Adolescent Development: Physical and Psychological

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Section A

Patterns of Pubertal Development
What Is Puberty?

The physical changes that lead to the following:

- The ability to have children
- Establishment of adult appearance
- Development of secondary sex characteristics
- Development of adult physical capacities
Male Pubertal Development

- Occurs between nine and seventeen years of age

- Pattern of development
  - Penis, testes, pubic hair—early
  - Facial hair, height, voice changes—late
Secondary Sexual Development

**MALES**

- **Height Spurt**
  - Age: 10.5–16, 13.5–17

- **Penis**
  - Age: 11–14.5, 13.5–17

- **Testis**
  - Age: 10.5–16, 14.5–18

- **Pubic Hair**
  - Age: 2 (10.5–16), 3, 4, 5 (14–18)

**Age in Years**

- Ages: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19
Genital Changes in Males

- Onset of ejaculations about one year after onset of puberty
- Production of mature sperm usually about one year after first ejaculation
Male Development Compared with Female Development

- Male development occurs 18-24 months later
- Progresses slowly through middle-late adolescence
- Early changes are not often visible
The Social Consequences of Height

- Status and stature are closely connected
Genital Changes in Females

- Ovarian enlargement
- Enlargement and pigmentation of labia
- Uterus—to be four times the size of the cervix
- Vagina elongates and becomes more elastic
- Vaginal microenvironment changes reflected by drop in pH
### Puberty: 1997 PROS Study

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>AA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Age Onset (Years):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast</td>
<td>10.0</td>
<td>8.9</td>
</tr>
<tr>
<td>Pubic Hair</td>
<td>10.5</td>
<td>8.8</td>
</tr>
<tr>
<td>Menarche</td>
<td>12.9</td>
<td>12.2</td>
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</tbody>
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Source: Herman-Giddens et. al. (1997). Secondary sexual characteristics and menses in young girls seen in office practice. *Pediatrics, 99*, 505-512. Data from 17,000 girls coming in for primary care. 90% white, 10% AA. “Normal” not clear. Age of onset much lower than previously thought.