



## Pearls of Excellence<sup>tm</sup>

# Abnormal Uterine Bleeding in Adolescents

Author: Nyima Ali, MD

Mentor: Nanette Santoro, MD

Editor: Eduardo Lara-Torre, MD

Abnormal uterine bleeding (AUB) in adolescents is defined as excessive bleeding occurring between menarche and 19 years of age. During the first 12–18 months after the onset of menstruation, immaturity of the hypothalamic-pituitary axis is believed to result in an inconsistent ‘positive feedback’ response, wherein sustained elevations of periovulatory estradiol cause a reflex surge of Luteinizing Hormone (LH). This failure of an appropriately timed LH surge results in a sustained elevation of estradiol without ovulation, progesterone production, or a normal luteal phase. Anovulation is the most common cause of abnormal uterine bleeding during early adolescence. By the third year after menarche, about 75% of menstrual cycles are 21–34 days long, regardless of age at menarche.

Girls and adolescents with more than 45 days between menstrual cycles, less than 21 days between menses, bleeding lasting longer than 7 days, having a single episode of 3 months between bleeding, or changing sanitary products more often than every 1-2 hours should undergo an evaluation. A coagulopathy may also be of concern in adolescents with excessive bruising or bleeding or a family history of a bleeding disorder. Regardless of reported sexual history, it is imperative to rule out pregnancy, sexual trauma, and sexually transmitted infections. Patients should be evaluated for endocrinopathies (such as thyroid disease), stress and eating disorders, and polycystic ovary syndrome (PCOS). Anovulatory cycles associated with obesity and hyperestrogenism can be seen in the absence of PCOS.

Laboratory testing in pubertal AUB should initially include an assessment of urine or serum β-hCG, a complete blood count with platelets, and TSH. Other testing should be performed based on the history and physical examination, and may include androgen levels (free or total testosterone) and prolactin. Adolescents with AUB can have a concomitant bleeding disorder. Von Willebrand disease is the most common bleeding disorder in women. Approximately one quarter of adolescents who require hospitalization or blood transfusion may have a coagulopathy. Anemia on initial evaluation should trigger further testing for a bleeding disorder including PT, PTT, and a Von Willebrand panel.



The goal of therapy is to decrease excessive bleeding, prevent its recurrence, and improve quality of life. A trial of combined oral contraceptives (COC) can serve as a diagnostic and therapeutic approach to the workup of abnormal bleeding in the adolescent. In addition to regulating menstrual flow and providing contraception, the practitioner should counsel the adolescent that combined COC's can provide relief of associated dysmenorrhea, acne/hirsutism, and premenstrual syndrome, prevent menstrual migraine, and potentially reduce pelvic pain associated with endometriosis. If estrogen is contraindicated, depot medroxyprogesterone acetate (DMPA) or the levonorgestrel intrauterine system can also reliably provide relief for AUB, with a substantial proportion of users achieving amenorrhea within 6 months. Rarely, incessant bleeding can become a medical emergency that requires hospitalization and more intense evaluation including a pelvic exam, ultrasound, and treatment including intravenous estrogen, fibrinolitics, and in rare cases, surgical intervention.

***Further Reading:***

American College of Obstetricians & Gynecologists; **ACOG Committee Opinion No. 651: Menstruation in Girls and Adolescents: Using the Menstrual Cycle as a Vital Sign.** [Obstet Gynecol. 2015 Dec;126\(6\):e143-6. doi: 10.1097/AOG.0000000000001215.](https://www.acog.org/~/media/Committee%20Opinions/Committee%20Opinion%20No.%20651.ashx)

Committee on Practice Bulletins—Gynecology. **Practice bulletin no. 136: management of abnormal uterine bleeding associated with ovulatory dysfunction.** [Obstet Gynecol. 2013 Jul;122\(1\):176-85. doi: 10.1097/01.AOG.0000431815.52679.bb.](https://www.acog.org/~/media/Committee%20Opinions/Committee%20Opinion%20No.%20136.ashx)

Committee on Adolescent Health Care; Committee on Gynecologic Practice; **Committee Opinion No.580: von Willebrand disease in women.** [Obstet Gynecol. 2013 Dec;122\(6\):1368-73. doi: 10.1097/01.AOG.0000438961.38979.19.](https://www.acog.org/~/media/Committee%20Opinions/Committee%20Opinion%20No.%20580.ashx)

Initial Approval: November 2017; Reaffirmed May 2019

\*\*\*\*\* ***Notice Regarding Use*** \*\*\*\*\*

*The Foundation for Excellence in Women's Health, Inc ("Foundation") is committed to accuracy and will review and validate all Pearls on an ongoing basis to reflect current practice.*

*This document is designed to aid practitioners in providing appropriate obstetric and gynecologic care. Recommendations are derived from major society guidelines and high quality evidence when available, supplemented by the opinion of the author and editorial board when necessary. It should not be construed as dictating an exclusive course of treatment or procedure to be followed.*



The Foundation for Excellence  
in Women's Health

*Variations in practice may be warranted when, in the reasonable judgment of the treating clinician, such course of action is indicated by the condition of the patient, limitations of available resources, or advances in knowledge or technology. The Foundation reviews the articles regularly; however, its publications may not reflect the most recent evidence. While we make every effort to present accurate and reliable information, this publication is provided "as is" without any warranty of accuracy, reliability, or otherwise, either express or implied. The Foundation does not guarantee, warrant, or endorse the products or services of any firm, organization, or person. Neither the Foundation, the ABOG, SASGOG nor their respective officers, directors, members, employees, or agents will be liable for any loss, damage, or claim with respect to any liabilities, including direct, special, indirect, or consequential damages, incurred in connection with this publication or reliance on the information presented.*

*Copyright 2019 The Foundation for Excellence in Women's Health, Inc. All rights reserved. No re-print, duplication or posting allowed without prior written consent.*

*Copyright 2019 - The Foundation for Excellence in Women's Health, Inc. All rights reserved. No publication, reuse or dissemination allowed without written permission.*

[www.excellence.org](http://www.excellence.org)