

## Strategies and the Nursing Care Management of Adolescents Diagnosed with PCOS

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[youngwomenshealth.org](http://youngwomenshealth.org)



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## Conflicts of Interest

None  
Phaedra Thomas

A conflict of interest exists when an individual is in a position to profit directly or indirectly through application of authority, influence, or knowledge in relation to the affairs of PENS. A conflict of interest also exists if a relative benefits or when the organization is adversely affected in any way.

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## Objectives

1. Describe both the physical and psychological presentation of teens who have PCOS.
2. Discuss treatment goals and various medical modalities to treat young women diagnosed with PCOS.
3. Identify age-appropriate resources for teens diagnosed with PCOS.

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### Outline of Presentation

- Intro to Boston Children’s Hospital
- Overview of the CYWH
- PCOS-Incidence, symptoms, treatment options, nutrition, fitness and modalities to effectively treat hirsutism
- Nursing Care and Management
- Printed educational materials & online resources

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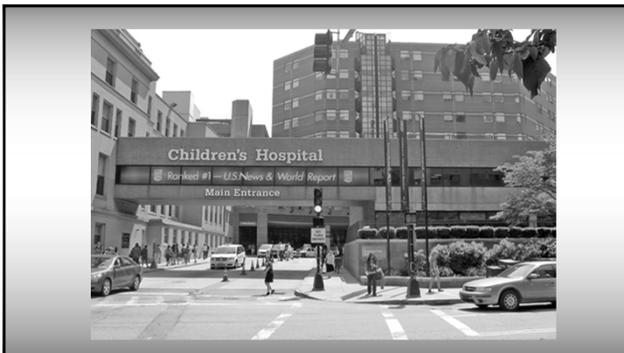
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### Boston Children’s Hospital



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**The Center for Young Women's Health**

Our Mission

- We aim to empower teen girls and young women around the world to take an active role in their own health care.
- We strive to help teen girls, their parents, teachers, and health care providers improve their understanding of normal health and development, as well as of specific diseases and conditions.

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**The Center for Young Women's Health**

- Resource Center
- Youth Advisory Program
- Community outreach
- Resident training
- Patient educational materials
- Curricula
- Website
- Resources
- Online chats, blog, newsletter
- Patient and family conferences

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**The Center for Young Women's Health**

The Resource Center

- Location:
  - Between Adolescent & Gynecology Clinics
  - Open to public
- Our Resources
  - Library of books
  - Computers with Internet access
  - Brochures, informational binders
  - Health videos, learning modules




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### ***The Center for Young Women's Health***

#### The Youth Advisory Program

- Started as a: "Youth Web Advisory Program"
- Initial focus: To teach teens how to access reliable health information online.
- Leadership training
- Provide presentations
- Newsletter – *Teen Talk*
- Train residents
- Health fairs in community




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### ***The Center for Young Women's Health***

#### The Youth Advisory Program Resident Training

- Purpose:
  - To provide residents with the opportunity to improve their communication skills with teens
- Mock Interviews
  - Simplify health information
  - Appropriate language
  - Handling resistance
  - Confidentiality
  - Resource Center & Websites




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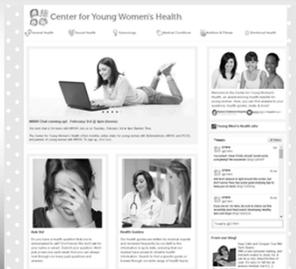
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## ***youngwomenshealth.org***




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**Polycystic Ovary Syndrome**

Polycystic Ovary Syndrome

“Is the most common but least understood endocrine disorder in females”

- Kent and Legro; Adolescent Medicine STARS 2002

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**Polycystic Ovary Syndrome**

Polycystic Ovary Syndrome

PCOS is a complex hormonal and metabolic imbalance that affects the entire body and has many different effects on the health and well-being of both adolescents and women who have it.

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**Polycystic Ovary Syndrome**

Polycystic Ovary Syndrome

- Affects 5-10% of women, 4%-6% of adolescent girls
- Leading cause of oligomenorrhea, hirsutism, and infertility
- Most common endocrine disorder in premenopausal women
- Clinical criteria, pathophysiology, and treatment still debated
- **Definite criteria:** Hyperandrogenism; Menstrual Dysfunction  
(Exclusion of congenital adrenal hyperplasia)
- **Probable criteria:** Insulin Resistance; Perimenarcheal onset; Elevated LH:FSH; PCOS by Ultrasound

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**Polycystic Ovary Syndrome**

**What Causes PCOS**

- Imbalance in the hormones secreted by the pituitary gland.
- Higher than normal levels of insulin
- Higher levels of LH:FSH
- Resulting in extra testosterone production by the ovaries

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**Polycystic Ovary Syndrome**

**Signs & Symptoms**

- Irregular periods
- Hirsutism
- Acne
- Weight gain or difficulty losing weight, some cases, obesity
- Patches of dark skin on the back of the neck and other areas- "Acanthosis nigricans"
- Infertility or impaired fertility 2° to irregular menses

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**Polycystic Ovary Syndrome**

**Less Common Signs/Symptoms**

- Hair thinning- male pattern baldness
- Skin tags under the armpits or neck area
- High total cholesterol and /or low HDL
- High blood pressure

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### **Polycystic Ovary Syndrome**

#### **Evaluation**

- History: onset of menstrual irregularity and hirsutism usually at menarche; slow progression
- Rapid onset of hirsutism or virilization suggestive of tumor or ovarian hyperthecosis
- Physical examination: weight/height; BMI; acanthosis nigricans

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### **Polycystic Ovary Syndrome**

#### **Laboratory Studies**

- LH:FSH (ratio) may be elevated or normal; LH often high, FSH low to normal, BMI>27. FSH r/o ovarian failure
- Prolactin, TSH
- Total Testosterone; IF reliable lab, Free Testosterone incr in 70-90%; Sex Hormone Binding Globulin (SHBG) is decreased
- DHEAS (adrenal androgen) 20-30%
- Progesterone day 20-24 of cycle if regular menses and hirsutism

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#### **Laboratory Studies Continued**

- 0 and 2 hr post 75 gm glucose
  - Fasting glucose: 100-125 mg/dl IGT; > 125 mg/dl Diabetes
  - 2 hour glucose: 140-199 mg/dl IGT; > 200 mg/dl Diabetes
  - Insulin levels (not standardized)
    - "insulin resistance" gluc/insulin <4.5
    - at 2 hrs >80-100 uIU/ml elevated; >300 uIU/ml severe hyperinsulinemia
- Lipids - Chol, HDL, LDL, Triglycerides
- LFTs - ALT, AST

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### ***Polycystic Ovary Syndrome***

#### **Imaging**

IF pelvic exam difficult/not possible/abnormal,  
Testosterone level high, or examination of  
ovarian morphology:

- Pelvic ultrasound (PCOS protocol)
- There may be many very tiny cysts, a few or none (not harmful)

IF suspicion of tumor:

- CT/MRI

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### ***Polycystic Ovary Syndrome***

#### **Rotterdam Criteria for PCOS: Meet 2 of 3 for PCOS Dx**

- Oligo- or anovulation
- Clinical or biochemical signs of hyperandrogenism
- "Polycystic ovaries" by ultrasound and exclusion of other etiologies (CAH, tumors, Cushing's)

Fertil Steril 2004;81:19-25

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### ***Polycystic Ovary Syndrome***

#### **How do teens react to a PCOS diagnosis?**

- Girls initially feel confused & distressed
- Difficult diagnosis to comprehend
- Often feel frustrated/sad/depressed if struggling with acne, hirsutism, menstrual irregularities.
- Feel different and may have poor self-esteem and negative body image
- Girls often feel relieved when there is an explanation for their symptoms

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### ***Polycystic Ovary Syndrome***

#### **Decreased Quality of Life in Adolescents with PCOS**

- Disruption in quality of life
- General Health Perceptions
  - Physical Functioning
  - Family Activities

Perceived severity by patient, not clinical severity by clinician, associated with quality of life

Trent et al, Arch Pediatric Adoles Med 2002

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### ***Polycystic Ovary Syndrome***

#### **Gather information from your adolescent patient**

- What does she know about her condition?
- Where does she get her information? Is it a reliable source?
- What are her concerns?
- What has helped, what hasn't (treatment or other)
- Does the adolescent have a support system/bff/bf/?
- Has your patient tried any CAM therapies? If so, what?
- Does anyone else in the family have PCOS?

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### ***Polycystic Ovary Syndrome***

#### **Treatment Options for Young Women with PCOS**

- Oral contraceptive pills (OCP's)
- Other hormonal treatments- ie. vaginal ring
- Metformin
- Spironolactone
- Nutrition plan that helps to manage insulin levels
- Exercise
- Effective hair removal modalities for hirsutism

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**Polycystic Ovary Syndrome**

**PCOS Therapy – None FDA Approved**

Oligomenorrhea	OCP, patch, ring	Metformin or progestins
Hirsutism	OCP, patch, ring	Spirolactone Metformin, Hair removal
Overweight	Exercise/diet	Metformin and diet/exercise
Infertility	Clomiphene	Metformin, IVF

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- Polycystic Ovary Syndrome**
- Treatment Goals**
- Lifestyle change – decrease weight 5-10%  
(? low glycemic diet) and increase exercise
  - Regulate menses
  - Decrease hirsutism and acne
  - Increase insulin sensitivity
  - Prevent long-term complications – cardiovascular, sleep apnea, fatty liver
  - Improve fertility

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- Polycystic Ovary Syndrome**
- What can the clinician do to help?**
- Take time to explain what PCOS is and why your patient has certain symptoms
  - Explain treatment options and engage your patient in her treatment plan
  - Provide age-appropriate educational materials
  - Remind your patient about the benefits of healthy lifestyle changes; nutrition & exercise, positive ways to cope with stress
  - Provide ongoing support to both patient & parent(s)

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### ***Polycystic Ovary Syndrome***

#### **Your Role in Helping Teens Manage their PCOS**

- Listen to what your patient has to say.
- Clarify myths about PCOS, ex. cysts, infertility, excess hair.
- Admit no magic bullet but many ways to manage symptoms and lower risk for diabetes.
- Help motivate teens to move more, make healthy food choices.
- Create a space in your office for PCOS educational materials
- Be a PCOS advocate, collaborate with school nurses, etc.

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### ***The Center for Young Women’s Health***

#### **The Need for PCOS Resources for Teens**

- 1 in 10 women have PCOS
- Symptoms start during the adolescent years and manifest during the adult years
- Very little information that is “teen-friendly”
- Compliance increases when patients are involved in their treatment plan

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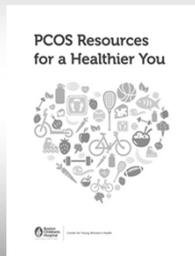
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### ***youngwomenshealth.org***

- PCOS Health Guides:
- Teens, Parents
- School Nurses, Teachers, Coaches
- Curriculum for Educators
- Resource Book
- YouTube Videos
- PCOS Blog
- PCOS Chats




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### The Center for Young Women's Health

#### Our Web Stats for month of March 2015

- 1,599,292 sessions viewing 2,044,950 pages of content in English, Spanish, French and Portuguese
- 1,417,614 visitors from 227 countries and territories
- 69% of sessions came from mobile platforms, compared with 44% mobile in March 2014, prior to the launch of our new mobile-friendly site

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### Google Analytics

#### PCOS Health Guide Statistics




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### youngwomenshealth.org

#### Analyzing Our PCOS Health Guide Statistics

Via Google Analytics, we've learned that:

- Pages containing "PCOS" were viewed 86,876 times in March
- These visitors spent approximately 3.5 minutes reading each page
- After reading a PCOS guide, 27% of the visitors stay on the website, as opposed to 22% who are reading other content

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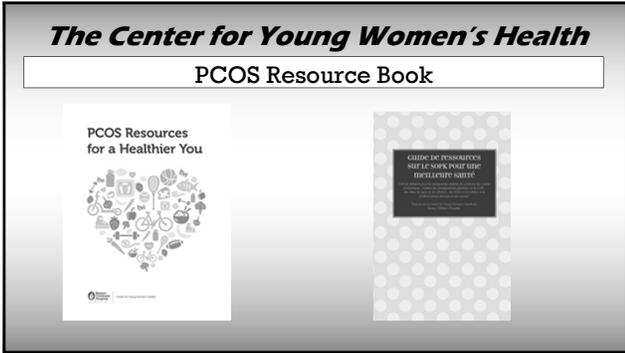
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## youngwomenshealth.org

### Online PCOS Health Chats

- First medically moderated chat for teens- began 2003 to present
- A safe place for girls aged 13-22 to ask questions and discuss concerns with other girls with similar issues
- Held 1 evening a month for 1hr.
- Moderated by a physician, nurse specialist, nutritionist and chat master
- 308 young women on our PCOS Chat e-mail list, and average 6 chatters per chat session




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### Health Chat Interface: Adobe Connect Pro

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## ***youngwomenshealth.org***

### ***What are Girls with PCOS Chatting about?***

Chat discussions should not be considered medical advice nor a forum for medical consultations. The chat is a meeting place for support & education for teens diagnosed with PCOS and moderated by a adolescent specialists.

- "I have been trying to lose weight and can't- HELP"
- "Will I be able to get pregnant some day?"
- "Is it safe to be on the pill for a long time?"
- "Why do I have dark patches on my neck?- Is this normal?"
- "I skip meals and I still can't lose weight"
- "I wish my doctor understood how I feel!"
- "No one knows what it's like to be me"
- "Are there natural remedies for PCOS?"
- "Why am I so hairy? Is there any treatment?"
- "Is it possible for the PCOS to go away?"

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## ***Blog: TeenSpeak.org***

### ***Monthly PCOS Blog Entries on TeenSpeak.org***

Our monthly PCOS blog entries started in September of 2009. Example of posts:

- Learning about PCOS
- What's up with the dirt on my neck?
- A PCOS-Friendly Holiday Season
- Top 10 PCOS Tips
- The PCOS Exam: What to Expect
- Unwanted Hair & PCOS
- Oligomenorrhea
- PCOS and Pregnancy




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## **Thank you!**

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