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# Adolescent Development: Physical and Psychological

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## Section A

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### Patterns of Pubertal Development

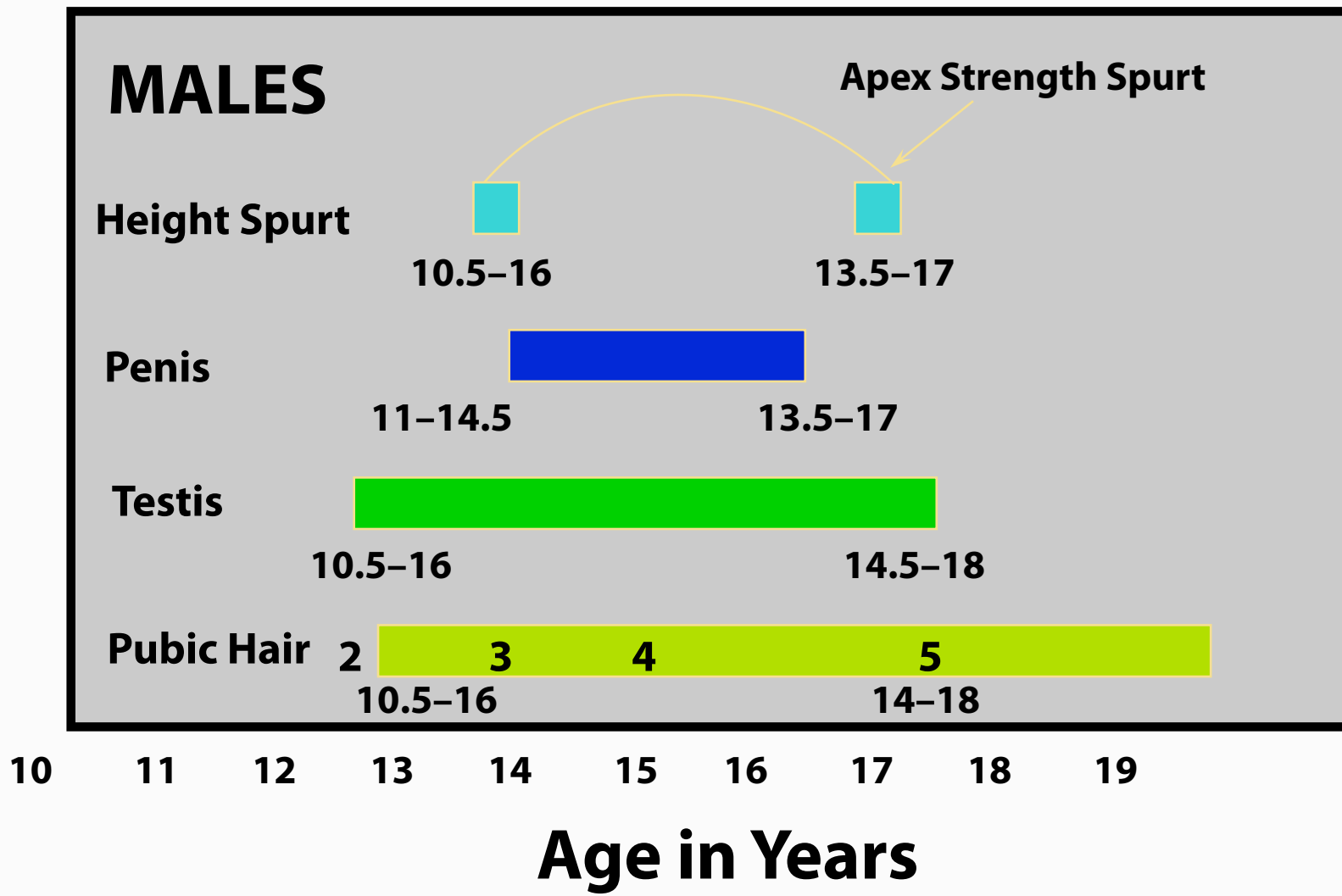
# What Is Puberty?

- 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



# 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

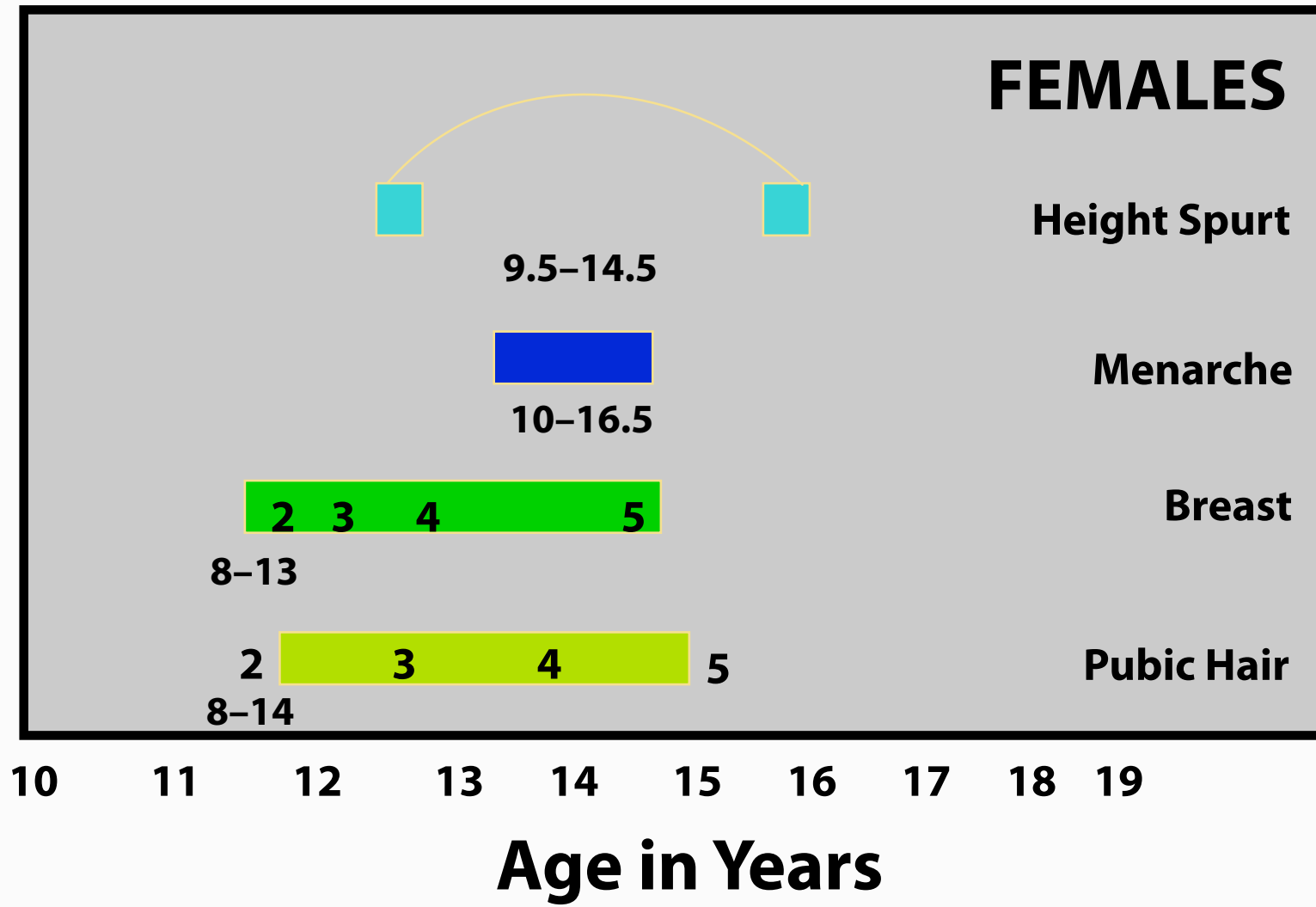
- Male development occurs 18-24 months later
- Progresses slowly through middle-late adolescence
- Early changes are not often visible



# The Social Consequences of Height

- Status and stature are closely connected

# Secondary Sexual Development



# 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

	White	AA
Mean Age Onset (Years):		
Breast	10.0	8.9
Pubic Hair	10.5	8.8
Menarche	12.9	12.2

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.