

# Chapter 2 – Biological Foundations

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# 1. Chapter Overview

## A) Learning Objectives

- 2.1 Describe the functions of the hormones in the feedback loop of the endocrine system and how they initiate puberty.
- 2.2 Explain how the growth spurt differs for girls and boys, and identify the order in which body parts experience rapid growth.
- 2.3 Describe how physical functioning changes during puberty, and contrast physical functioning in adolescence and emerging adulthood.
- 2.4 Explain the difference between primary and secondary sex characteristics, and provide the typical order of development of secondary sex characteristics in boys and girls.
- 2.5 Explain how culture influences the timing of puberty.
- 2.6 Identify the rates of prevalence of puberty rituals across cultures, and explain the function of these rituals.
- 2.7 Describe how cultural influences shape responses to menarche and semenarche among adolescents.
- 2.8 Summarize the gender differences in how boys and girls respond to reaching puberty relatively early or late.
- 2.9 Compare and contrast passive, evocative, and active genotype-environment effects.
- 2.10 Explain why genotype-environment effects change over time.

## B) Chapter Outline

- I. The Biological Revolution of Puberty
  - A. The Endocrine System
  - B. Physical Growth During Puberty
  - C. Primary Sex Characteristics
  - D. Secondary Sex Characteristics
  - E. The Order of Pubertal Events
- II. Cultural, Social, and Psychological Responses to Puberty
  - A. Culture and the Timing of Puberty
  - B. Cultural Responses to Puberty: Puberty Rituals
  - C. Social and Personal Responses to Puberty
  - D. Early and Late Pubertal Timing
- III. Biological Development and the Environment: The Theory of Genotype-Environment Effects
  - A. Genotype-Environment Effects Over Time

## C) Thinking Critically

1. What are some of the social and psychological consequences of the fact that girls mature about two years earlier than boys during puberty? (Page 37)
2. Given that girls naturally gain substantially more body fat than boys during puberty, why would any culture create physical ideals that demand thinness in females once they reach puberty? (Page 38)
3. Puberty involves the development of sexual maturation. Among the secondary sex characteristics described here, which are viewed in your culture as enhancing sexual interest and attractiveness between males and females? Which are not? (Page 42)
4. In your view, what potential social and psychological problems may develop as a consequence of girls showing signs of reaching puberty (such as initial breast development) as early as 8 or 9 years old? (Page 46)
5. Are there rituals in Western cultures that are comparable to the puberty rituals in traditional cultures? Should people in Western cultures recognize and mark the attainment of puberty more than they do now? If so, why, and how? (Page 50)
6. What kind of preparation for menarche/semenarche would you recommend be provided for today's adolescents? At what age? If schools provide information on menarche/semenarche, should that information include a discussion of the relation between these events and sexuality? (Page 52)
7. In the light of the difficulties often experienced by early-maturing girls, can you think of anything families, communities, or schools could do to assist them? (Page 55)

## D) Applying Your Knowledge

1. Think of one of your abilities in relation to the genes and environment your parents have provided to you, and describe how the various types of genotype-environment interactions may have been involved in your development of that ability. (Page 57)

# 2. Lecture Suggestions

## A) Think-Jot-Share

One way to engage students with the course material is to have them reflect on course material and share that reflection with a classmate and/or the class at large. For the past several years, we have used this activity to instigate and initiate class discussions. Having students first think about their reflections and jot them down encourages reflective thinking. Moreover, this approach also provides those students who are more reluctant to participate in class discussion the opportunity to discuss their viewpoints with others.

Listed below are several ideas for THINK-JOT-SHARE activities for course material on the introduction to adolescence. Handouts are provided at the end of this section. These are just a few samples of ways to get a class discussion going – feel free to develop some of your own

questions, or use the Thinking Critically questions listed in Section 1 (Chapter Overview) to highlight important issues.

### 1. Pubertal Development

#### TO BE USED: HANDOUT 2.1

Give students an opportunity to think about their own pubertal development by asking them to complete HANDOUT 2.1. With this activity, some students may feel more comfortable than others in sharing their own experiences. To be sensitive to this issue, you may want to have students do this anonymously and then collect their responses to discuss in class.

Teaching note: Lawrence G. Shelton (1998), in a chapter entitled "Twenty Questions to Ask Before Teaching Adolescent Development," offers helpful advice by delineating several of the issues of which teachers of adolescent development need to be cognizant when asking students to reflect on their own adolescent experiences. While Shelton overwhelmingly endorses the utilization of assignments and activities that ask students to examine their own lives in the context of the course material, he readily acknowledges that it is critical that instructors are sensitive and consider ethical issues of privacy and confidentiality. It is important that the instructor recognize that while for some students it is quite easy to discuss their own personal experiences with their classmates, for others such self-disclosures are not readily forthcoming. Most importantly, in any class in which there will be discussion of personal experiences, there needs to be the establishment of a classroom context that is accepting and respectful. Additionally, the instructor needs to help some students limit their self-disclosures when they threaten to dominate or sidetrack discussion or put the students at risk.

### 2. Research on Pubertal Development

#### TO BE USED: HANDOUT 2.2

Those of us who have tried to conduct research on pubertal development understand the challenges that can be encountered when getting adolescents to respond to the Tanner typology. To integrate their understanding of adolescent pubertal development with their knowledge of research, have students complete HANDOUT 2.2.

### 3. The Secular Trend

#### TO BE USED: HANDOUT 2.3

The Secular Trend is often an intriguing concept for students. Use HANDOUT 2.3 to have them think about the number of factors that underlie this trend. For further reading on these topics (e.g., experiences of pubertal development, conducting research on adolescent puberty):

Brooks-Gunn, J., Berlin, L.J., Leventhal, T. & Fuligni, A.S. (2000). Depending on the kindness of strangers: Current national data initiatives and developmental research. *Child Development*, 71(1), 257–268.

Graber, J. A., Petersen, A. C., & Brooks-Gunn, J. (1996). *Pubertal processes: Methods*,

*measures, and models.* In J. A. Graber, J. Brooks-Gunn, & A. C. Petersen (eds.), *Transitions through adolescence: Interpersonal domains and context* (pp. 23–53). Mahwah, NJ: Lawrence Erlbaum.

## B) Exit Slips

Another way to have students actively participate in class is to allow them to reflect on the information they have read in the chapter. The Exit Slip is an activity that can be done in the last 10–15 minutes of class. Students are asked to reflect on something they read in the chapter or discussed or learned in class. Exit Slips are designed to allow students to voice their opinions, ask questions, or incorporate their previous experiences with the material being presented to them. For the past several years, we have used this exercise to allow students to be reflective not only of their own experiences but also on the material they are currently learning.

Listed below are several ideas for Exit Slips activities for course material on gender and related issues. These are just a few samples of ways to get your students to reflect on the chapter and course materials – feel free to develop some of your own questions. (Note: The Thinking Critically questions listed above from the chapter provide an excellent source for these Exit Slips.)

### TO BE USED: HANDOUT 2.4

1. According to Brooks-Gunn and Reiter (1990) "the off-time maturer, particularly the early-maturing girl, is currently provided little information about her maturational status" (p. 51). Why do you think that off-time maturers receive little information about their maturational status? What might be some of the concerns of these "off-time" adolescents and what can teachers/parents/health care professionals do to help?

### TO BE USED: HANDOUT 2.5

2. Do parent-adolescent relationships change during adolescence? Why or why not? Describe.

#### Suggested Reading:

Paikoff, R. L., & Brooks-Gunn, J. (1991). Do parent-child relationships change during puberty? *Psychological-Bulletin*, 110, 47–66.

In this article, Paikoff and Brooks-Gunn review changes in parent-child relationships during puberty, emphasizing the developmental processes that might be implicated in these changes. Evidence suggests increases in conflict and less warm interactions in relationships between parents and children during puberty. Changes are assumed to be short term, although little longitudinal research has directly addressed the issue of long lasting effects. Other developmental changes occurring for the adolescent, the parent, or both (such as social cognitive or self-definitional change), as well as other relationship changes, personality characteristics, and the sheer number of life events or transitions, have all been posited as potential contributors to changes in the parent-child relationship for young adolescents. These possible contributors, however, have seldom been studied in conjunction with pubertal changes. Such integrative research is necessary to test

various models through which puberty and social relationships, as well as social cognitive, self-definitional, and other processes, influence one another and are influenced by one another during the transition to adolescence.

## C) Class Activities / Demonstrations / Lecture Launchers

### Activity: "Dear Annie/Arnie": Exploring the Pubertal Concerns of Adolescents

In this activity, you will have your students think about the experience of puberty from the perspective of adolescents. Ask students to develop questions that they believe would be asked by adolescents in relation to puberty. Have them put these questions in the form of letters to an advice columnist of a magazine targeted for teens (your students may even want to look at some magazines, such as *Teen* or *Seventeen*, to see if there are any appropriate questions). They may wish to draw from their own experiences. Here is an example:

Dear Annie,

I am 11 years old and I have already started my period. I am so embarrassed because I am so much bigger and heavier than all of the girls in my fifth-grade class. Right now I feel as if I will keep on growing and growing. When will this stop?

For this activity, you can have students work either alone or in small groups. You also can be directive about the topics that you wish each group to cover. (Topics: early/late maturation, experiences of puberty, cultural experiences of puberty, etc.)

After students have developed their questions, they should develop answers. Their answers should be done in language appropriate for teens at the same time of conveying the important information from research in the area.

### Activity: How Do Parents and Adolescents Learn About Puberty?

Bookstores are replete with popular press books for parents of teens which provide information on what parents go through when their child suddenly goes through puberty. As well, there are now a number of books for adolescents (mainly for girls) that discuss puberty. At some point in their later elementary years/beginning middle school years, students encounter a lecture/presentation about the nature and timing of puberty. Either you or your students (or both) can bring in some of these materials and discuss their relation to the material presented in the book about puberty. (Note: It would be particularly interesting to find some materials that deal with culture differences as well.)

Some questions to consider include:

1. Is puberty depicted as a positive or negative experience? Describe.
2. How is information about pubertal growth and development conveyed to boys? To girls?
3. How much information about biological/physiological changes is provided?
4. Are any misconceptions presented? If so, what are these?
5. How well-researched is the material? How does the material relate to the information presented in the chapter on pubertal growth in boys and girls?
6. How do you think parents (or teens) might respond to the material? Is the information presented in an engaging manner?
7. Is the material culturally sensitive?

#### Suggested Sources:

Langlois, C. (1999). *Understanding your teen: Ages 13 to 19: Parenting strategies that work. A Canadian Living Family Book*. Mississauga, ON: Ballantine Books.

Laursen, N., & Stukane, E. (1993). *You're in Charge: A Teenage Girl's Guide to Sex and Her Body*. New York: Fawcett.

Madaras, L. & Madaras, A. (2007). *The "What's Happening to My Body?" Book for Girls: Revised Third Edition*. New York: Newmarket Press.

Madaras, L., & Madaras, A. (2007). *The "What's Happening to My Body?" Book for Boys: Revised Third Edition*. New York: Newmarket Press.

## Lecture Launcher / Activity: The Tyranny of Slenderness—A Female Obsession

The biggest selling books in the United States are diet books. It is estimated that almost 40% of the population is dieting at any one time. How did all of this dieting/thinness concern get started? Super thin models, Barbie doll fascination, media hype, all contribute to unrealistic expectations of feminine beauty. Not so long ago, the ideal woman's form was a voluptuous, buxom beauty. In the West now, being thin is viewed as beautiful. In fact, the result of all of the social pressure on thinness is a great deal of irrational fear of getting fat, especially by adolescent girls and young adult women. One view is that our society increasingly demands that women be thin to be accepted or appreciated. Girls and women are willing to try to be thin rather than accept the natural dimensions of their bodies.

Usually, women who feel tyrannized by their fear of fat have a deep sense of personal rejection: their own bodies are their enemies. An example of where this tyranny exists is in the women's sport of gymnastics. Young girls are encouraged / required to maintain a young girl's (boyish) body shape and avoid becoming woman-like with curves and bounces. Yet, look at the popularity of gymnastics: It was one of the most watched events at the summer Olympics.

Students can discuss the following questions in small groups and then representatives can speak for the group in a large group discussion. Where are our attitudes about beauty learned? Is it true, as some people say, that American (and other Western cultures) support the view that you

can never be too thin? What role do the media play in forming and promoting these attitudes? What role does the family play? What does it mean psychologically if someone rejects their natural body? Can they every really feel okay about themselves?

What is the statement being made when girls are given little-girl-body role models (such as gymnasts) and discouraged from being woman-like?

## Lecture Launcher: Weight and Dieting Concerns

The following is a summary of a research study conducted by Casper and Offer (1990) examining the relation between mental health and dieting among adolescents. You can describe this study and then have students critically analyze the results from a cultural perspective.

Casper, R., & Offer, D. (1990). Weight and dieting concerns in adolescents: Fashion or symptom? *Pediatrics*, 86, 384–390.

### Introduction

- Rationale: Body image is very important in adolescence, especially considering the physical changes that accompany puberty.
- Research Questions: What are adolescents' attitudes toward body weight and dieting and how are these attitudes related to emotional adjustment?

### Method

- Sample: 497 high school students (249 boys, 248 girls) between the ages of 16 and 18.
- Measures: Offer Self-Image Questionnaire; Symptom Checklist; Delinquency Checklist.

### Results (some highlights)

- Females scored higher than males on the Weight and Diet Awareness scale, indicating that adolescent girls are more concerned with weight and dieting than adolescent boys. For example, 60% of the females indicated that they are terrified of gaining weight, whereas only 14% of the males responded in the positive to this question.
- Females more frequently connected overeating with feeling ugly and were also reported that they were worried that they would eat in response to feeling upset.
- Increased weight and dieting concerns were associated with greater body-image and self-image dissatisfaction, with depression, and greater number of psychiatric symptoms.

### Discussion and Conclusions

- Adolescent girls are more critical of their bodies than adolescent males and tend to try and correct imperfections through dieting.
- Excessive preoccupation with weight and dieting indicates psychological problems.

## Lecture Launcher: Bulimia—Too Much, Too Little, Too Many

Eating too little and eating too much have probably been problems as long as there have been people. Nearly everyone has pursued one of these behaviors at one time or another. But like so many behaviors, when they are carried to extremes they can be dangerous. In the case of eating



disorders, these behaviors can sometimes be deadly. Also, they are very prevalent among the high school and college female populations. Many students (especially males) are surprised at how prevalent eating disorders are, especially bulimia (bingeing-and-purging), among their peers.

In bulimia, there are periods of binge eating during which enormous amounts of food (usually starches and sweets) may be eaten. To prevent body weight and shape from ballooning, the person compensates by vomiting, exercising, or using laxatives or diuretics. Although bulimic individuals are concerned about their weight and appearance, they do not have the distorted self-image typical of anorexia nervosa. Bulimia, in fact, is not limited to underweight people; in fact, it is probably more common in people of normal weight.

The DSM-IV criteria for bulimia include:

Person repeatedly eats in binges. In a binge episode:

- Person consumes much more food than most people would in similar circumstances and in a similar period of time;
- Person feels that eating is out of control;
- Person repeatedly controls weight gain by inappropriate compensatory means, such as fasting, self-induced vomiting, excessive exercise, abuse of laxatives or other drugs; and
- Self-evaluations are unduly influenced by body shape and weight.

One popular perspective on bulimic bingeing is that these individuals fill themselves up because they feel so empty inside. Eating is one of the few ways some people take care or give something to themselves. If you feel deprived, upset, or unhappy, eating is one way to cheer yourself up (think of the stereotypical “grandmother solution” of cookies and milk to make you feel better). The binge eater is just going to an extreme because emotions are extreme. From this view, food addicts use food to feel in control and protected from the need for love. Eating becomes a substitute for intimacy, involvement, and love. (See **Additional References** for Roth's, *Feeding the Hungry Heart* and *When Food is Love*.)

Your students may wonder how individuals with bulimia maintain a normal weight when they consume so few calories outside of their binges. Dr. Kaye and colleagues developed an interesting study to investigate this topic. In a naturalistic, but controlled environment, they allowed women with bulimia nervosa to binge as they would normally and calculated the number of calories consumed. Then, when the women purged, they did so into plastic buckets and the researchers measured the calories remaining in the vomited material. They determined that participants retained approximately 1,150 calories during a binge despite purging relatively quickly after eating. This is up to 75 percent of the recommended calorie intake for women for an entire day. Even if restricting their caloric intake the rest of the day, on average they would consume enough calories to maintain their body weight.

Kaye, W. H., Weltzin, T. E., Hsu, L. K. G., McConaha, C. W., & Bolton, B. (1993). Amount of

calories retained after binge eating and vomiting. *American Journal of Psychiatry*, 105(6), 969–971.

## Lecture Launcher: Binge Eating

Anorexia nervosa and bulimia are the two most commonly noted eating disorders. A lesser known eating disorder is called binge-eating disorder. People with binge-eating disorder have recurrent eating binges, but do not purge themselves of the excess food afterwards. Binge eating disorder is classified in the DSM-IV-TR as a potential disorder requiring further study. We presently know too little about the characteristics of people with binge-eating disorder to warrant inclusion as an official diagnostic category. Unlike bulimia, binge-eating disorder is more commonly found among obese individuals. People with binge-eating disorder tend to be older than those with anorexia or bulimia. It may fall within the broader domain of compulsive behaviors such as pathological gambling and substance disorders due to the impaired control over maladaptive behaviors.

## Activity: Reflections on Body Image

### TO BE USED: HANDOUT 2.6

Another assignment idea is one in which students explore some of the media messages to adolescents about how they should look. You can have students find some source of media (e.g., newspapers, magazines, T.V.) and have them analyze the messages conveyed to adolescents about body image. In HANDOUT 2.6 are some interesting facts taken from a 1996 *People Magazine* article on dieting (<http://www.frankwbaker.com/peoplebodyimage.htm>). These facts often inspire much discussion about body image and development in adolescence.

Some questions students could consider are outlined below:

1. Think about how different adolescents may view their body image. How might their perceptions influence their school performance? Their interactions with family members and peers?
2. When do you think children/adolescents become concerned about their body image? How does this come about?
3. Throughout history, physical attractiveness has been important in the initiation of relationships between or among the sexes. Yet, the specific definition of an attractive person has changed many times. How is attractiveness defined? How does the definition get changed? How is the definition, in effect, conveyed to adolescents? Specifically, who do they use for their ideal and with whom do they compare themselves?
4. Are there differences in the way that adolescent boys and adolescent girls feel about their body image? Explain why this may or may not be.
5. What can adults (e.g., teachers, parents) do to help adolescents feel more comfortable about their body image?

## Activity: Case Studies

Case studies often offer a window of understanding to students who need to have a concrete

example to more fully comprehend complex information and concepts. For instance, students often find hearing about the pubertal experiences of adolescents in the actual words of an adolescent meaningful and engaging. Thus, you may want to supplement your discussion about the psychological effects of puberty by having students read a few case studies about adolescents. Several suggestions are listed below:

1. Have students review the examples of various adolescents' experiences of puberty at the beginning of the chapter. Some questions for them to consider include: What are the similarities among their experiences? What are the differences? Are there generational differences? Cultural differences? What are the differences by gender?
2. Have students find a teen magazine article where an adolescent is describing his/her experiences.

An excellent source of case studies:

Garrod, A. Smulyan, L., Powers, S. I., & Kilkenny, R. (2002). *Adolescent Portraits: Identity, Relationships, and Challenges*. 4th Edition. Boston: Allyn & Bacon.

## Lecture Launcher / Activity: The Effects of Being a Late Developer

As Arnett notes, research indicates that being a late developer is particularly difficult for boys. Late developing boys tend to be smaller, less muscular, and less traditionally athletic than earlier developing boys. This puts them at a great disadvantage because sports are an important aspect of adolescent boys' experience and definition of themselves. The difficulty of this period can have lasting effects on self-esteem well into adulthood. Again, this result indicates the critical importance that body image has on our self-esteem and our self-evaluations. Ask students to discuss the following questions: How did our society become so body oriented? What is the evolutionary perspective on this issue?

### Activity: "The Stars and the Nerds"

TO BE USED: HANDOUT 2.7

#### **Early/Late Maturation**

King and Clark (1990) suggest that one way to discuss and describe the findings about the relation between early or late maturation and aspects of personality and social development in adolescent boys is to do "The Stars and the Nerds" activity. According to the authors, this activity is fun and stimulates student discussion about the relation between physical and psychological development at puberty. This activity also provides students with the opportunity to apply the course materials on this topic to their own lives.

Step1: Begin this activity by asking the class to think about the most popular boy in their seventh-, eighth-, or ninth-grade class. Ask your students to form a "mental" image of the popular boy in clear enough detail to describe to you. Allow a few minutes for responding and

then solicit both their psychological and physical descriptions. Write the word "Star" on a chalkboard or on an overhead and record their answers under that heading. Sometimes you may wish to ask for clarification or additional comments. Students generally have fun thinking of these characteristics and describing the "Star."

Step 2: After collecting descriptions of "Stars," ask your students to now think about a description of the class "Nerd" or least popular boy. Give students a few minutes to think and then collect their responses and put them under the "Nerd" heading. Students have lots of fun thinking of these responses.

Step 3: Finally, ask students to study the paired sets of characteristics and comment on any pattern among the respective lists of psychological and physical characteristics that they notice. You should find indications that (a) the popular boy was an early maturer and the unpopular boy was a late maturer, and (b) the popular boy enjoyed a considerable range of personal and social advantages compared to the unpopular boy. Comment on the extent to which this mirrors the classic and contemporary work on early versus late maturation. If you have time, you may want to repeat the activity for students' recollection of popular versus unpopular girls (or do it this way in the first place), and find out whether the results are similar. The literature suggests that they should not be.

Have the class divide into groups and think up situations in which adolescents would be affected differently by the onset of puberty. You may wish to limit the discussion to the material presented in the text. Have a student representative from each group present their examples to the class for general discussion.

Source:

King, M. B. & Clark, D. E. 1990. *Instructor's Manual to accompany Children*. Dubuque: Wm. C. Brown Publishers.

For your discussion, provide students with the characteristics of early and late maturers in HANDOUT 2.7. Ask them to reflect on the following questions:

1. What role do adults play in determining adolescents' reactions to early and late maturation?
2. If given the opportunity, would you rather be an early or late maturer? Explain.
3. What problems in adolescence may occur as a result of early/late maturation?
4. Take each category (early maturing girl, late maturing girl, early maturing boy, late maturing boy) and give your hypotheses about how individuals in each category would fare in adulthood. For instance, who might be the most successful? The least successful?

While many students can think about the effects of pubertal timing on family and peer relationships, many do not think about the effects of pubertal development on academic achievement.

## D) Technology-Enabled Learning Activities

For each chapter, this section provides activity suggestions that incorporate learning with or about technology. Use your imagination and investigate learning technologies and resources available to you and your students through your institution. Consider strategies and activities to provide information and encourage interaction through technology (e.g., online discussion groups, wikis, blogs, student web pages or online portfolios, to name a few).

### Online Resources for Health

The British Broadcasting Corporation has an excellent website that deals with Science and Nature. There is an entire section devoted to the "Human Body and Mind." The Puberty resources have many interactive and informative activities and resources.

<http://www.bbc.co.uk/science/humanbody/body/index.shtml?lifecycle>

Use this website for in-class demonstrations. Follow up with a discussion on the proliferation of consumer health information available online. How do you judge the trustworthiness of the information?

### Twitter Poll

Have students use Twitter ([www.twitter.com](http://www.twitter.com)) or another social networking tool to ask people about their puberty stories. Have students post questions with friends and families asking them to share some of the highs and lows they experienced during puberty. Have students note whether there are any gender or cultural differences with the types of stories they receive.

## E) Watch and Learn

Television doesn't have to be a bad thing! Mass media can be a great source of critical thinking exercises, classroom debates, and discussions. This section provides a suggestion based on chapter content for incorporating some aspect of television in a discussion or activity.

### Portrayal of Teens over the Generations

Bring in video clips from popular TV shows (past and present). Given the research on pubertal development, what observations can be made? How were teens portrayed in different generations? What similarities and differences between these different generations? Did the show portrayed current teenage stereotypes or past ones (e.g., *Happy Days* was created in the 1970s but portrayed teenagers in the 1950s)?

Show Ideas (you can download clips on [YouTube](http://www.youtube.com))

1. The Secret Life of the American Teenager (2000s)

2. The O.C. (2000s)
3. Dawson's Creek (2000s)
4. My So Called Life (1990s)
5. Saved by the Bell (1990s)
6. The Facts of Life (1980s)
7. The Wonder Years (1980s)
8. Happy Days (1970s)
9. The Partridge Family (1970s)
10. The Monkees (1960s)
11. Gidget (1960s)
12. The Many Loves of Dobie Gillis (1950s)
13. The Adventures of Ozzie and Harriet (1950s)

If you want to spice it up a little, you can visit ABC News' *Sex-Ed Films Through the Years* (<http://abcnews.go.com/video/playerIndex?id=6862388>). This is a short vignette of film excerpts from sexual education films from the 1930s, 40s, 50s, 60s, 70s and 80s. It shows how this topic was discussed (or not discussed) in popular media.

## America's Next Top Model vs. Friday Night Lights

Have students compare popular TV shows for gender stereotypes. You can use shows like America's Top Model (<http://www.cwtv.com/shows/americas-next-top-model>) vs. Friday Night Lights (<http://www.nbc.com/friday-night-lights/>) for clips. Full episodes are available on Netflix and Hulu plus. How are early-maturing and late-maturing girls and boys portrayed? How realistic are these portrayals? You can add shows like Ugly Betty to the discussion (available on hulu plus).

You can also start a class debate about whether teens want realistic portrayals of teen life on TV. Check out the discussion online at <http://www.ypulse.com/do-teens-want-realistic-portrayals-of-teen-life-on-tv>

## 3. Practical Resources

### A) Internet Resources

There is so much information available via the Internet – how do we know the information we are gleaning is reliable, accurate, and meaningful? Promote the critical analysis of websites and Internet resources with your students. Most university library websites contain guides to critically assessing Internet resources. For example, the University of British Columbia offers this evaluation resource on their website -- <http://www.library.ubc.ca/home/evaluating/>.

#### Puberty

The following websites have additional information on hormonal regulation of puberty, puberty in boys, and puberty in girls.

Hormonal Regulation of Puberty:

<http://www.sciencedaily.com/releases/2010/07/100712121826.htm>

Puberty in Boys: [http://kidshealth.org/kid/grow/boy/boys\\_puberty.html](http://kidshealth.org/kid/grow/boy/boys_puberty.html)

Puberty in Girls: <http://teens.webmd.com/girls/facts-about-puberty-girls>

#### Overweight Teen

<http://www.overweightteen.com/>

This site is sponsored by the CRC Health Group that provides treatment and educational programs for adults and youth who are struggling with behavioral issues, chemical dependency, eating disorders, obesity, pain management, or learning disabilities. This particular site provides comprehensive resources for overweight teens and their families as well as current statistics for obesity in the US.

#### Native American Culture Perspectives – Kinaalda: The Navajo Puberty Ritual

[http://www.associatedcontent.com/article/106033/native\\_american\\_culture\\_perspectives.html?cat=4](http://www.associatedcontent.com/article/106033/native_american_culture_perspectives.html?cat=4)

This site describes the Navajo puberty ritual for girls. When a Navajo girl reaches puberty (the time of her first menstruation), she undergoes a four-day ceremony called Kinaalda, which signifies her transformation from childhood into womanhood. The ceremony is centered on the Navajo myth of Changing woman, the first woman on Earth who was able to bear children.

#### American Medical Association Adolescent Health Online

<http://www.ama-assn.org/ama/pub/category/1947.html>

The American Medical Association's Program on Child and Adolescent Health provides this website as a source of health-related information. Includes information on injury prevention, nutrition, and physical fitness, among other topics. The information is intended to be understandable to the general public, not just physicians and other health care providers.

#### Adolescent Health – Healthy Youth

<http://www.cdc.gov/HealthyYouth/>

The Centers for Disease Control and Prevention website area that focuses on adolescent health. Provides statistics as well as information on medical treatments and health promotion programs.

#### Sexuality Information and Education Council of the U.S. (SIECUS)

<http://www.siecus.org/>

SIECUS disseminates information, promotes education on sexuality issues, and advocates the right to make responsible sexual choices. The site features a school health education clearinghouse, library and information services, and links for adults, parents, adolescents, as well as international links.

#### Teen Health

<http://www.nlm.nih.gov/medlineplus/teenhealth.html>

Links are provided to websites that address teen health issues.

### More on Sexual Health

[http://www.kidshealth.org/teen/sexual\\_health/](http://www.kidshealth.org/teen/sexual_health/)

Contains articles on sexual health-related issues such as puberty, menstruation, and birth control. There are links to articles geared toward both boys and girls. This is a resource for teens and those wanting to learn more about adolescent health issues.

### Research and Action for Youth Health

<http://www.mcs.bc.ca>

The McCreary Centre Society's website contains information on recent survey research on adolescent health issues in Canada. An excellent site where you can link up with youth health resources, current educational and research news in the area of adolescence and adolescent health, as well as information on youth action initiatives.

### Go Ask Alice

<http://www.goaskalice.columbia.edu/>

This site is a comprehensive health Q & A site produced by Columbia University's Health Education Program. If you are looking for straightforward information on a variety of health-related topics, then you should definitely Go Ask Alice! Topic areas include: sexual health, sexuality, relationships, and more. All inquiries remain anonymous.

## B) Films and Videos

Note: Many of the popular film descriptions are abstracted from The Internet Movie Database ([www.imdb.com](http://www.imdb.com)) and All Movie ([www.allmovie.com](http://www.allmovie.com)). Other film descriptions are abstracted from Martin, M., & Porter, M. (2006). DVD & Video Guide 2006. New York: Ballantine Books. Educational videos were sourced from both university and public library databases including ERIC. Try your own search at your local libraries for additional materials.

Hulu (<http://www.hulu.com> – can only be streamed in the U.S.) offers free films and television series, as well as movie previews. This site is legal and the material is authorized for web distribution. You can browse through and find older films, vintage television shows, and educational videos (See introduction to IRM for additional information regarding copyright).

Another great source for current and insightful educational videos and documentaries is the Public Broadcasting Service website (<http://www.pbs.org/>). The site has a link to instructional resources as well as to audio iPodcasts you can download and play in your class. Also, check out the website About.com ([http://websearch.about.com/od/imagesearch/a/education\\_video.htm](http://websearch.about.com/od/imagesearch/a/education_video.htm)) for a listing of free educational videos on the web.

## I) Educational Videos

### 1. The Birds, The Bees, and Me

(Films for the Humanities and Sciences, <http://www.libraryvideo.com>, 20 minutes for each video – one for girls and one for boys)



Designed for a preteen audience, this award-winning video collection offers an introduction to puberty and sex education with live-action and animated sequences, teen hosts, and an introduction by a pediatrician.

## 2. Teens: What Makes Them Tick?

(Films for the Humanities and Sciences, <http://ffh.films.com/>, 43 minutes)

In this ABC News special, John Stossel interviews a variety of teens and their parents about the myriad of changes that occur during adolescence. In the program, Mr. Stossel visits the Harvard Medical School's Brain Center to reveal some surprising physiological reasons for the behaviors that teenagers display.

## 3. The Cult of the Beautiful Body

(Films for the Humanities and Sciences, <http://ffh.films.com/>, 30 minutes)

In this program, the cult of the body in Western society is examined. A discussion of the cultural ideals that have driven the courtship ritual between boys and girls to a one dimensional experience to focus almost exclusively on physical attractiveness is presented. The media's role in pressuring youth to conform to unrealistic portrayals is scrutinized.

## 4. Fear of Fat

(Churchill, 1986, 26 minutes)

This video discusses common eating disorders.

# II) Popular Films

## 1. 50 Ways of Saying Fabulous

(dir. Stewart Main, 2005, 90 minutes)

This is the story of 12-year-old Billy, who is about to discover that growing up is a lot more confusing than he could have ever imagined. He is a farmer's only son who is out of step with the other boys at his school. As he learns about his sexuality, everything he knows is called into question, including his lifelong loyalty to his best friend, tomboy Louise.

## 2. Persepolis

(dir. Vincent Paronnaud, Marjane Satrapi, 2007, 96 minutes)

This movie is a poignant coming-of-age story of a precocious and outspoken young Iranian girl that begins during the Islamic Revolution. Marjane Satrapi grew up wearing sneakers and beating up boys. She wanted to grow up to be a saint. When she was ten years old, her world changed overnight. Girls and boys had to use different doors to enter the school. She had to cover herself with a long dark robe.

## 3. The Year My Voice Broke

(dir. John Duigan, 1988, 103 minutes)

A likeable Australian coming-of-age drama with echoes of "The Last Picture Show" and the novels of S.E. Hinton. Though the film market has been saturated with adolescent dramas since 1962, this movie's refreshing honesty makes it a welcome addition to the genre.

## C) Popular Reading Room

Novels, nonfiction, and other literature you can suggest as related reading for your students. Besides being entertaining and enlightening, you may find excerpts, quotes, or cartoons to bring illustrative examples to your lectures and presentations.

### 1. Are You There, God? It's Me, Margaret

(Judy Blume, 1970, Bantam Doubleday Dell Books for Young Readers)

A classic teen novel that addresses issues of puberty and peers through the eyes of a young girl. Great material for case study discussions in your lectures.

### 2. Teen Angst? Naaah.... (A Quasi-Autobiography)

(Ned Vizzini, 2000, Free Spirit Publishing)

A humorous account of the teen years, in the form of a survival guide. A series of essays by 19-year-old Vizzini.

### 3. Inbreeding, Incest, and the Incest Taboo: The State of Knowledge at the Turn of the Century

(Arthur P. Wolf and William H. Durham – editors, 2004, Stanford University Press)

This book brings together contributions from the fields of genetics, behavioral biology, primatology, biological and social anthropology, philosophy, and psychiatry which reexamine the questions surrounding the incest taboo.

## D) Annotated Readings

Brausch, A. M., & Gutierrez, P. M. (2009). The role of body image and disordered eating as risk factors for depression and suicidal ideation in adolescents. *Suicide and Life-Threatening Behavior*, 39(1), 58–71.

*In the current study, disordered eating and body image were examined as risk factors for suicide ideation since these factors are prevalent in adolescence, particularly for females. The authors sampled 392 high school students. Results indicated that disordered eating contributed to both suicide ideation and depressive symptoms, while body image only contributed to depressive symptoms. Depressive symptoms contributed to suicide ideation. The model was found to be cross-validated with males and females, and no gender differences emerged.*

Brumberg, J. J. (1997). *The body project: An intimate history of American girls*. New York: Random House.

*Joan Brumberg wrote a book about eating disorders in 1988 that led her to examine adolescent girls' attitudes toward their bodies from the 19<sup>th</sup> century to the present. The archival photographs are worth the cost of the book. Make slides and show your class. An eye-opener.*

Chernin, K. (1982). *The Obsession: Reflections on the tyranny of slenderness*. New York: Harper & Row.

*An excellent review of women's irrational fear of fat and the social pressures on women.*

Cota-Robles, S., Neiss, M., & Rowe, D. (2002). The role of puberty in violent and nonviolent delinquency among Anglo American, Mexican American, and African American boys.

*Journal of Adolescent Research, 17*(4), 364–76.

*This article focuses on the correlation between early pubertal timing and problem behaviors. The article hypothesizes that social and biological processes, which differ among ethnic groups, may also explain the relationship between pubertal timing and delinquency. The researchers interviewed 5,000 boys ages 11 to 17. The research showed that early pubertal timing predicts nonviolent and violent delinquency for Anglo American, African American, and Mexican American adolescent boys.*

Hollis, J. (1985). *Fat is a family affair: A frank discussion of eating disorders and the family's involvement*. San Francisco: Harper/Hazeldon Publishers.

*Hollis takes a systemic family view of eating disorders. Her point of view is that an eating disorder is a symbol or symptom of how food addicts relate to the world.*

Johnson, K. A., & Tyler, K. A. (2007). Adolescent sexual onset: An intergenerational analysis.

*Journal of Youth and Adolescence, 36*(7), 939–49.

*Based on a sample of 2,494 adolescents from the National Longitudinal Survey of Youth (NLSY97), structural and parental process variables were examined in the prediction of sexual onset. Results indicated that the age at which youth initiate sexual intercourse is related to the structural characteristics of their grandmothers and mothers, as well as puberty, gender, and race.*

## E) Additional References

Banfield, S. S. & McCabe, M. P. (2002). An evaluation of the construct of body image.

*Adolescence, 37*(146), 373–93.

Bruch, H. (1973). *Eating disorders*. New York: Basic Books.

Dick, D. M., Rose, R. J., Pulkkinen, L., & Kaprio, J. (2001). Measuring puberty and

understanding its impact: A longitudinal study of adolescent twins. *Journal of Youth and Adolescence, 30*(4), 385–399.

Dorn, L. D., Dahl, R. E., & Woodward, H. R. (2006). Defining the boundaries of early adolescence: A user's guide to assessing pubertal status and pubertal timing in research with adolescents. *Applied Developmental Science, 10*(1), 30–56.

Roth, G. (1991). *When food is love: Exploring the relationship between eating and intimacy*.

New York: Plume Books.

Sun, S. S., Schubert, C. M. & Liang, R. (2005). Is sexual maturity occurring earlier among U.S.

children? *Journal of Adolescent Health*, 37(5), 345–355.

Talpade, M. (2008). Hispanic versus African American girls: Body image, nutrition and puberty. *Adolescence*, 43(169), 119–127.

Tremblay, L., & Frigon, J. (2005). Precocious puberty in adolescent girls: A biomarker of later psychosocial adjustment problems. *Child Psychiatry & Human Development*, 36(1), 73–94.

Wong, J., Salili, F., & Ho, S. Y. (2005). The perceptions of adolescents, parents and teachers on the same adolescent health issues. *School Psychology International*, 26(3), 371–384.

## 4. Handouts

- 2.1 Think-Jot-Share
- 2.2 Think-Jot-Share
- 2.3 Think-Jot-Share
- 2.4 Exit Slip
- 2.5 Exit Slip
- 2.6 Activity: Reflections on Body Image (Facts About Figures)
- 2.7 Activity: The ĨStars and the NerdsÓ (Characteristics of Early/Late Maturing Girls and Boys)

# THINK - JOT - SHARE

Think about your own pubertal development.

- Were you early? Late? On time?
- How did the timing of your own pubertal development affect who you are as a person right now?

# THINK - JOT - SHARE

Think about the research on pubertal development.

- How comfortable and accurate do you believe adolescents would be when asked to describe their own rate of pubertal development?
- What do you believe might be some of the problems a researcher may encounter when embarking on research on adolescent pubertal development?

# THINK - JOT - SHARE

Think about the research on the Secular Trend.

- What are the factors that are responsible for this trend?
  
  
  
  
  
  
  
  
  
  
- How might differences between the generations be exacerbated given the secular trend?



# Exit Slip

1. Why do you think that off-time maturers receive little information about their maturational status?
2. What might be some of the concerns of these "off-time" adolescents and what can teachers/parents/health care professionals do to help?

## HANDOUT 2.5

# Exit Slip

1. Do parent-adolescent relationships change during adolescence? Why or why not? Describe.

## HANDOUT 2.6

### THE FACTS ABOUT FIGURES

**1%– 4%** Percentage of high school and college girls have either anorexia or bulimia.

**0.5%– 1%** Percentage of girls who had bulimia or anorexia in 1976.

**33-23-33** Average measurements of a contemporary fashion model.

**36-18-33** Projected measurements of a Barbie Doll, in inches, if she were a full-sized human being.

**5'4" - 142** The average height and weight of an American woman.

**5'9" - 110** Average height and weight of a model.

**33%** Percentage of American women who wear a size 16 or larger.

**80%** Percentage of women who diet.

**24%** Percentage of men who diet.

**50%** Percentage of American women on a diet at any one time.

**50%** Percentage of 9-year-old girls who have ever dieted.

**\$10 billion** Revenues of the diet industry in 1970.

**\$33 billion** Revenues of the diet industry today.

**10%** Percentage of teenagers with eating disorders who are boys.

## HANDOUT 2.7

### **Early-Maturing Boys**

Athletic advantage  
Social prestige  
More extracurricular participation  
Chosen for leadership roles  
Peer recognition  
More interest in girls  
Early heterosexual relationships  
Adults favor--rate them higher  
Adults treat them as more mature, able persons  
Appear more poised, relaxed, good-natured

### **Late-Maturing Boys**

Socially-induced inferiority  
Negative self-perceptions and self-concepts  
Characterized as less attractive, less well-groomed, less popular, more restless,  
bossy, more rebellious against parents  
Feelings of inadequacy, rejection and dependency  
Self-conscious, become withdrawn  
Overly eager for status and attention  
Use attention-getting devices  
Delay adult commitments, such as marriage

### **Early-Maturing Girls**

During elementary years--negative effects  
Taller, more developed  
Feel awkward and self-conscious  
During junior high--positive effects  
Envied by other girls  
Attract the attention of older boys  
Emotionally unequipped to deal with sophisticated social activities and sex

### **Late-Maturing Girls**

Distinct social disadvantage in JH and HS  
Look like "little girls" and resent being treated as such  
Late daters  
On par with normal maturing boys  
Temporary loss of social status

## 5)Video Guide Questions & Answers

### Chapter 2:

#### Twins (p. 57)

1. List at least 3 similarities that Elyse and Paula had in common as described in this video.
  - Good answers might include:
    - Both had older brothers
    - Both studied film in college
    - Both collected Alice in wonderland dolls (and kept them in the packaging)
    - Both were editors of their school newspaper
    - Both had some tough times during college
2. Describe Elyse's views on nature vs. nurture. Then describe your own views on nature vs. nurture.
  - She feels that it is a constant interplay
  - Subsequent answers will vary
3. Take the example that both women were editors of their high school newspapers & describe how this could have been impacted differently by nature as well as nurture.
  - Answers will vary – but may include:
    - Nature: perhaps there was an innate interest
    - Nurture: Perhaps it was taken on because the opportunity was available (keep in mind if they were not separated, they both may not have had the opportunity)