Distance vs. Velocity Curves
Growth spurts for males and females
Juvenile deceleration and adolescent acceleration, why?

Adolescence
“Starts in biology and ends in psychology”
Hypothalamus regulates hormone levels by stimulating pituitary gland
- Sex hormones
  - Male—androgens, testosterone
  - Female—estrogens
- Facial hair, muscular development, broad shoulders
- Breasts, hips

Biological changes in Puberty
- Menarche around 12.5 years, Intense training in gymnastics, figure skating and ballet can delay. Spermarche for males about 2 years later
- Muscle and fat development
  - Girls more likely to increase in fat due to hormone changes, Muscle/Fat =5/4. Negative body image
  - Boys more likely to increase in muscle due to hormone changes, Muscle/Fat=3/1. Positive body image.

Are children maturing earlier? Secular trend.

Boys and Girls and Athletics
Boys continue to increase in physical strength and ability during teen years, girls decrease after puberty

Gender and Sports Participation
One in three girls now is active in sports, compared to one in 27 in 1972

Ballgirl
Does Playing in Sports Benefit Women?

Higher self-esteem
Physical competence
More positive body image
Women take on positive male characteristics, assertiveness and healthy sense of competition
Also physically more healthy
Some studies show relation to later occupational success
Boys are raised to focus on what they can do, Girls how they look.

Now the bad news
• One-third of all American girls are completely sedentary, and another third meet only minimal standards of physical activity. Outside of organized sports, girls’ participation in physical activities is waning (Tucker Report 2008).

Puberty

Is adolescence a period of storm and stress?
Physical maturity associated with:
• Decrease in closeness with parents
• Increase in desire for autonomy
• Increase in conflicts

Emotions during Adolescence

Negativity

• M = Mild
• A = Moderate
• B = Severe
• R = Very Severe

Depression

Percent clinically depressed

Age (in years)

0 5 10 15 20 25 30

Total  Male  Female

Suicide rates for 15- to 19-year-olds

White males  Non-white males  White females  Non-white females

Female Depression

Proposed Reasons for depression in females
• Females under greater stress
  – More emphasis on one’s body and appearance
  – Adolescent biological changes move females away from favored body type, males move closer
• Females more likely to ruminate about their "inadequacies" 
  – Focus on "I’m so fat," "I’m not pretty," "Nobody likes me," etc.
• Possible relation to maternal depression
  – Females have more contact with their mothers than do boys, and more affected by their depression

Early Maturation

Early Maturation Males
• Early maturing Males benefit more than early females
  – Popular, athletic, given positions of leadership
  – Relaxed, self-confident, independent and physically attractive
  – Body type meets adolescent standards for males, high self esteem*
• Late maturing males bossy, restless, attention seeking
• Early maturation leads to adultlike appearance which can bring positive perks, but with adult appearance comes greater expectations of acting responsible and greater achievement.
• Advantages tend to dissipate quickly for early maturing boys, but some effects still there in follow-up in their 30s
  – Early males still more sociable, confident and responsible but now rigid, conventional and inflexible
  – Late males much happier, more insight into people
**Early Maturation**

**Early Maturation females**
- Early maturing boys have the highest positive body image, early maturing girls have the lowest. Late females show better adjustment.
- Early females suffer, unpopular, withdrawn, lack self confidence, few positions of leadership, and more likely to be anxious and depressed.
- But greater popularity with older boys, more likely to engage in deviant behavior (sex and drinking). Problem of associating with older peers of same physical maturity.
  - This seems to be an effect of presence of boys because it is more likely to happen in coed schools and with girls who have more boyfriends.
- Effects wash out with time, By adulthood both early and late, equally well-adjusted

**Sexual Motivation and Behavior**

**Dehydroepiandrosterone (DHEA)**
- Adrenal Glands of Men and Women
  - Responsible for the development of sexual feelings and both boys and girls.

**Hormones and Sexual Behavior**

**In adolescence** Activation of sexual behavior seems to be associated with hormonal factors.
- In preadolescence, interest in sex is low related to low hormone levels, but begins around 10, the age at which the adrenal gland matures (secretes smaller amounts of sex hormones than gonads).
- Hormone of interest is testosterone.
- Levels of testosterone associated with sexual interests and activities in boys independent of secondary sexual development.
- In Girls sexual interests are also associated with testosterone, but not behavior. Social factors may play a greater role for females.
- Among males sexual interest and the potential for sexual activity are highest at the age when testosterone levels are highest (ages 15 TO 25).
- Hypogonadism and relation to sexual interests.

**Romantic Relationships**

**Time spent interacting with the other sex.**
- **Preadolescents** < an hour per week
- **12th grade**
  - Boys spend an average of 5 hours a week
  - Girls spend an average of 10 hours a week
  - Both genders spend an additional 5-8 hours a week thinking about the other sex (Richards, Crowe, Larson, & Swarr, 1998).
- Romantic partners become a major source of support for many adolescents. Among 10th graders, only close friends provide more support.
- During the college years, romantic relationships are the most supportive relationships for males, and among the most supportive relationships for females (Farman & Buhrmester, 1992).

**Adolescent Sexuality**

- Masturbation rates of males higher than females
  - Males may know more about their orgasms than females, and may emphasize sex as genitally focused. Making love is manipulating the right parts.
  - Females less likely to masturbate, those who do more likely to have orgasms in marriage. Greater experience among males with sex may give control to males.
- Change in standards in 60s and 70s
  - Sex is OK if the partners “love each other” in a long term relationship
- Relaxation of the “double standard”
  - Sex is OK for men AND women.
- Have things changed? Male the “gas pedal,” female the “brake pedal.”
Adolescent Sexuality

Male and female response to first intercourse

- Females emotionally involved, “in love,” remembers person with fondness.
- Females more likely to report being afraid, guilty, worried, embarrassed, does not confide
- Males keep sex and intimacy separate, 1/3 never sleep with first partner again, relationship not long lasting
- Males more likely to feel happy, satisfied, excited, and exhilarated, and to tell friends. More of a “scoring” attitude.

Adult Sexuality

“Women need a reason to have sex--men just need a place.” (Billy Crystal’s character of Mitch in City Slickers).

Differences in perception of intimate relationship

- Among College students, males rank physical/sexual the highest, relationships characteristic, but number four for females.
- Females’ top three relationships characteristics were openness, sharing, and trust/fait (Roscoe, Kennedy, & Pope, 1987).
- As a generalization women are more likely to give reasons such as love and commitment for sexual behavior whereas men are more likely to stress physical reasons or self gratification (Carol, Volk, & Hyde, 1985; Leigh, 1989; Oliver & Hyde, 1993)
- Changes in middle age reverse physical and relationship reasons for sex for men and women (Sprague and Qadagno, 1989).

Homosexuality

Sexual orientation is likely to be on a continuum, but distribution looks bimodal, not normal curve.

Sexual behavior vs. sexual preference or orientation

- About 1/3 of male children show “homosexual” behavior

Freud’s explanation

- Child continues identification with mother figure, because of her dominating, and seductive behavior, and father’s weakness

What makes a person a homosexual? The Bell study.

- Determined prior to adolescence
- Find heterosexual sex unsatisfying
- Gender nonconformists as children
- Poor relationships with father

Biological explanation

- Relation to genetics
- Relation to prenatal hormones.
- Homosexuality and birth order (Blanchard & Bogaert, 1996)*

Homosexual Identity Formation

It is difficult to compare homosexual identity with heterosexual identity because of difference in numbers, and acceptance by members or our culture.

- Both heterosexuals and homosexuals become romantically attracted to opposite and same sex persons about the same time, 10 years of age.
- However homosexual person more likely to find it troubling and may feel alienated from the self. It is unlikely to be a sexual feeling in the adult sense of the term at this stage.
- Individual differences. Some lesbians (one study put number at 16%) don’t remember homosexual feelings early but only developed much later in adulthood. Vast majority of male homosexuals believe they had always felt that way.

The average age at which a person identifies himself or herself as homosexual is around 15 years of age, but this is kept private.

- Males tend to have sex with same sex before they label themselves gay, whereas females more likely to label themselves lesbian before engaging in sex with others. Females more likely to engage in heterosexual sex.
- At this point motivated to seek out company of other homosexuals and begin to feel more positive about themselves.

Typically, sexual orientation not disclosed to siblings or peers until 17-19, and not to parents until a year or two later. Mother more likely to be told before father.

- Youth who have parents who are accepting experience higher self-esteem and lower levels of depression and anxiety.