

### Adjust to new physical sense of self.

Young adolescents experience rapid and profound physical changes triggered by hormones acting on different parts of their body.

- Continuing physical and sexual changes.
- Concern with appearance and body.
- Often feel strange about their self and their body.
- Excessive physical activity alternating with lethargy.
- Appetite increases during growth spurts and decreases markedly between them.
- Increased need for sleep.

### Adjust to a sexually maturing body and feelings

With the significant changes in adolescence, youth must adapt sexually and establish a sense of sexual identity. This includes incorporating a personal sense of masculinity or femininity into one's personal identity; establishing values about sexual behavior; and developing skills for romantic relationships.

- Sexual drives emerge.
- Begin to explore their ability to date and attract a partner.
- Concerns about sexual attractiveness.
- Frequently changing relationships.
- Feelings of love and passion.

### Brain Development

Although scientists have documented brain development in adolescence and young adulthood, they are less sure about what it means for changes in cognitive development, behavior, intelligence, and capacity to learn.

By age 6 (on average), a young person's brain is 95% of adult size. However, the brain continues to physically develop in the teen years and even into the 20s with a second growth spurt of gray matter (peaking at age 11 for girls and 12 for boys) followed by a "pruning" process in which connections among neurons in the brain that are not used wither away and those that are used remain.

The front part of the brain, responsible for functions such as complex reasoning, problem-solving, thinking ahead, prioritizing, long-term planning, self-evaluation and regulation of emotion, begins to develop in early adolescence with a final developmental push starting at age 16 or 17. It is not that these tasks cannot be done before young adulthood, but rather that it takes more effort and requires practice.

### Physical Growth & Puberty

	Males	Females
Growth starts (average)	Age 14 (range 12-16)	Age 12 (range 10-14)
1 year height change during growth spurt (average)	4.1"	3.5"
Puberty starts (average)	Age 11-12 (range 9-14)	Age 10-11 (range 8-13)
Length of Puberty (average)	3-4 years	4-5 years
Progression of changes	<ul style="list-style-type: none"> <li>■ Growth of testicles and penis;</li> <li>■ First ejaculation (average age 13-14; range of ages 12-16);</li> <li>■ Hair growth in pubic area and armpits;</li> <li>■ Muscle growth, voice deepens, acne and facial hair develop.</li> </ul>	<ul style="list-style-type: none"> <li>■ Breast development;</li> <li>■ Hair growth in pubic area and armpits;</li> <li>■ Acne;</li> <li>■ Menstruation (starts average age of 12-13; range of ages 10-16).</li> </ul>

### Gender Differences & Similarities

#### Males

- Physical growth spurt begins 1-2 years after girls and accelerates more slowly.
- Continue to grow for about 6 years after 1st visible changes of puberty.
- Physical development continues 3-4 years after most girls; may not finish until age 21.

#### Females

- Begin the process of physical growth and puberty about 1-2 years earlier than boys.
- Attain adult height and reproductive maturity about 4 years after the 1st physical changes of puberty appear.

#### Both

- Girls and boys are both entering puberty at earlier ages than ever.
- There is a wide range of normal.
- Physical maturation has little correlation with cognitive development (e.g. youth that look physically older do not necessarily have higher levels of cognitive ability).

## Develop and apply abstract thinking skills

Adolescents experience significant changes in their capacity to think. In changing from concrete to abstract thought they are increasingly able to understand and grapple with abstract ideas, think about possibilities, think ahead, think about thinking, and “put themselves in another person’s shoes.”

In general, this changes their ability to think about themselves, others and the world around them.

This is a gradual process that spans adolescence and young adulthood. For example, early in the process youth are limited in their ability to hold more than one point of view - understanding something from one perspective but not another.

- Growth in abstract thought; developing new thinking skills, such as thinking more about possibilities, thinking more about the process of thinking itself, thinking in multiple dimensions, and seeing things as relative rather than absolute.
- Cause-effect relationships are better understood.
- Practicing new thinking skills through humor and by arguing with parents and others.
- Reverts to concrete thought under stress.

## Define a personal sense of identity

Adolescents move from identifying themselves as an extension of their parents (childhood) to recognizing their uniqueness and separation from parents. They develop a sense of self as an individual and as a person connected to valuable people and groups.

They refine their sense of identity around issues such as gender, physical attributes, sexuality, ethnicity. They explore issues such as Who am I? How do I fit in? Am I loveable and loving? How am I competent?

One result of this is experimentation with different, temporary “identities” by means of alternative styles of dress, jewelry, music, hair, manner, and lifestyle. Teens may struggle to identify a true self amid seeming contradictions in the way they feel and behave in different situations, and with different levels of thought and understanding.

- Very self-absorbed.
- Self-involvement alternates between unrealistically high expectations and poor self-concept.

- Focused on examining their inner experiences (may include journaling, etc.).
- Continuing egocentrism. Often believes self to be invulnerable to negative events.

## Adopt a personal value system

Adolescents develop a more complex understanding of moral behavior and underlying principles of justice. They question and assess beliefs from childhood and restructure these beliefs into a personal ideology (e.g. more personally meaningful values, religious views, and belief systems to guide decisions and behavior).

- Development of ideals and selection of role models.
- Interest in moral reasoning.
- Increasingly able to take the perspective of others into account with their own perspective.
- In addition to concern about gaining social approval, morals begin to be based on respect for the social order and agreements between people: “law and order” morality.
- Begins to question social conventions and re-examine personal values and moral/ethical principles, sometimes resulting in conflicts with parents.

## Renegotiate relationship with parents/caregivers

Adolescents negotiate a change in relationship with parents that begins to balance autonomy (independence) with connection. Overall, the adolescent’s task is one of separating in some ways, while maintaining and redefining connections in others, in order to make room for a more adult relationship that meets cultural expectations and provides necessary support.

- Complaints that parents interfere with independence.
- Conflict with family predominates due to ambivalence about emerging independence.
- Periods of sadness as the psychological loss of parents takes place.

## Develop stable and productive peer relationships

Peer relationships change during adolescence to provide youth with more support and connections as they spend less time with adults and in supervised activity.

Peer relationships often compete with parents and schools in influence on teen’s attitudes and behaviors. As networks with peers broaden, peer relationships become deeper and play an increasing role in shaping an individual teen’s self-concept and interaction.

Adolescents experience three transformations in peer relationships:

1. Reorientation of friendships from activity-based relationships of childhood to more stable, affectively oriented friendships based on idea and value sharing.
2. Growth of romantic and sexually oriented relationships.
3. Emergence of peer “crowds.”

Throughout adolescence, friendships become more stable, intimate and supportive; they provide a cornerstone for learning about adult relationships.

- Strong emphasis of the peer group.
- Strong peer alliances - fad behaviors.
- Increasing interest and involvement in opposite-sex relationships and friendships.
- Increasing tendency for youth to label or group peers (e.g. cliques).

## Meet demands of increasing mature roles and responsibilities

Adolescents gradually take on the roles expected of them in adulthood. They learn the skills necessary for these roles and manage the multiple demands of the labor market as well as meet expectations regarding commitment to family, community and citizenship.

- Intellectual interests gain importance.
- Greater capacity for setting goals.
- Experience with short-term, part-time jobs.

This synthesis of adolescent development research was compiled by Kristin Teipel, [State Adolescent Health Resource Center](#), University of Minnesota (2012).