair at medial thighs and is triangular in appearance.



**Breast**

**Development:**

*Stage I:* Preadolescent, only the papilla is elevated above chest wall.

*Stage II:* Elevation of breasts and papillae, small mounds.

*Stage III:* Enlargement of the areolae.

*Stage IV:* Areolae and papillae are elevated above the level of the breast and greater development of breast tissue.

*Stage V:* Mature female breasts.

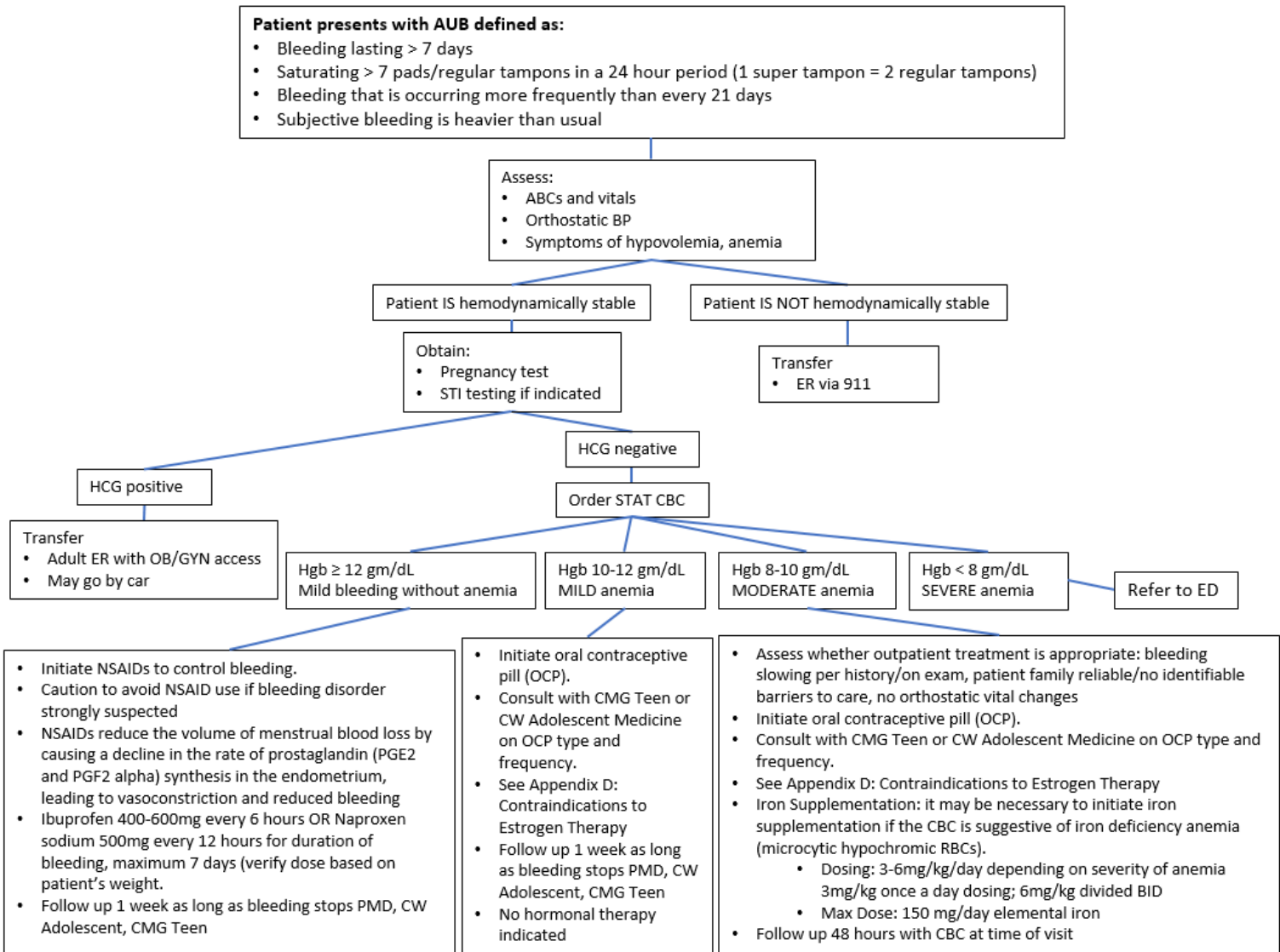
**Menarche typically occurs within 2-3 years after thelarche (breast budding), at Tanner stage IV breast development, and is rare before Tanner stage III development.**

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Appendix C: AUB Treatment



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**Appendix D: Contraindications to Estrogen Therapy**

Migraine with aura

Headaches with focal neurological symptoms

Venous thromboembolism

Cerebrovascular or coronary artery disease

Structural heart defects

Diabetes with complications of diabetes

Breast cancer

Pregnancy

Postpartum < 42 days

Lactation (< 6 weeks postpartum)

Liver disease

Major surgery with prolonged immobilization

Hypertension (blood pressure > 160/100 mmHg or with concomitant vascular disease)

Systemic Lupus Erythematosus

Crohn's disease

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