

# Cook Children's Endocrine and Diabetes program

## Pubertal disorders

The clinical recommendations listed below are not mandatory standards, and are not intended to be medical advice, but rather a set of recommendations for clinical evaluation and care. These recommendations are not a substitute for reasonable clinical judgment and decision making and do not exclude other options. Clinical care must be individualized to the specific needs of each patient and interventions must be tailored accordingly.

Disorder	Signs/symptoms	Suggested lab workup prior to referral
<b>Delayed puberty</b>	<p><b>Boys</b> No testicular enlargement by 14 years of age</p> <p><b>Girls</b> No breast involvement by 13 years of age or no menses by 16 years of age</p>	<p>Growth chart</p> <p>Labs:</p> <ul style="list-style-type: none"> <li>• LH by ICMA</li> <li>• FSH by ICMA</li> <li>• Ultrasensitive estradiol (females)</li> <li>• Testosterone (males)</li> <li>• Free T4</li> <li>• TSH</li> <li>• Prolactin</li> </ul> <p>Imaging:</p> <ul style="list-style-type: none"> <li>• Bone age</li> </ul>
<b>Precocious puberty</b>	<p><b>Boys &lt; 9 years of age</b> Axillary and/or pubic hair with or without testicular enlargement (&gt; 4cc or &gt; 2.5 cm)</p> <p><b>Girls &lt; 8 years of age</b> Axillary and/or pubic hair with or without breast development; vaginal bleeding</p>	<p>Growth chart</p> <p>Labs:</p> <ul style="list-style-type: none"> <li>• LH by ICMA</li> <li>• FSH by ICMA</li> <li>• Ultrasensitive estradiol (females)</li> <li>• Testosterone (males)</li> <li>• Beta-HCG (males)</li> <li>• Free T4</li> <li>• TSH</li> </ul> <p>Imaging:</p> <ul style="list-style-type: none"> <li>• Bone age</li> </ul>



682-885-1940

To better serve our treating clinicians, we can assist you with:

- Non-emergent transfer requests
- Direct admissions
- Specialist consultations



COOK CHILDREN'S  
ENDOCRINE AND DIABETES PROGRAM  
1500 Cooper St. | Fort Worth, TX | 76104

682-885-7960

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

Disorder	Signs/symptoms	Suggested lab workup prior to referral
<b>Premature adrenarche</b>	<p><b>Boys &lt; 9 years of age</b> Axillary and/or pubic hair without testicular enlargement (&gt; 4cc or &gt; 2.5 cm)</p> <p><b>Girls &lt; 8 years of age</b> Axillary and/or pubic hair without breast enlargement</p>	<p>Growth chart</p> <p>Labs:</p> <ul style="list-style-type: none"> <li>• Testosterone</li> <li>• 17 hydroxyprogesterone</li> <li>• Androstenedione</li> <li>• DHEA-S</li> </ul> <p>Imaging:</p> <ul style="list-style-type: none"> <li>• Bone age</li> </ul>
<b>Premature thelarche</b>	<p><b>Girls with breast enlargement &lt; 8 years of age</b></p> <p><b>Breast &gt; Tanner stage II</b></p> <p><b>Comments:</b> Imaging such as bone age and pelvic ultrasound, if indicated, are best done after consultation.</p>	<p>Labs:</p> <ul style="list-style-type: none"> <li>• Ultrasensitive estradiol</li> </ul>
<b>Gynecomastia</b>	<p><b>Boys</b> Tanner stage II with glandular breast enlargement</p> <p><b>Comments:</b> Boys with breast enlargement who are &lt; 12 year of age and who have no sign of pubertal development should be referred.</p> <p>Unilateral or bilateral breast enlargement occurs in &gt; 65% of boys 12-14 years of age, is generally benign, and resolves spontaneously within two years. Therefore, clinical judgment is advised in determining whether laboratory testing is necessary.</p> <p>In boys with scant sexual maturation and small testes, consider Klinefelter syndrome.</p>	<p>Labs:</p> <ul style="list-style-type: none"> <li>• LH by ICMA</li> <li>• FSH by ICMA</li> <li>• Ultrasensitive estradiol</li> <li>• Prolactin</li> <li>• Free T4</li> <li>• TSH</li> </ul> <p>Imaging:</p> <ul style="list-style-type: none"> <li>• Bone age</li> </ul>

Disorder	Signs/symptoms	Suggested lab workup prior to referral
<b>Premature menses</b>	<ul style="list-style-type: none"> <li>• Vaginal bleeding in girls &lt; 10 years of age</li> <li>• Vaginal bleeding in any girl without signs of puberty</li> </ul> <p><b>Comments:</b> Consider vaginal foreign body.</p>	<p>Labs:</p> <ul style="list-style-type: none"> <li>• LH by ICMA</li> <li>• FSH by ICMA</li> <li>• Ultrasensitive estradiol</li> <li>• Prolactin</li> <li>• Free T4</li> <li>• TSH</li> </ul> <p>Imaging:</p> <ul style="list-style-type: none"> <li>• Bone age</li> <li>• Pelvic ultrasound</li> </ul>
<b>Polycystic ovarian disease (PCOS)</b>	<ul style="list-style-type: none"> <li>• Irregular menses/amenorrhea</li> <li>• Hirsutism</li> <li>• Excessive acne</li> </ul> <p><b>Comments:</b> Consider pregnancy.</p>	<p>Labs:</p> <ul style="list-style-type: none"> <li>• LH</li> <li>• FSH</li> <li>• Testosterone</li> <li>• 17-Hydroxyprogesterone</li> <li>• DHEA-S</li> <li>• Prolactin</li> <li>• Fasting glucose</li> <li>• Fasting lipids</li> <li>• Hemoglobin A1c</li> <li>• Free T4</li> <li>• TSH</li> </ul>

# Cook Children's Endocrine and Diabetes program

## Evaluation and referral guidelines

Tips for an effective visit:

- Inform the child and family about the reason for the referral and what to expect.
- Ensure all recommended evaluations have been completed prior to the child's scheduled endocrine appointment.
- Provide relevant insurance information (copy of insurance card if available), clinic notes, growth charts, laboratory test and other diagnostic test results.

### Referral priority



#### EMERGENCY

##### Hospitalization anticipated/required

Cook Children's Emergency Department  
682-885-4095

Teddy Bear Transport  
1-800-KID-HURT

Notify endocrinologist on call  
682-885-4000



#### URGENT

##### Outpatient visit needed within 1-5 days

Contact endocrinologist on call at 682-885-4000



#### ROUTINE

##### First available appointment

Fax request for referral to 682-885-1327



#### NOT SEEN

New patient referrals > 18 years of age

### Our staff



Paul Thornton, M.D., Medical Director

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*All referrals are seen as soon as scheduling and staffing permit. If there are concerns about a delay in a child's scheduled outpatient appointment, if the child's condition deteriorates or if other circumstances require the child to be evaluated sooner, please contact the endocrinologist on call.*

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