

2010-2012

# Managing Contraception

For Your Pocket

Bridging the Gap Communications

P.O. Box 79299

Atlanta, GA 30357

[www.managingcontraception.com](http://www.managingcontraception.com)

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### **Suggested formal citation:**

Zieman M, Hatcher RA et al. *A Pocket Guide to Managing Contraception*. Tiger, Georgia: Bridging the Gap Foundation, 2010.

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The authors remind readers that this book is intended to educate health care providers, not guide individual therapy. The authors advise a person with a particular problem to consult a primary-care clinician or a specialist in obstetrics, gynecology, or urology (depending on the problem or the contraceptive) as well as the product package insert and other references before diagnosing, managing, or treating the problem. **Under no circumstances should the reader use this handbook in lieu of or to override the judgment of the treating clinician.** The order in which diagnostic or therapeutic measures appear in this text is not necessarily the order that clinicians *should* follow in each case. The authors and staff are not liable for errors or omissions.

Tenth Edition, 2010-2012

ISBN 978-0-9794395-2-0

Printed in the United States of America

The Bridging the Gap Foundation

On 165 pages, we cannot possibly provide you with all the information you might want or need about contraception. Many of the questions clinicians ask are answered in the textbook *Contraceptive Technology* or in detail on our website. Visit us regularly at: **[www.managingcontraception.com](http://www.managingcontraception.com)**

2010-2012

# Managing Contraception

For Your Pocket

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**Special Thanks:** *A Pocket Guide to Managing Contraception* was developed and sent, from 1999 to 2006, to all 3rd year medical students in the United States thanks to the **David and Lucile Packard Foundation**. We are extremely grateful to the Packard Foundation and to **Scherring Plough** and another Foundation which funded distribution of the last edition to 3rd year medical students, GYN-OB residents, and family practice residents. Send an email to [info@managingcontraception.com](mailto:info@managingcontraception.com) if your program has not received copies.

*The Bridging the Gap Foundation • Tiger, Georgia*

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## OUR MISSION

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The mission of *Bridging The Gap Foundation* is to improve reproductive health and contraceptive decision-making of women and men by providing up-to-date educational resources to the physicians, nurses and public health leaders of tomorrow.

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## OUR VISION

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Our vision is to provide educational resources to the health care providers of tomorrow to help ensure informed choices, better service, better access to service, happier and more successful contraceptors, competent clinicians, fewer unintended pregnancies and disease prevention.

***[www.managingcontraception.com](http://www.managingcontraception.com)***

**Examples of questions answered on this website:**

***I received a Mirena IUD on the 13th of October. My question is: From October 28th through November 4th I have been having a period. It's been 8 days. Is that normal?***

**My reply on November 4th:**

Bleeding days exceed days with no blood for the first month using Mirena (not for everyone, but this is on average). You may have still more days of spotting or bleeding in the days or weeks ahead. I hope the bleeding is becoming less over time. In time, women using Mirena have 90% LESS blood loss than women of the same age using no hormonal method of contraception. This difference between the first month or so and later on has led to the advice given by a wise person:

*Terri Wynn-Hipps is a nurse midwife in Ft. Bragg, North Carolina. She has inserted close to 200 IUDs in the past year. 85% of her last 100 insertions have been Mirena IUDs. You can see that whatever she is telling women in advance of inserting an IUD clearly is not discouraging her patients from choosing Mirena. So, how does Terri Wynn-Hipps from Ft. Bragg, North Carolina deal with the spotting, bleeding and cramping in the first month after Mirena insertion? SHE TELLS WOMEN: "You may dislike it for a month but then you will love it for 5 years."*

*(Contraceptive Technology Conference-Atlanta, Georgia October 29, 2009)*

## HOW TO USE MANAGING CONTRACEPTION AND THE INTERACTIVE LECTURE

This pocket guide is designed to give up-to-date, immediate clinical information that is evidence-based. For more comprehensive information, we refer you to *Contraceptive Technology*, an in-depth textbook, which is available through the website ([www.managingcontraception.com](http://www.managingcontraception.com)) or in CD-ROM or PDF formats.

*Managing Contraception* can also be used as a teaching tool.

Medical, nursing or public health students OR residents can receive *Managing Contraception* along with a handout that has self-learning questions at the beginning of their clerkship or rotation.

The questions can be divided and assigned to the students in advance of the lecture. Students can prepare answers to the questions and present to the class during the interactive lecture.

The CD-ROM, "Teaching Contraception: An Interactive Lecture Using *Managing Contraception*" contains power point slides that can accompany the lecture. The slides contain photos of all the methods, The CD-ROM also provides supplemental information, page numbers, and answers in the 'NOTES' section of the lecture. To order the CD, please contact Bridging the Gap at 770-887-8383 or [www.mangagingcontraception.com](http://www.mangagingcontraception.com).



**PREPARED  
LECTURE!**

If you desire to give the lecture in one session, it takes approximately 1 1/2 hours to present. Alternatively, the lecture can be split into 2-3 shorter sessions.

Have fun with it! Bring examples of different birth control methods to show, props, etc.

## INTERACTIVE QUESTIONS FOR MC, 2010-2012 EDITION

Name the four most effective contraceptive methods available in the U.S. Which of these methods does not affect future fertility? Pages 38, 89, 91, 131.

A 21 year-old woman is considering a copper T IUD and asks: How does it work? For how long is it effective? What bleeding pattern should she expect with its use? Will it increase her risk of abortion, ectopic pregnancy, or pelvic inflammatory disease (PID)? Please answer her questions. Pages 82-89

A 36 year-old woman presents with heavy menstrual periods and desires long-term contraception. What are the contraceptive and non-contraceptive benefits she might experience with the levonorgestrel intrauterine contraceptive? Specifically, what bleeding pattern should she expect with its use? Pages 82, 90-93

A 16 year-old adolescent frequently forgets to take her oral contraceptive. You suggest she use the progestin-only implant. For how many years is this implant effective? What is the failure (pregnancy) rate of the implant in the first year of use? Where/how is it inserted? What bleeding pattern should she expect with its use? Page 38, 40, 130-133

Depo-Provera injections contain progestin, a synthetic form of progesterone, without any estrogen added. What are the most common benefits and side effects to review with a patient before she starts Depo-Provera? Pages 121-127

What is the main message about how to choose or prescribe a combined (estrogen and progestin) pill? What types and doses of estrogen are found in combined pills today? What is the difference between monophasic and multiphasic pill formulations? What is the difference between cyclic and extended pill formulations? Pages 94-103, 108

Give three examples of when to start combined (and other) contraceptive methods other than the "Sunday start." Which is now the preferred time to start? Is it necessary to perform a pelvic examination before starting combined contraceptive methods? Pages 102-104, 107

A 30 year-old woman who has not been sexually active for a year wonders if she should stop taking her combined pill. What are the risks of taking the pill? What are the non-contraceptive benefits of combined pills? Are there added benefits to taking combined pills in an extended regimen? Pages 94-107

A 26 year-old woman has been using the weekly Ortho Evra patch and realized that she left her patch off for 9 days. What should she do at this point? Review the correct use of the patch with her, including: how to place the patch correctly, how often to change the patch, and how long to leave the patch off. Pages 112-114

A 30 year-old likes the menstrual regularity of combined pills, but often forgets to take them. You suggest the monthly vaginal Nuva ring. Instruct her in its use, specifically: how to place the ring, how long to leave the ring in, how long to wait before inserting a new ring. Pages 114-116

A 40 year-old woman prefers to use oral contraceptives but has not yet quit smoking, and so you suggest she use progestin-only pills. What are the advantages and disadvantages of these pills? What other types of women might be good candidates for uses of progestin-only pills? Pages 117-120.

The United States CDC Medical Eligibility Criteria provides guidelines for safe use of contraceptive methods. Using the criteria, give two examples of medical conditions in which women may safely take combined contraceptive methods. Give two examples of conditions in which the use of combined methods is contraindicated. Pages A1-A8.

A 20 year-old woman is 24 hours postpartum and plans to breast feed. Name the three conditions she should follow in order to effectively use the lactational amenorrhea method for contraception. If she wishes to use something else for her contraception, what options does she have at this point? Pages 47-51.

What points should you review when counseling a 28 year-old married woman who is considering tubal sterilization? How effective are the various tubal sterilization methods? How do they compare to male sterilization? Pages 134-143.

A 19 year-old college student plans to use male condoms as her primary contraceptive method. How effective are male condoms at protecting women (and men) from pregnancy and infection? How would you instruct her in the proper use of male condoms? Pages 56-62.

How do you counsel a 22 year-old nulligravid patient who wishes to continue to use Depo-Provera, but still needs to protect herself from infection? Specifically, how would you encourage her to use a barrier method in addition to her main contraceptive method? Pages 20, 58-59, 122.

A 28 year-old woman had unprotected sex 2 days ago and is considering taking emergency contraceptive pills. She asks you: When and how do I take them? How do they work? Will they cause an abortion? Will they protect me for the rest of my menstrual cycle? Please answer her questions. Pages 73-78.

Your 14 year-old patient plans to continue abstinence as her contraceptive method. What are your instructions to her? What back-up methods can you provide her before she leaves your office? Pages 44-46.

What are the various types of female-controlled barrier methods available? What are the primary advantages of these methods? What are the primary disadvantages? What type of patient might be a good candidate for these methods? Pages 63-67.

A 22 year-old woman and her boyfriend are using withdrawal for contraception. How can you advise her (and him) about the effectiveness of withdrawal as a contraceptive? For what else would she (they) be at risk? Pages 40, 71-72.

A 30 year-old woman with multiple sexual partners is using spermicides as her only method of contraception. How would you counsel her about her risks with using spermicides? Specifically, how effective are spermicides in protecting against pregnancy? Does spermicide use potentially increase or decrease her risk of acquiring HIV and other STIs? Pages 40, 68-70.

There are various fertility awareness methods that can be utilized for contraception. How effective are the various methods? What instructions can women (and couples) follow to increase the effectiveness of the various fertility awareness methods? Pages 40, 52-55.

*Version 1-1-10*



## DEDICATION



*We dedicate this edition of **Managing Contraception**  
to **Carl Tyler, Jr. MD***

Dr. Tyler was an early advocate for the study of reproductive health in the United States. He was the first director of what was then called “The Family Planning Evaluation Division” - now the Division of Reproductive Health - at the CDC. Later, he led the Epidemic Intelligence Service, EIS, Program.

As Chief of Family Planning Evaluation (FPE), Carl was the driving force behind the abortion surveillance program that documented the positive effects of safe, legal abortion on the health of American women. He also engaged the Division in the evaluation of national and international family planning programs through the relationships he developed with the DASPA (Deputy Assistant Secretary for Population Affairs) and Title X and with Ray Ravenholt, the Director of the Office of Population at USAID. As a result of these initiatives EIS Officers and others from FPE worked all over the country and around the world to improve the family planning programs funded by Title X and USAID. Among those who worked with Carl and whose careers were shaped by his leadership and mentoring were Ward Cates, Philip Darney, David Grimes, Bob Hatcher, Bert Peterson, Andy Kauntiz, Judith Rooks, and many others who became leaders in family planning. All of the authors of this book have been trained and/or influenced by one of the above people.

Carl insisted on a sound scientific investigation and clear and concise presentations of findings. We strive for the same in the production of this pocket guide. We thank Carl for his vision, leadership and inspiration.



## IMPORTANT CONTACTS

TOPIC	ORGANIZATION	PHONE NUMBER	WEBSITE
Abortion	Abortion Hotline (NAF)	(202) 667-5881	www.prochoice.org
Abuse/Rape	National Domestic Violence Hotline	(312) 663-3520	
Adoption	Adopt a Special Kid-America	800-799-SAFE	www.ndvh.org
	Adoptive Families of America	888-680-7349	www.adoptaspecialkid.org
		800-372-3300	www.adoptivefamilies.org
Breastfeeding	La Leche League	800-LA-LECHE	www.lalecheleague.org
Contraception	Managing Contraception/ Bridging the Gap Communications	(770) 887-8383	www.managingcontraception.com
	Planned Parenthood Federation of America	800-230-PLAN	www.ppfa.org
	Family Health International	(919) 544-7040	www.fhi.org
	World Health Organization	011-41-22-791-21-11	www.who.int
	Assoc. of Reproductive Health Professionals (ARHP)	(202) 466-3825	www.arhp.org
Counseling	Depression and Bipolar Support Alliance	800-826-3632	www.ndmda.org
Emergency contraception	Emergency Contraception Information	888-NOT-2-LATE	not-2-late.com
HIV/AIDS	Ntl. HIV/AIDS Clinicians' Consultation Center		www.ucsf.edu/hivcntr
	Post-Exposure Prophylactic Hotline (PEP)	888-HIV-4911	
Pregnancy	Lamaze International	800-368-4404	www.lamaze.org
	Depression After Delivery	800-944-4773	depressionafterdelivery.com
STIs	CDC Sexually Transmitted Disease Hotline	800-342-AIDS	cdc.gov/nchstp/dstd/dstdp.html

## HOW TO USE THIS BOOK

- Carry it with you.
- Arrows are a simple way for you to find the new information in this edition: ➔ or ➜
- Chapter 31 is taken directly from the most recent CDC recommended guidelines for the treatment of STIs. STIs alphabetized on page 146.
- Color photos of pills help you to determine the pill your patient is/was on (A22 - A33)
- The pages on the menstrual cycle concisely explain a very complicated series of events. Study pages 1-4 over and over again. Favorite subjects for exams!
- Algorithms throughout book; several that might help you are on the following pages:
  - Page 108: Choosing a pill
  - Page 109: What to do about breakthrough bleeding or spotting on pills
  - Page 128: Late for Depo-Provera injection
- If you know the page number for the 2007-2009 edition, the information in your 2010-2012 book is likely to be on **approximately** the same page.
- Using the back cover to find a topic is much easier than going to the index.
- If the print is too small, go to [www.managingcontraception.com](http://www.managingcontraception.com) and print out pages 8" x 11", put 3-hole punches into your large-print edition, and use this larger-print edition.**

## ABBREVIATIONS USED IN THIS BOOK

<b>ACOG</b>	American College of Obstetricians & Gynecologists	<b>E<sub>2</sub></b>	Estradiol
<b>AIDS</b>	Acquired immunodeficiency syndrome	<b>EE</b>	Ethinyl estradiol
<b>AMA</b>	American Medical Association	<b>EPA</b>	Environmental Protection Agency
<b>ASAP</b>	As soon as possible	<b>EPT</b>	Estrogen-progestin therapy
<b>BBT</b>	Basal body temperature	<b>ET</b>	Estrogen therapy
<b>BCA</b>	Bichloroacetic acid	<b>FAM</b>	Fertility awareness methods
<b>BID</b>	Twice daily	<b>FDA</b>	Food and Drug Administration
<b>BMI</b>	Body Mass Index	<b>FH</b>	Family History
<b>BP</b>	Blood pressure	<b>FSH</b>	Follicle stimulating hormone
<b>BTB</b>	Breakthrough bleeding	<b>GAPS</b>	Guidelines for Adolescent Preventive Services
<b>BTL</b>	Bilateral tubal ligation	<b>GC</b>	Gonococcus/gonorrhea
<b>BV</b>	Bacterial vaginosis	<b>GI</b>	Gastrointestinal
<b>CA</b>	Cancer (if not California)	<b>GnRH</b>	Gonadotrophin-releasing hormone
<b>CDC</b>	Centers for Disease Control and Prevention	<b>HBsAg</b>	Hepatitis B surface antigen
<b>COCs</b>	Combined oral contraceptives (estrogen & progestin)	<b>HAV</b>	Hepatitis A virus
<b>CMV</b>	Cytomegalovirus	<b>HBV</b>	Hepatitis B virus
<b>CT</b>	Chlamydia trachomatis	<b>HCG</b>	Human chorionic gonadotrophin
<b>CVD</b>	Cardiovascular disease	<b>HCV</b>	Hepatitis C virus
<b>D &amp; C</b>	Dilation and curettage	<b>HDL</b>	High density lipoprotein
<b>D &amp; E</b>	Dilation and evacuation	<b>HIV</b>	Human immunodeficiency virus
<b>DCBE</b>	Double contrast barium enema	<b>HPV</b>	Human papillomavirus
<b>DMPA</b>	Depot-medroxyprogesterone acetate (Depo-Provera)	<b>HSV</b>	Herpes simplex virus (I or II)
<b>DUB</b>	Dysfunctional uterine bleeding	<b>H(R)T</b>	Hormone (replacement) therapy
<b>DVT</b>	Deep vein thrombosis	<b>IM</b>	Intramuscular
<b>E</b>	Estrogen	<b>IPPF</b>	International Planned Parenthood Federation
<b>EC</b>	Emergency contraception	<b>IUC</b>	Intrauterine contraceptive
<b>ECPs</b>	Emergency contraceptive pills ("morning-after pills")	<b>IUD</b>	Intrauterine device
<b>ED</b>	Erectile dysfunction	<b>IUP</b>	Intrauterine pregnancy
		<b>IUS</b>	Intrauterine system
		<b>IV</b>	Intravenous

<b>KOH</b>	Potassium hydroxide	<b>PLISSIT</b>	Permission giving
<b>LAM</b>	Lactational amenorrhea method		Limited information
<b>LDL</b>	Low-density lipoprotein		Simple suggestions
<b>LGV</b>	Lymphogranuloma venereum		Intensive
<b>LH</b>	Luteinizing hormone		Therapy
<b>LMP</b>	Last menstrual period	<b>PMDD</b>	Premenstrual dysphoric disorder
<b>LNG</b>	Levonorgestrel	<b>PMS</b>	Premenstrual syndrome
<b>MI</b>	Myocardial infarction	<b>po</b>	Latin: "per os"; orally, by mouth
<b>MIS</b>	Misoprostol	<b>POCs</b>	Progestin-only contraceptives
<b>MMG</b>	Mammogram	<b>POP</b>	Progestin-only pill (minipill)
<b>MMPI</b>	Minnesota Multiphasic Personality Inventory	<b>PP</b>	Postpartum
<b>MMR</b>	Mumps Measles Rubella	<b>PPFA</b>	Planned Parenthood Federation of America
<b>MMWR</b>	Mortality and Morbidity Weekly Report	<b>PRN</b>	As needed
<b>MPA</b>	Medroxyprogesterone acetate	<b>qd</b>	Once daily
<b>MRI</b>	Magnetic resonance imaging	<b>qid</b>	Four times a day
<b>MTX</b>	Methotrexate	<b>RR</b>	Relative risk
<b>MVA</b>	Manual vacuum aspiration	<b>Rx</b>	Prescription
<b>N-9</b>	Nonoxonyl-9	<b>SAB</b>	Spontaneous abortion
<b>NFP</b>	Natural family planning	<b>SHBG</b>	Sex hormone binding globulin
<b>NSAID</b>	Nonsteroidal anti- inflammatory drug	<b>SPT</b>	Spotting
<b>OA</b>	Overeaters Anonymous	<b>SSRI</b>	Selective Serotonin Reuptake Inhibitors
<b>OB/GYN</b>	Obstetrics & Gynecology	<b>STD</b>	Sexually transmitted disease
<b>OC</b>	Oral contraceptive	<b>STI</b>	Sexually transmitted infection
<b>OR</b>	Operating Room	<b>Sx</b>	Symptoms
<b>OTC</b>	Over the counter	<b>TAB</b>	Therapeutic abortion/elective abortion
<b>P</b>	Progesterone or progestin	<b>TB</b>	Tuberculosis
<b>Pap</b>	Papanicolaou	<b>TCA</b>	Trichloroacetic acid
<b>PCOS</b>	Polycystic ovarian syndrome	<b>tid</b>	Three times a day
<b>PE</b>	Pulmonary embolism	<b>TSS</b>	Toxic shock syndrome
<b>PET</b>	Polyester (fibers)	<b>URI</b>	Upper respiratory infection
<b>PG</b>	Prostaglandin	<b>UTI</b>	Urinary tract infection
<b>pH</b>	Hydrogen ion concentration	<b>VTE</b>	Venous thromboembolism
<b>PID</b>	Pelvic inflammatory disease	<b>VVC</b>	Vulvovaginal candidiasis
		<b>WHO</b>	World Health Organization
		<b>ZDV</b>	Zidovudine



# CHAPTER 1

## The Menstrual Cycle

www.noperiod.com

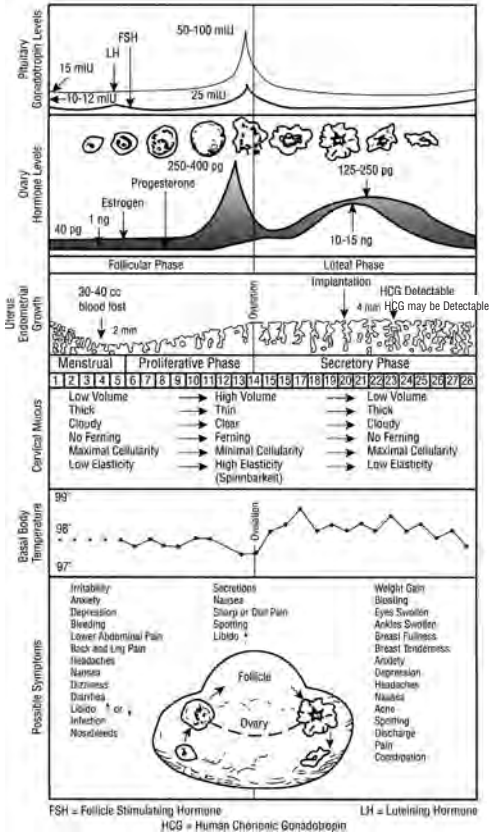


### SEVERAL KEY POINTS ON MENSTRUAL PHYSIOLOGY:

- **What initiates menses (and the next cycle)** is atrophy of the corpus luteum on or about day 25 of a typical 28 day cycle. This atrophy is initiated by a decline in LH release from the anterior pituitary gland and results in a fall in serum estrogen (E) and progesterone (P) levels. Without hormonal support, the endometrium sloughs. This drop in hormonal levels is also detected by the hypothalamus and pituitary, and FSH levels increase to stimulate follicles for the next cycle (Fig. 1.1 and 1.2).
- **Anovulation in women NOT on hormonal contraception leads to prolonged cycles, oligomenorrhea or amenorrhea or to irregular bleeding.** The absence of progesterone in anovulatory women *not* on hormones or birth control places these women at risk for endometrial hyperplasia and cancer. Recovery of ovarian function and return of ovulation has been demonstrated in women with functional hypothalamic amenorrhea who have been treated with cognitive behavioral therapy designed to improve coping skills for circumstances and moods that exacerbate stress [Berga-2003]. Similar results have also been achieved in women treated with hypnotherapy [Tschugguel-2003]
- **The two-cell, two gonadotrophin theory:** At the very beginning of the cycle, the outer theca cells can only be stimulated by LH and produce androgens (testosterone and androstenedione) and the inner granulosa cells can only be stimulated by FSH. Androgens diffuse toward the inner layer *granulosa* cells where they are converted into estradiol (E<sub>2</sub>) by FSH-stimulated aromatase (see Figure 1.3).
- In a developing follicle, **low androgen levels** not only serve as the substrate for FSH-induced aromatization, but also **stimulate** aromatase activity. On the other hand, **high levels of androgens** (an “androgen-rich” environment as in some women with polycystic ovaries) lead to **inhibition** of aromatase activity and to follicular atresia.
- The female infant is born with 1-2 million follicles, most of which undergo atresia before puberty. Only about 10-20 follicles each month are recruited by rising FSH levels. The recruitment actually occurs during the late luteal phase of the preceding cycle. Of those 10-20 follicles, usually only one dominant follicle ovulates. The number of follicles stimulated each month depends on the number of follicles left in the residual pool.
- FSH levels are low before ovulation as a result of negative feedback on FSH of E<sub>2</sub> and inhibin B. The dominant follicle “escapes” the effects of falling FSH levels before ovulation, because it has more granulosa cells, more FSH receptors on each of its granulosa cells, and increased blood flow. Cut off from adequate FSH stimulation, the other nondominant follicles undergo atresia.
- When E<sub>2</sub> production is sustained at sufficient levels (about 200 pg/ml) for more than 50 hours, negative feedback of E<sub>2</sub> on LH reverses to positive feedback. The LH surge occurs, and about 12 hours later an oocyte is extruded.
- About 50,000 granulosa cells form the corpus luteum. Some granulosa cells continue to produce E<sub>2</sub> and inhibins but many join the outer layers of theca cells to produce progesterone (P). Inhibin selectively suppresses FSH, not LH. The highest levels of inhibin are during the mid-luteal phase (primarily inhibin A now), causing FSH levels to be the lowest in the mid-luteal phase. At the end of the cycle (10-14 days after ovulation) if the corpus luteum is not rescued by HCG produced by the implanted trophoblast (pregnancy), the corpus luteum will undergo programmed atresia. Falling E<sub>2</sub>, P, and inhibin levels induce the release of FSH to initiate another cycle.

# Figure 1.1 Menstrual cycle events - Idealized 28 Day Cycle

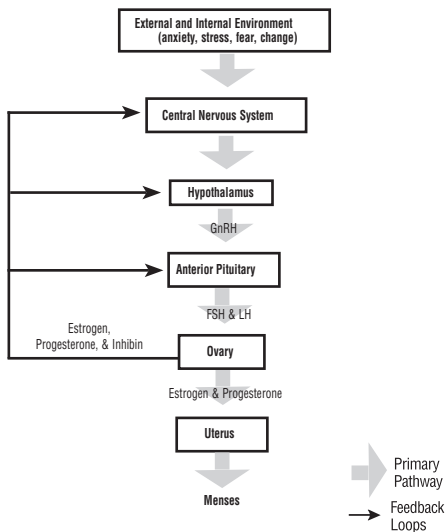
[Hatcher RA, et al. *Contraceptive Technology*. 18th ed. New York: Irvington, 2004:69]





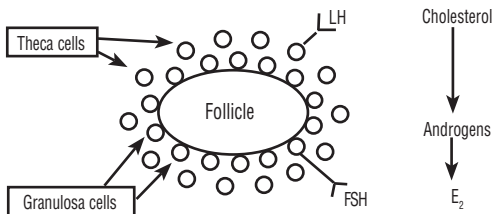
## Figure 1.2 Regulation of the menstrual cycle

[Hatcher RA, et al. *Contraceptive Technology*. 18th ed. New York: Irvington, 2004:68]



Primary hormone pathways ( ➡ ) in the reproductive system are modulated by both negative and positive feedback loops ( → ). Prostaglandins, secreted by the ovary and by uterine endometrial cells, also play a role in ovulation, and may modulate hypothalamic function as well.

## Figure 1.3 The two-cell, two gonadotrophin theory



## ***Is Menstruation Obsolete? Who Needs a Period?***

The extended or continuous use of pills causes women to have fewer "pill periods". Most, but not all, women like this [Ropes-2002]. Decreased periods or no periods at all is important to discuss with women considering use of continuous pills, Depo-Provera injections, the Mirena IUD or the implant, Implanon. A 2003 Gallop poll found that 99% of female gynecologists consider menstrual suppression safe.

***What is "natural" — 50, 150, or 450 menstrual periods in a woman's lifetime?***

In prehistoric times women had 50 menstrual cycles or fewer. In Colonial America, when women were having an average of 8 babies and nursing each baby for 2-3 years, women averaged 150 menstrual periods per lifetime. Currently in America women average 450-480 menstrual cycles per lifetime. [Segal, 2001]

Some women find regular menses reassuring, positive, "natural" or important evidence that they are still capable of reproducing. Many women regularly experience inconvenience, messiness, blood loss, painful menses, cyclic migraines, depression, ovarian cysts, and/or breast tenderness, would be happier having periods less often, or not at all (see discussion of extended use of COCs on page 100).

Many women feel both positively and negatively about their periods. Close to half of all visits to gynecology clinicians are for difficulties women experience at the time of their menses. [Segal, 2001] Women experiencing symptoms associated with their menses may benefit from contraceptives that alter the likelihood of ovulation, the amount of blood lost each month, or the extent of menstrual cramping and pain. In some instances, women may benefit from contraceptives that completely eliminate monthly periods. This is particularly likely to be true for women with any of the following cyclic symptoms: PMS, endometriosis, dysmenorrhea, depression, headaches, seizures, nausea, vomiting, breast enlargement or tenderness or very heavy bleeding. Unfortunately, few women are aware of the noncontraceptive benefits of contraceptives [Peipert, 1993] or of basic contraceptive knowledge [Davis, 2006]. ←

**Clearly some women choose contraceptives to gain relief from symptoms related to their menstrual cycles. Others discontinue contraceptives due to undesirable effects on the patterns of their menses.** In the pages ahead, the advantages and disadvantages of each contraceptive related to the menstrual cycle are described.

A provocative book by Coutinho and Segal raises the question: ***Is Menstruation Obsolete?*** [Coutinho, 1999] These two individuals played pivotal roles in the research leading to the approval of a number of our current contraceptives. Here is a comment on their book:

Kate Miller, MPH, of the University of Pennsylvania states: ***One of the difficulties of regular menstruation is the usual assembly of monthly symptoms - cramps, headache, fatigue, irritability - which are often dismissed as part of "the curse" that women must simply endure. Since women tolerate these symptoms so regularly, they may not automatically include them in the "risks" of monthly menstruation. The reader is encouraged to recognize what may have previously gone unnoticed: that this monthly discomfort is simply not obligatory. In fact, it can be a startling exercise for a woman to imagine her life without the hassles and ailments of regular menstruation. This is a message whose time has come.***

## CHAPTER 2

### Recommended Screening/Risk Assessment by Age\*\*

#### AGES 13-18 YEARS

##### SCREENING

###### History

- Reason for visit
- Health status: medical, surgical, family, menstrual
- Dietary/nutrition assessment
- Physical activity
- Use of complementary and alternative medicine
- Tobacco, alcohol, other drug use
- Abuse/neglect
- Sexual practices

###### Physical Examination

- Height and Weight
- Blood pressure
- Body Mass Index
- Secondary sexual characteristics (Tanner staging)
- Pelvic examination (when indicated by the medical history) and skin\*

##### LABORATORY TESTS

###### Periodic

- Cervical cytology (annually beginning at approximately 3 years after initiation of sexual intercourse)
- Chlamydia and gonorrhea testing if sexually active

###### High-Risk Groups\*

- Hemoglobin level assessment
- Bacteriuria testing
- Sexually transmitted disease testing
- Human immunodeficiency virus (HIV) testing
- Genetic testing/counseling
- Rubella titer assessment
- Tuberculosis skin testing
- Lipid profile assessment
- Fasting glucose testing
- Hepatitis C virus testing
- Colorectal cancer screening†

##### EVALUATION AND COUNSELING

###### Sexuality

- Development
- High-risk behaviors
- Preventing unwanted/unintended pregnancy
  - Postponing sexual involvement
  - Contraceptive options, including emergency contraception
- Sexually transmitted diseases
  - Partner selection
  - Barrier protection

###### Fitness and Nutrition

- Dietary/nutritional assessment (including eating disorders)
- Exercise: discussion of program

- Folic acid supplementation (0.4 mg/d)
- Calcium intake

###### Psychosocial Evaluation

- Suicide: depressive symptoms
- Interpersonal/family relationships
- Sexual identity
- Personal goal development
- Behavioral/learning disorders
- Abuse/neglect
- Satisfactory school experience
- Peer relationships
- Date rape prevention

###### Cardiovascular Risk Factors

- Family history
- Hypertension
- Dyslipidemia or obesity
- Diabetes mellitus

###### Health/Risk Behaviors

- Hygiene (including dental); fluoride supplementation
- Injury prevention
  - Safety belts and helmets
  - Recreational hazards/firearms
  - Hearing
  - Occupational hazards
  - School hazards
  - Exercise and sports involvement
- Skin exposure to ultraviolet rays
- Tobacco, alcohol, other drug use

##### IMMUNIZATIONS\*

###### Periodic

- Tetanus-diphtheria booster (once between ages 11 and 16 years)
- Hepatitis B virus vaccine (one series for those not previously immunized)
- HPV vaccine (one series for those not previously immunized)
- Meningococcal vaccine (before high school for those not previously immunized)

###### High-Risk Groups\*

- Influenza vaccine
- Hepatitis A virus vaccine
- Pneumococcal vaccine
- Measles, mumps, rubella vaccine
- Varicella vaccine

###### Leading Causes of Death\*\*:

- Accidents
- Malignant neoplasms
- Homicide
- Suicide
- Congenital anomalies
- Diseases of the heart

†Only for those with a family history of familial adenomatous polyposis or 8 years after the start of pancolitis. For a more detailed discussion of colorectal cancer screening, see Smith RA, von Eschenback AC, Wender R, Levin B, Byers T, Rothenberger D, et al. American Cancer Society guidelines for the early detection of cancer: update of early detection guidelines for prostate, colorectal, and endometrial cancers. Also: update 2001-guidelines for early lung cancer detection [published erratum appears in CA Cancer J Clin 2001;51:150]. CA Cancer J Clin 2001;51:38-75; quiz 77-80.

\*See Table 1.

\*\*See box at end

\*NOTE: the vaccine against HPV is being recommended by many public health groups for women 9 to 26 years of age 5

#### Leading Causes of Morbidity:

- Acne
- Asthma
- Chlamydia
- Diabetes mellitus or obesity
- Headache
- Infective, viral, and parasitic diseases
- Mental disorders, including affective and neurotic disorders
- Nose, throat, ear and upper respiratory infections
- Sexual assault
- Sexually transmitted diseases
- Urinary tract infections
- Vaginitis

\* Please see page 10 for High-Risk Factors

## AGES 19-39 YEARS

### SCREENING

#### History

- Reason for visit
- Health status: medical, surgical, family
- Dietary/nutrition assessment
- Physical activity
- Use of complementary and alternative medicine
- Tobacco, alcohol, other drug use
- Abuse/neglect
- Sexual practices
- Urinary and fecal incontinence

#### Physical Examination

- Height and weight
- Body mass index ←
- Blood pressure
- Neck, adenopathy, thyroid
- Breasts/abdomen
- Pelvic examination
- Skin\*

### LABORATORY TESTING

#### Periodic

- Cervical cytology (annually beginning no later than age 21 years; every 2-3 years after 3 consecutive negative test results if age 30 years or older with no history of cervical intraepithelial neoplasia 2 or 3, immunosuppression, human immunodeficiency virus (HIV) infection, or diethylstilbestrol exposure in utero)\*

#### High-Risk Groups \*

- Hemoglobin level assessment
- Bacteriuria testing
- Mammography
- Fasting glucose testing
- Sexually transmitted disease testing
- Human immunodeficiency testing
- Genetic testing/counseling
- Rubella titer assessment
- Tuberculosis skin testing
- Lipid profile assessment
- Thyroid-stimulating hormone screening
- Hepatitis C virus testing

- Colorectal cancer screening
- Bone density screening

### EVALUATION AND COUNSELING

#### Sexuality

- Discussion of a reproductive health plan ←
- High-risk behaviors
- Contraceptive options for prevention of unwanted pregnancy, including emergency contraception
- Preconceptional and genetic counseling for desired pregnancy
- Sexually transmitted diseases
  - Partner selection
  - Barrier protection
- Sexual function

#### Fitness and Nutrition

- Dietary/nutritional assessment
- Exercise: discussion of program
- Folic acid supplementation (0.4 mg/d)
- Calcium intake

#### Psychosocial Evaluation

- Interpersonal/family relationships
- Intimate partner violence
- Work satisfaction
- Lifestyle/stress
- Sleep disorders

#### Cardiovascular Risk Factors

- Family history
- Hypertension
- Dyslipidemia or Obesity
- Diabetes mellitus
- Lifestyle

#### Health/Risk Behaviors

- Hygiene (including dental)
- Injury prevention
  - Safety belts and helmets
  - Occupational hazards
  - Recreational hazards/firearms
  - Hearing
  - Exercise and sports involvement
- Breast self-examination
- Chemoprophylaxis for breast cancer (for high-risk women ages 35 years or older)
- Skin exposure to ultraviolet rays
- Suicide: depressive symptoms
- Tobacco, alcohol, other drug use

### IMMUNIZATIONS

#### Periodic

- Tetanus-diphtheria booster (every 10 years)
- HPV vaccine (one series for those ≤ 26 ← years with no prior immunization)

#### High-Risk Groups \*

- Measles, mumps, rubella vaccine
- Hepatitis A virus vaccine
- Hepatitis B virus vaccine
- Influenza vaccine
- Pneumococcal or Varicella vaccine
- Meningococcal vaccine ←

\* Please see page 10 for High-Risk Factors

#### Leading Causes of Death:

- Malignant neoplasms
- Accidents
- Diseases of the heart
- Suicide
- Human immunodeficiency virus infection
- Homicide

#### Leading Causes of Morbidity:

- Acne
- Arthritis/Asthma
- Back symptoms
- Cancer/Chlamydia
- Depression
- Diabetes mellitus
- Gynecologic disorders
- Headache/migraines
- Hypertension
- Joint disorders
- Menstrual disorders
- Mental disorders, including affective and neurotic disorders
- Nose, throat, ear, and upper respiratory infections
- Obesity
- Sexual assault/domestic violence
- Sexually transmitted diseases
- Skin rash/dermatitis
- Substance abuse
- Urinary tract infections

## AGES 40-64 YEARS

### SCREENING

#### History

- Reason for visit
- Health status: medical, surgical, family
- Dietary/nutrition assessment
- Physical activity
- Use of complementary and alternative medicine
- Tobacco, alcohol, other drug use
- Abuse/neglect
- Sexual practices
- Urinary and fecal incontinence

#### Physical Examination

- Height, Weight, Blood pressure, BMI
- Oral cavity, Neck: adenopathy, thyroid
- Breasts, Axillae, Abdomen, Pelvic examination
- Skin\*

### LABORATORY TESTING

#### Periodic

- Cervical cytology (every 2-3 years after 3 consecutive negative test results if no history of cervical intraepithelial neoplasia 2 or 3, immunosuppression, human immunodeficiency virus (HIV) infection, or diethylstilbestrol exposure in utero)
- Mammography (every 1-2 years beginning at age 40 years; yearly beginning at age 50 years)
- Bone density screening (if no risk factors; ← no more frequent than every 2 years)

- Lipid profile assessment (every 5 years beginning at age 45 years)
- Beginning at age 50 years, yearly fecal occult blood testing or flexible sigmoidoscopy every 5 years or yearly fecal occult blood testing plus flexible sigmoidoscopy every 5 years or double contrast barium enema every 5 years or colonoscopy every 10 years
- Fasting glucose testing (every 3 years after age 45)
- Thyroid-stimulating hormone screening (every 5 years beginning at age 50 years)

#### High-Risk Groups\*

- Hemoglobin level assessment
- Bacteriuria testing
- Fasting glucose testing
- Sexually transmitted disease testing
- Bone density screening
- HIV/TB testing
- Lipid profile assessment
- Thyroid-stimulating hormone screening
- Hepatitis C virus testing
- Colorectal cancer screening

### EVALUATION AND COUNSELING

#### Sexuality†

- High-risk behaviors
- Contraceptive options for prevention of unwanted pregnancy, including emergency contraception
- Sexually transmitted diseases

Partner selection

Barrier protection

- Sexual functioning

#### Fitness and Nutrition

- Dietary/nutrition assessment
- Exercise: discussion of program
- Folic acid supplementation (0.4 mg/d until age 50 years), Calcium intake

#### Psychosocial Evaluation

- Family relationships, Intimate partner violence
- Work satisfaction, Retirement planning
- Lifestyle/stress, Sleep disorders

#### Cardiovascular Risk Factors

- Family history
- Hypertension
- Dyslipidemia or Obesity
- Diabetes mellitus
- Lifestyle

#### Health/Risk Behaviors

- Hygiene (including dental)
- Hormone therapy
- Injury prevention
  - Safety belts and helmets
  - Occupational hazards
  - Exercise and sports involvement
  - Firearms
  - Hearing

\*Preconceptional counseling is appropriate for certain women in this age group.

† Please see page 10 for High Risk Factors.

- Breast self-examination\*\*\*
- Chemoprophylaxis for breast cancer (for high risk women)
- Skin exposure to ultraviolet rays
- Suicide: depressive symptoms
- Tobacco, alcohol, other drug use

#### IMMUNIZATIONS

##### Periodic

- Influenza vaccine (annually beginning at age 50)
- Tetanus-diphtheria booster (every 10 yrs)

##### High-Risk Groups \*

- Measles, mumps, rubella vaccine
- Hepatitis A virus vaccine, Hepatitis B virus vaccine
- Influenza vaccine, Pneumococcal vaccine
- Varicella vaccine
- Meningococcal vaccine ←

##### Leading Causes of Death:

- Malignant neoplasms
- Diseases of the heart
- Cerebrovascular diseases
- Chronic lower respiratory disease
- Accidents
- Diabetes mellitus
- Chronic liver disease and cirrhosis
- Suicide
- Human immunodeficiency virus (HIV) disease

##### Leading Causes of Morbidity:

- Arthritis/osteoarthritis
- Asthma
- Back symptoms
- Cancer
- Cardiovascular disease
- Depression
- Diabetes mellitus
- Headache/migraine
- Hypertension
- Menopause
- Mental disorders, including affective and neurotic disorders
- Musculoskeletal ←
- Nose, throat, and upper respiratory infections
- Obesity
- Sexually transmitted diseases
- Ulcers
- Vision impairment

## AGE 65 YEARS AND OLDER

#### SCREENING

##### History

- Reason for visit
- Health status: medical, surgical, family
- Dietary/nutritional assessment
- Physical activity
- Use of complementary and alternative medicine
- Tobacco, alcohol, other drug use, and concurrent medication use
- Abuse/neglect
- Sexual practices
- Urinary and fecal incontinence

##### Physical Examination

- Height, Weight, Blood pressure, BMI
- Oral cavity,
- Neck: adenopathy, thyroid
- Breasts, axillae
- Abdomen
- Pelvic examination
- Skin\*

#### LABORATORY TESTING

##### Periodic

- Cervical cytology (every 2-3 years after 3 consecutive negative test results if no history of cervical intraepithelial neoplasia 2 or 3, immunosuppression, human immunodeficiency virus (HIV) infection, or diethylstilbestrol exposure in utero)\*
- Urinalysis
- Mammography
- Lipid profile assessment (every 5 years)
- Yearly fecal occult blood testing *or* flexible sigmoidoscopy every 5 years *or* yearly fecal occult blood testing plus flexible sigmoidoscopy every 5 years *or* double contrast barium enema every 5 years *or* colonoscopy every 10 years
- Fasting glucose testing (every 3 years)
- Bone density screening (if no new risk factors, no more often than every 2 years) ←
- Thyroid-stimulating hormone screening (every 5 years)

##### High-Risk Groups \*

- Hemoglobin level assessment
- Sexually transmitted disease testing
- Human immunodeficiency virus testing
- Tuberculosis skin testing
- Thyroid-stimulating hormone testing
- Hepatitis C virus testing
- Colorectal cancer screening

\* Please see page 10 for High Risk Factors

\*\*\* Despite a lack of definitive data for or against breast self-examination, breast self-examination has the potential to detect palpable breast cancer and can be recommended.

## EVALUATION AND COUNSELING

### **Sexuality**

- Sexual functioning
- Sexual behaviors
- Sexually transmitted diseases
  - Partner selection
  - Barrier protection

### **Fitness and Nutrition**

- Dietary/nutrition assessment
- Exercise: discussion of program
- Calcium intake

### **Psychosocial Evaluation**

- Neglect/abuse
- Lifestyle/stress
- Depression/sleep disorders
- Family relationships
- Work/retirement satisfaction

### **Cardiovascular Risk Factors**

- Hypertension
- Dyslipidemia or Obesity
- Diabetes mellitus
- Sedentary lifestyle

### **Health/Risk Behaviors**

- Hygiene (including dental)
- Hormone therapy
- Injury prevention
  - Safety belts and helmets
  - Prevention of falls
  - Occupational & Recreational hazards
  - Exercise and sports involvement
  - Firearms
- Visual acuity/glaucoma; Hearing
- Breast self-examination
- Chemoprophylaxis for breast cancer (for high risk women)
- Skin exposure to ultraviolet rays
- Suicide: depressive symptoms
- Tobacco, alcohol, other drug use

## IMMUNIZATIONS

### **Periodic**

- Tetanus-diphtheria booster (every 10 yrs)
- Influenza vaccine (annually)
- Pneumococcal vaccine (once)

### **High-Risk Groups \***

- Hepatitis A virus vaccine
- Hepatitis B virus vaccine
- Varicella vaccine
- Meningococcal vaccine

### **Leading Causes of Death:**

- Diseases of the heart
- Malignant neoplasms
- Cerebrovascular diseases
- Chronic lower respiratory diseases
- Alzheimer's disease
- Influenza and pneumonia
- Diabetes mellitus
- Accidents and adverse effects
- Alzheimer's disease

### **Leading Causes of Morbidity:**

- Arthritis/osteoarthritis
- Asthma
- Cancer
- Cardiovascular disease
- Chronic obstructive pulmonary diseases
- Diabetes mellitus
- Diseases of the nervous system and sense organs
- Hearing and vision impairment
- Hypertension
- Mental disorders, including affective and neurotic disorders
- Musculoskeletal symptoms
- Nose, throat, and upper respiratory infections
- Obesity/Osteoporosis
- Pneumonia/Septicemia
- Ulcers
- Urinary tract infections
- Urinary tract (other conditions, including urinary incontinence)
- Vertigo

\* Please see page 10 for High Risk Factors

## Sources of Leading Causes of Mortality & Morbidity

**Leading causes of mortality** are provided by the Mortality Statistics Branch at the National Center for Health Statistics. Data are from 2002, the most recent year for which final data are available. The causes are ranked.

**Leading causes of morbidity** are unranked estimates based on information from the following sources:

- National Health Interview Survey, 2004
- National Ambulatory Medical Care Survey, 2004
- National Health and Nutrition Examination Survey III, 2003-2004
- National Hospital Discharge Survey, 2004
- National Nursing Home Survey, 1999
- U.S. Department of Justice National Violence Against Women Survey, 2006
- U.S. Centers for Disease Control and Prevention Sexually Transmitted Disease Surveillance, 2004
- U.S. Centers for Disease Control and Prevention HIV/AIDS Surveillance Report, 2004

## INTERVENTIONS FOR HIGH-RISK FACTORS

Intervention	High-Risk Factor
• Bacteriuria testing	Diabetes mellitus
• Bone density screening	Postmenopausal women younger than 65 years: personal history of fracture as an adult; family history; Caucasian; dementia; poor nutrition; smoking; low weight and BMI; estrogen deficiency caused by early (age <45 years menopause, bilateral ovariectomy, or prolonged (>1 year) premenopausal amenorrhea; low life-long calcium intake; alcoholism; impaired eyesight despite adequate correction; history of falls; inadequate physical activity. All women: certain diseases or medical conditions and those who take certain drugs associated with an increased risk of osteoporosis
• Colorectal cancer screening	Colorectal cancer or adenomatous polyps in first-degree relative younger than 60 years or in two or more first-degree relatives of any ages; family history of familial adenomatous polyposis or hereditary nonpolyposis colon cancer; history of colorectal cancer, adenomatous polyps, or inflammatory bowel disease, chronic ulcerative colitis, or Crohn's disease
• Fasting glucose test	Overweight (body mass index $\geq 25$ kg/m <sup>2</sup> ); family history of diabetes mellitus; habitual physical inactivity; high-risk race/ethnicity (eg, African American, Hispanic, Native American, Asian, Pacific Islander); have given birth to a newborn weighing more than 9 lb or history of gestational diabetes mellitus; hypertension; high-density lipoprotein cholesterol level $\leq 35$ mg/dL; triglyceride level $\geq 250$ mg/dL; history of impaired glucose tolerance or impaired fasting glucose; polycystic ovary syndrome; history of vascular disease
• Fluoride supplementation	Live in area with inadequate water fluoridation (<0.7 ppm)
• Genetic testing/counseling	Considering pregnancy and: patient, partner, or family member with history of genetic disorder or birth defect; exposure to teratogens; or African, Cajun, Caucasian, Eastern European (Ashkenazi) Jewish, French Canadian Mediterranean, or Southeast Asian ancestry
• Hemoglobin level assessment	Caribbean, Latin American, Asian, Mediterranean, or African ancestry; history of excessive menstrual flow
• Hepatitis A vaccination	Chronic liver disease; clotting factor disorders; illegal drug users; individuals who work with HAV infected nonhuman primates or with HAV in a research laboratory setting; individuals traveling to or working in countries that have high or intermediate endemicity of hepatitis A
• Hepatitis B vaccination	Hemodialysis patients; patients who receive clotting factor concentrates; health care workers and public safety workers who have exposure to blood in the workplace; individuals in training in schools of medicine, dentistry, nursing, laboratory technology, and other allied health professions; injecting drug users; individuals with more than 1 sexual partner in the previous 6 months; individuals with a recently acquired STD; all clients in STD clinics; household contacts and sexual partners of individuals with chronic HBV infection; clients and staff of institutions for the developmentally disabled; international travelers who will be in countries with high or intermediate prevalence or chronic HBV infection for more than 6 months; inmates of correctional facilities
• Hepatitis C virus (HCV) testing	History of injecting illegal drugs; recipients of clotting factor concentrates before 1987; chronic (long-term) hemodialysis; persistently abnormal alanine aminotransferase levels; recipient of blood from a donor who later tested positive for HCV infection; recipient of blood or blood-component transfusion or organ transplant before July 1992; occupational percutaneous or mucosal exposure to HCV-positive blood
• Human immunodeficiency virus (HIV) testing	More than one sexual partner since most recent HIV test or a sex partner with more than one sexual partner since most recent HIV test; Seeking treatment for STIs; drug use by injection; history of prostitution; past or present sexual partner who is HIV positive or bisexual or injects drugs; long-term residence or birth in an area with high prevalence of HIV infection; history of transfusion from 1978-1985; invasive cervical cancer. Adolescents entering detentional facilities. Offer to women seeking preconceptional evaluation. Adolescents who are or whoever have been sexually active.



• Influenza vaccination	Anyone who wishes to reduce the chance of becoming ill with influenza; chronic cardiovascular or pulmonary disorders including asthma; chronic metabolic diseases, including diabetes mellitus, renal dysfunction, hemoglobinopathies, and immunosuppression (including immunosuppression caused by medications or by HIV); residents and employees of nursing homes and other long-term care facilities; individuals likely to transmit influenza to high risk individuals (eg, household members and caregivers of elderly, children aged from birth to 59 months, adults with high risk conditions, health-care workers; day-care workers)
• Lipid profile assessment	Family history suggestive of familial hyperlipidemia; family history of premature (age <50 years for men, <60 years for women) cardiovascular disease; diabetes mellitus; multiple coronary heart disease risk factors (eg, tobacco use, hypertension)
• Mammography	Women who have had breast cancer or who have a first-degree relative (ie, mother, sister, or daughter) or multiple other relatives who have a history of premenopausal breast or breast and ovarian cancer
• Measles, mumps, rubella vaccine	Adults born in 1957 or later should be offered vaccination (one dose of MMR) if there is no proof of immunity or documentation of a dose given after first birthday; persons vaccinated in 1963-1967 should be offered revaccination (2 doses); health-care workers, students entering college, international travelers, and rubella-negative postpartum patients should be offered a second dose
• Meningococcal vaccine	→ Adults with anatomic or functional asplenia or terminal complement component deficiencies, first year college students in dormitories, microbiologists routinely exposed to <i>Neisseria meningitidis</i> , military recruits, travel to hyperendemic or endemic areas. Any condition (eg cognitive dysfunction, spinal cord injury, seizure or other neuromuscular disorder) that compromises respiratory function or the handling of respiratory secretions or that increases risk of aspiration
• Pneumococcal vaccine	Chronic illness such as cardiovascular disease, pulmonary disease, diabetes mellitus, alcoholism, chronic liver disease, cerebrospinal fluid leaks, functional asplenia (eg, sickle cell disease) or splenectomy; exposure to an environment where pneumococcal outbreaks have occurred; immuno-compromised patients (eg, HIV infection, hematologic or solid malignancies, chemotherapy, steroid therapy); Revaccination after 5 years may be appropriate for certain high-risk groups
• Rubella titer assessment	Childbearing age and no evidence of immunity
• STD testing	History of multiple sexual partners or a sexual partner with multiple contacts, sexual contact with persons with culture-proven STI, history of repeated episodes of STIs, attendance at clinics for STIs; developmental disabilities, routine screening for chlamydial infection for all sexually active women aged 25 years or younger and other asymptomatic women at high risk for infection; routine screening for gonorrheal infection for all sexually active adolescents and other asymptomatic women at high risk for infection, syphilis testing for sexually active adolescents who exchange sex for money, use IV drugs, entering a detention facility, or live in a high prevalence area →
• Skin examination	Increased recreational or occupational exposure to sunlight; family or personal history of skin cancer; clinical evidence of precursor lesions
• Thyroid-stimulating hormone test	Strong family history of thyroid disease; autoimmune disease (evidence of subclinical hypothyroidism may be related to unfavorable lipid profiles)
• Tuberculosis skin test	HIV infection; close contact with persons known or suspected to have TB; medical risk factors known to increase risk of disease if infected; born in country with high TB prevalence; medically underserved; low income; alcoholism; intravenous drug use; resident of long-term care facility (e.g., correctional institutions, mental institutions, nursing homes and facilities); health professional working in high-risk health-care facilities
• Varicella vaccine	All susceptible adults and adolescents, including health-care workers; household contacts of immunocompromised individuals; teachers; day-care workers; residents and staff of institutional settings, colleges, prisons, or military installations; adolescents and adults living in households with children; international travellers; non-pregnant women of childbearing age

American College of Obstetricians and Gynecologists. Primary and preventive care: periodic assessments. ACOG Committee Opinion, No. 357. Nov. 2006.

\*For a more detailed discussion of bone density screening, see osteoporosis. ACOG Practice Bulletin 50. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2004; 103: 203-16.

\*\*For a more detailed discussion of colorectal cancer screening, see Smith RA, von Eschenback AC, Wender R, Levin B, Byers T, Rothberger D, et al. American Cancer Society guidelines for the early detection of cancer: update of early detection guidelines for prostate, colorectal, and endometrial cancers. Also: update 2001-testing for early lung cancer detection [published erratum appears in *CA Cancer J Clin* 2001;51:150]. *CA Cancer J Clin* 2001;51:38-75; quiz 77-80.

# CHAPTER 3

## Counseling Guidelines

www.gmhc.org, www.plannedparenthood.org

### *Advantages of counseling:*

- Goal is reducing unintended pregnancies, now 50% of U.S. pregnancies ←
- Involves patient in his/her own care and dispels misconceptions, myths and rumors
- Improves success with complicated regimens
- Advises change of risky behaviors
- Facilitates the decision-making process regarding contraception and STI prevention
- Explains possible side effects, which reduces anxiety, increases success with method and encourages clients to contact if problems occur, reducing severity of complications
- Strengthens the provider/patient relationship
- Encourages patient responsibility for his/her health decisions
- Ensures and maintains *confidentiality*

### *Principles of good counseling: Allow plenty of time: important and difficult!*

- Know what you are talking about!
- *Listen*, look at your patients, allow them to speak freely, paraphrase what you hear
- Remember LISTEN and SILENT use the same letters!
- *Respect*, recognize and accept each individual's unique situation
- Accept and anticipate that behavior change occurs slowly and incrementally.
- Remain *sensitive*; acknowledge that sex/sexuality are very personal
- Be *nonjudgmental* and encourage *self-determination*; avoid *false reassurance*
- ***Urge all your patients to know their HIV status***; each encounter offers opportunity to counsel about STI/HIV prevention and contraception
- Inquire about problems patients may have had with previous medical recommendations
- Realize your patient will remember only 1-4 points from each visit. Avoid information overload and provide written information at appropriate reading level for later reference

### *The GATHER method suggests the following steps:*

- **Greet** patient in a warm, friendly manner; help her or him to feel at ease
- **Ask** patient about her or his needs and reproductive goals; ask about risk for STIs
- **Tell** patient about her or his choices, explaining the advantages and disadvantages of all options
- **Help** patient to choose
- **Explain** the correct use of the method or drug being prescribed
- **Repeat** important instructions to the patient and clarify time and conditions of return visit; give written instructions to patient to review later

### *Reproductive/Contraceptive Goals:*

GOAL:	MAIN CONTRACEPTIVE CONCERNS MAY BE:
Delaying birth of first child	Effectiveness of method, future fertility and STIs; explain EC
Avoiding abortion	Need for maximal effectiveness; Tell about ECs; May want to use 2 methods consistently
Spacing births	Balance of efficacy & convenience; explain EC; safety with breastfeeding
Completed childbearing	Needs effective method for long term

## STRUCTURED COUNSELING

### *Carefully planned structured counseling may include:*

- Repetition of a specific message at the time of the initial visit
- Having the patient repeat back her understanding of a message
- Use of a clear, concise videotape
- Asking the patient if she has questions about the videotape
- Written information and instructions that highlight key messages
- Repetition at each follow-up visit
- Checklist for patient to fill out at **each** follow up visit

### *Example: Structured counseling for Depo-Provera\**

- **The message: Depo-Provera will change your periods.** No woman's periods stay the same as they were before starting Depo-Provera. Ask: "**Will you find it acceptable if there are major changes in your periods?**" If no, steer clear of DMPA (as well as progestin-only pills, Implanon, Mirena)
- Have the patient repeat back her understanding of the message, particularly that **over time women stop having periods most months.** Women tend to have very irregular menses almost immediately
- Use of a clear, concise videotape
- Asking the patient if she has questions about the videotape
- Written instructions that clearly highlight the key messages
- Asking at each 3-month visit what has happened to a woman's pattern of bleeding, whether amenorrhea has begun and how she feels about her pattern of bleeding

### *Checklist for Depo-Provera patient to fill out at each follow up visit. Please check yes or no. Tell us if you have/are:*

Spotting or irregular vaginal bleeding	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Missed periods or very, very light periods	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Concern over your pattern of vaginal bleeding	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Depression, severe anxiety or mood changes	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Gained 5 pounds or more	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Questions you want to ask us about Depo-Provera injections	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Any wrist, hip or other fractures	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Using calcium supplements	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Regular exercise ←	<input type="checkbox"/> Yes	<input type="checkbox"/> No

\* Continuation rates for women started on Depo-Provera are only 40-60% at one year. Structured counseling has been shown to improve these rates. See p. 126 for details. Structured counseling is also important for women starting any method of contraception, including barrier methods.

## CHAPTER 4

### Taking a Sexual History

www.siecus.org

#### *Taking Sexual Histories*

Explain to the patient that obtaining sexual information is necessary to provide complete care, but reassure her/him that she/he has the right to discuss only what she/he is comfortable divulging. Ask patients less direct questions in the beginning to build trust, then ask the questions that explicitly address sexual issues once you have their confidence. Be cautious about what **information** you place on the chart. Medical records are not necessarily confidential and can be reviewed by insurance companies (**may also be subpoenaed in legal proceedings**)

#### *Suggestions for Initiating the Sexual History*

- I will be asking some personal questions about your sexual activity to help me make more accurate diagnoses. This is a normal part of the exam I do with all patients
- To help keep accurate medical records, I will be writing down some of your responses.  
If there are things you do not want me to record, please tell me
- Some patients have shared concerns with me related to their risks of infections or concerns about particular sexual activities. If you have any concerns, I would be happy to discuss them with you

#### *Sexual History Questions*

- **What are you doing to protect yourself from HIV and other infections? OR What are you doing that puts you at risk for HIV?**
- Do you have questions regarding sex or sexual activity?
- How old were you when you had your first sexual experience?
- Do you have sex with men, women or both?
- Do you need contraception? How are you protecting yourself from unwanted pregnancy?
- How many sex partners have you had in the last 3 months? in the last 6 months? in your lifetime?
- How many sex partners does your partner have?
- Do you have penis in vagina sex? penis in mouth sex? penis in rectum sex?
- Do you drink alcohol or take drugs in association with sexual activity?
- Have you ever been forced or coerced to have sex?
- Are you now in a relationship where you feel physically, sexually, or emotionally threatened or abused?
- When you were younger, did anyone touch your private body parts or ask you to touch theirs?
- Have you ever had sex for money, food, protection, drugs or shelter?
- Do you enjoy sex? Do you usually have orgasms? Do you ever have pain with sex?
- Do you or your partner(s) have any sexual concerns?
- Do you awaken from sleep and you are having intercourse? (If this happens often, condoms and other barrier methods may not be the best method for you.)

**Avoid Assumptions:** Making assumptions about a patient's sexual behavior and orientation can leave out important information, undermine patient trust and make the patient feel judged or alienated, causing her to withhold information. This can result in diagnostic and treatment errors. Do not assume that patients:

- ARE sexually active and need contraception
- Are NOT sexually active (e.g., older patients, young adolescents)
- Are heterosexual, homosexual or bisexual OR know if their partners have other partners
- Have power (within a relationship) to make or implement their own contraceptive decisions

## CHAPTER 5

### Sexual Dysfunction

[www.herhealth.com](http://www.herhealth.com), [www.newshe.com](http://www.newshe.com) or [www.assect.org](http://www.assect.org)

#### FEMALE

##### *Dyspareunia*

- **Definition:** Pain during vaginal intercourse or vaginal penetration
- **Key questions:** Do you have pain with vaginal penetration? Do you have pain with early entry or in the mid vaginal area? Is there pain with deep thrusting? Is pain occasional or consistent? With every partner? Does the pain change with different sexual positions? Are you aroused and lubricated before penetration?
- **Causes:** Organic - vestibulitis, urethritis/UTI, vaginitis, cervicitis, vulvodynia, vulvar dystrophy, interstitial cystitis, traumatic deliveries (forcep or vacuum extractions), hypoestrogenism, PID, endometriosis, surgical scars or adhesions, pelvic injuries, tumors, hip joint or disc pain, female circumcision, orgasmic spasm, lack of foreplay, lubrication  
Psychological - current or previous abuse, relationship stress, depression, anxiety, fear of sex or fear of pregnancy
- **Treatment:** Directed to underlying pathology including depression. If dyspareunia is chronic, consider supplementing medical management with supportive counseling and sex therapy

##### *Vaginismus (special case of dyspareunia)*

- **Definition:** Painful involuntary spastic contraction of introital and pelvic floor muscles
- **Causes:** Organic - may be secondary to current or previous dyspareunia and its causes.  
Psychological - sexual abuse, fears of abnormal anatomy (e.g. terror that vagina will rip with penile or speculum introduction), negative attitudes about sexuality
- **Treatment:** Education is critical. Insight into underlying causes helps. After source is recognized, start progressive desensitization exercises, which may include self manipulation, dilators and/or biofeedback and pelvic floor physical therapy. Sex therapist/psychologist intervention may be needed to deal with unconscious fears unresponsive to education

##### *Decreased Libido (Hypoactive Sexual Desire)*

- **Definition:** Relative lack of sexual desire defined by individual as troublesome to her sexual relationship (there is no absolute "normal" level)
- **Causes:** **Organic** - may be due to acute or chronic debilitating medical condition (e.g., diabetes, stroke, spinal cord injury, arthritis, pain, cancer, chronic obstructive pulmonary disease, coronary artery disease, etc.), medications (e.g. sedatives, narcotics, hypnotics, anticonvulsants, centrally-acting antihypertensives, tranquilizers, anorectics, oral contraceptives, Depo-Provera, and some antidepressants), dyspareunia, incontinence, alcohol, hormonal imbalance, or healing episiotomy or other surgical scars; Sexual practices - inadequate sexual stimulation or time for arousal. Sexual desires discordant with partner's desires  
**Psychological** - depression, anxiety, exhaustion, life stress (finances, relationship problems, etc.), poor partner communication, lack of understanding about impacts of aging. Change in body image (breast-feeding, postpartum, weight gain, cancer, or post mastectomy or hysterectomy)
- **Treatment:** Treat underlying causes where possible. Rule out hyperactive sexual desire disorder of partner. Reassure about normalcy, if appropriate. Help patient create time and special space for sexual expression - no distractions from children, telephone, household chores. Suggest variety in sexual practices perhaps with aid of fantasies (romantic novels, films, etc). Exogenous testosterone therapy has yielded mixed results in studies and is not FDA approved. New drugs and creams, causing increased blood flow to the clitoris, may increase sexual arousal for those women whose problems started after developing a

medical disorder and had normal function previously. Consider referral to sex therapist. Read *For Each Other* by Lonnie Barbach and *Women, Sex & Desire* by Elizabeth Davis or *Our Bodies, Ourselves* by the Boston Women's Health Collective

#### ***Excessive Sexual Desire (Hyperactive Sexual Desire)***

- **Definition:** Excessive sexual activity resulting in social, psychological and physical problems. See Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)
- **Cause:** Low self esteem; abuse; attention seeking; acting out; mania; bipolar disease
- **Treatment:** Refer for psychological counseling and therapy and Sex Addicts Anonymous

#### ***Orgasmic Disorders: Anorgasmia or Primary Anorgasmia***

- **Definitions:**
  - **Preorgasmia or Primary Anorgasmia:** Never experienced orgasms and desires to be orgasmic
  - **Secondary Anorgasmia:** Orgasmic in past, no orgasms currently, desirous of orgasm
- **Cause:** Organic - may be secondary to dyspareunia, neurological, vascular disease, medications (e.g. sedatives, narcotics, hypnotics, anticonvulsants, centrally-acting antihypertensives, tranquilizers, anorectics, and some antidepressants - particularly SSRI class antidepressants), or poor sexual techniques of partner (painful, rapid ejaculation)  
Psychological - negative attitude about sexuality, chronic relationship stress; lack of knowledge about body and sexual response, depression, life stress
- **Treatment:** Treat underlying organic causes, if possible. Explain sexual response (suggest reading *Our Bodies, Ourselves* or *For Yourself*). Add behavioral/psychological approach using PLISSIT model (see Abbreviations, p. x), and sensate focusing exercises. Help couple set alternative pleasuring goals. Refer to sex therapist if initial interventions not successful. Have woman learn how to have an orgasm on her own in comfortable environment and then she can teach her partner how to pleasure her. Recommend use of lubricants, vibrators and sex toys.

### **MALE**

#### ***Decreased Libido (Hypoactive sexual desire disorder)***

- No absolute level is "normal"; "decreased libido" is usually related to previous experience, partner's expectations, or perceived societal norms
- Evaluation and treatment similar to female's (see above)

#### ***Excessive Sexual Desire (Hyperactive Sexual Desire)***

- **Definition:** Excessive sexual activity resulting in social, psychological and physical problems.
- **Cause:** Abuse at young age; attention seeking; acting out; mania; other such as bipolar disease
- **Treatment:** Refer for psychological counseling and therapy, Sex Addicts Anonymous after therapy

#### ***Premature (Rapid) Ejaculation***

- **Definition:** Recurrent ejaculation before or shortly after vaginal penetration or ejaculation occurs earlier than patient or partner desires. Average time from entry to ejaculation in "normal" couples is 2 minutes; shorter interval is consistent with diagnosis.
- **Causes:** Organic - urethritis, prostatitis, neurological disease (e.g. multiple sclerosis). Psychological - learned behavior, anxiety (especially among teens)
- **Treatment:** Education and reassurance is important. If goal is pleasuring of partner, teach other techniques to arouse her or him prior to intercourse and/or to achieve orgasm. "Start and stop" technique can be used to prolong erection; man stops stimulation for at least 30 seconds when he feels ejaculation imminent. "Squeeze" technique helpful; when man feels impending ejaculation, partner firmly squeezes the head of the penis beneath the glans for 4-5 seconds to decrease erection. Selective serotonin reuptake inhibitors (SSRIs) in low doses may be helpful if these other techniques are not adequate. Refer to sex therapist (or urologist if cause organic) for additional treatment if needed. Condoms are available with benzocaine to decrease sensation and reduce premature ejaculation

### ***Delayed (Retarded) Ejaculation/Anorgasmia***

- **Definition:** Inability to or difficulty in experiencing orgasm and ejaculation with a partner
- **Cause:** usually psychological; learned behavior; may occur when a man has masturbatory patterns that cannot be duplicated with partner; overemphasis on sexual performance; medications such as SSRI's. Rule out organic problems carefully
- **Treatment:** referral to sex therapist recommended

### ***Erectile Dysfunction/Disorders (ED) (Impotence)***

- **Definition:** Inability to attain or sustain an erection that is satisfactory for coitus
- **Primary:** never achieved erection
- **Causes:** Organic - low testosterone levels due to hypothalamic-pituitary-testicular disorder; severe vascular compromise. Psychological - usual cause
- **Secondary:** current inability to attain or maintain erection (may be situational)
- **Causes:** Organic - diabetes mellitus, alcohol abuse, hypothyroidism, drug dependency, medications (e.g. sedatives, narcotics, hypnotics, anticonvulsants, centrally-acting antihypertensives, tranquilizers, anorectics, illegal drugs, and some antidepressants), hypopituitarism, penile infections, atherosclerosis, aortic aneurysm, multiple sclerosis, spinal cord lesions, orchiectomy or prostatectomy  
Psychological - depression, relationship stress, prior abuse, etc. Suspect when patient has morning erection or is able to masturbate to ejaculation
- **Treatment:** Treat underlying cause. Switch medications if possible. Same measures that help women's sexual desire may be useful. Medical or mechanical treatments available:
  1. **Testosterone.** Shown to be useful in wasting diseases (AIDS) and other low testosterone conditions. Available in patches for ease of use
  2. **Phosphodiesterase inhibitors:** Viagra, Cialis, Levitra. Use caution in patients with cardiovascular disease. Not to be used when taking nitrates
  3. **Alprostadil injections (Edex or Caverject)** prostaglandin E1 ~ 1 cc injected into corpus cavernosa (strengths 125 µg - 1000 µg). Excessive injection may cause priapism. Erection achieved with stimulation lasts 30-60 minutes. Avoid in anticoagulated patients and with vasoactive medications.
  4. **Alprostadil suppository (Muse)** prostaglandin pellet E1 (125-1000 µg) placed inside urethra. Erection occurs as drug absorbed. 70% successful. Contraindications - anatomical penile abnormalities (strictures, hypospadias, etc.), and thrombosis risk factors. Limit 2/day
  5. **Yohimbine hydrochloride.** Prescription pill composed of indole alkaloid. Modestly successful. Avoid in psychiatric patients.
  6. **Vacuum Erection Device (VED).** Use of a vacuum pump and different size rubber bands maintains an erection for 30 minutes. Safe and effective (90% success rate).
  7. **Penile implants (protheses).** Permanent bendable rods or inflatable reservoirs implanted surgically into penis. Activated/inflated for intercourse. Success rate high, but associated with surgical risks and the risk that natural erections disappear
  8. **Microsurgery.** Used in men with atherosclerosis of penile arteries or venous pathology; over 50% success rate

## CHAPTER 6

### Adolescent Issues

[advocatesforyouth.org](http://advocatesforyouth.org), [youngwomenshealth.org](http://youngwomenshealth.org), [teenwire.com](http://teenwire.com),  
[arhp.org/arhpframepated.htm](http://arhp.org/arhpframepated.htm), [www.askdurex.com](http://www.askdurex.com)

Talking to adolescent patients about the benefits of delaying sexual activity, the correct use of contraceptives, and the need for protection for STI's and HIV is important:

- The teen pregnancy rate among all teens has decreased since 1990 due to more teens delaying sex and sexually active teens using contraception more consistently [*Santelli-2004*]
- However, the pregnancy rate remains very high among sexually experienced teen girls (31%), especially among teens who start having sex before age 15 (46%), Hispanic teens (52%), and teens who have more than 1 partner (37%) [*National Survey of Family Growth-2002*]
- Teens who used a method of contraception the first time they had sex are less likely to have been involved in a pregnancy than those who did not [*NSFG-2002*]
- HPV vaccine has the potential for the most benefit when used prior to the onset of sexual activity

#### COUNSELING CHALLENGES POSED BY ADOLESCENTS

*Teens are not "young adults."* Developmentally appropriate approaches are needed

- Age 11-14 – teens are very concrete, egocentric (self-focused) and concerned with personal appearance and acceptance, and have a short attention span. They will start sexual maturation and abstract thinking in this period
- Age 14-15 – teens are peer oriented and authority resistant (challenge boundaries), and have very limited images of the future
- Age 16-17 – teens are developing logical thought processes and goals for the future. Develop a stronger sense of identity. Thinking becomes more reflective
- Age 18 and above – development of distinct identity and more settled ideas and opinions

*Nonjudgmental, open-ended and reflective questions* are better than direct yes-no inquiries. Try reflective questions such as "What would you want to tell a friend who was thinking about having sex?" instead of "You're not having sex, are you?"

**CONFIDENTIALITY:** Adolescents are often afraid to obtain medical care for contraception, pregnancy testing or STI treatment because they fear parental reaction. Over two-thirds of teens never discuss sexual matters with their parents; over one-half feel that their parents could not handle it. All teens should be entitled to confidential services and counseling, but billing systems and/or laws in some states affect their confidential access to family planning services. Know your local laws and refer to sites that may be able to meet all the teen's needs if your practice can not.



**ADOLESCENTS AND THE LAW:** This table provides information on an adolescent's right to consent to reproductive health, contraception, and abortion services.

*Table 6.1 Adolescents and the Law - [www.guttmacher.org/sections/adolescents.php](http://www.guttmacher.org/sections/adolescents.php)* ←

AL ※■□★	DE ●■□◆	IN ※■★	MA ●■★	NV ※■◆	OH ○■★	TX ※■□★
AK ●■☆	DC ●■+	IA ●■◆	MI ※■□★	NH ※■+	OK ※■□◆★	UT ※■★◆
AZ ●■★	FL ※■◆	KS ※■□◆	MN ●■□◆	NJ ※■□+	OR ●■+	VT ※■+
AR ●■□★	GA ●■□◆	KY ●■□★	MS ※■★	NM ●■☆	PA ※■★	VA ●■★
CA ●■☆	HI ※■□+	LA ※■□★	MO ※■□★	NY ●■+	RI ○■★	WA ●■+
CO ●■◆	ID ●■★	ME ※■□+	MT ●■□◆	NC ●■★	SC ※■★	WV ※■◆
CT ※■+	IL ※■□◆	MD ●■□◆	NE ※■◆	ND ○□★	SD ※■◆	WI ○■★
					TN ●■★	WY ●■★

● = All minors may consent to contraceptive service

※ = Some minors may consent (e.g. married, pregnant, age)

○ = No explicit policy related to minors' access to contraceptive services

■ = Minor may consent to testing and treatment for STDs. Some states specify age (e.g. 12 or 14)

□ = Physician may inform parents about STD testing and treatment but is not required to

★ = Parental consent required before a minor may obtain an abortion

☆ = Parental consent law exists but not in effect (e.g., declared unenforceable by courts)

◆ = Parental notification required before a minor may obtain an abortion. In some states, parental notification is not necessary if a risk for the minor is perceived (i.e. telling parents may result in harm to minor)

◇ = Parental notification law exists but not in effect (e.g., declared unenforceable by courts)

+

*Sources: State Policies in Brief: An Overview of Minors' Consent Law. As of 2008. Guttmacher Institute.*

*Note: Many of the laws contain specific clauses that affect their meaning and application.*

*The authors encourage readers to consult the above documents (updated monthly) for more details: [www.agi-usa.org](http://www.agi-usa.org).*

## TEENS AND CONTRACEPTION

The pelvic exam may be a barrier to initiating contraceptive use. It is not necessary to perform a pelvic exam prior to prescribing any contraceptive other than an IUD [Stewart-2001]

### ADOLESCENTS AS RISK TAKERS

- Full evaluation of behaviors is important to personalize counseling. Teens must move away from parental authority figures to become independent adult individuals, but, along the way, they may take excessive risks in many areas, including sexuality
- HEADSS interview technique helpful as an organized approach. Ask each teen about Home, Education, Activities, Drugs, Sexuality (activity, orientation and abuse) and Suicide
- Look for the female athletic triad: eating disorders, amenorrhea and osteoporosis. This triad of symptoms may also occur in women who do not exercise excessively
- Discuss keeping emergency contraceptive pills at home and provide a prescription if needed or desired
- The single-rod implant is a highly effective method for use in this age group ←
- Both copper and levonorgestrel IUDs are safe and effective methods for nulliparous and parous adolescents (CDC category 2) ←
- As in adults, bone mineral density quickly recovers after discontinuation of DMPA use to levels as high as non-users by 12 months [Curtis-2006]. DEXA scans are NOT indicated in this age group as the scores cannot predict fracture risk in adolescents ←

## HEALTH CARE SCREENING FOR ADOLESCENTS (SEE CHAPTER 21) ←

- Initiate pap smear screening annually beginning 3 years after sexual debut or at age 21, whichever comes first
- HPV typing is not indicated in this age group since low-risk HPV infections are so common and resolve spontaneously (ASCCP, ACOG Guidelines)
- Teaching self breast examination is not recommended in women younger than 19 years old as it leads to many false positives and takes time from higher priority counseling issues

## SEX EDUCATION

Sex education has been abbreviated in most U.S. schools, sometimes focusing entirely on an “abstinence-only” message. Abstinence-only sex ed programs have been found ineffective in preventing or delaying teenagers from having sexual intercourse, and have no impact on likelihood that if they do have sex, they will use a condom. Moreover, sex education, contraception and STIs curricula offered in many schools are not medically correct. The information teens obtain from peers is also often inaccurate. Common **MYTHS** are:

- *You cannot get pregnant the first time you have intercourse*
- *You cannot get pregnant if you douche after sex*
- *Having sex or having a baby makes you a woman, makes your boyfriend love you, and gets you the attention you deserve*
- *Making a girl pregnant means that you are a man*

*Adolescents need very concrete information and opportunities to role play and practice:*

- How to open and place a condom and where to carry it
- How to negotiate NOT having sex and, in other cases, condom use
- How to punch out the pills, where to keep the pack, and how to remember them
- The remarkable advantages of extended use of pills, as well as the disadvantages
- Dual protection: condoms and another contraceptive
- How to access and use emergency contraception

## TEENS AND SEXUALLY TRANSMITTED INFECTIONS ←

- Although adolescents and young adults 15-24 years old account for 25% of the sexually active population, they experience almost half of the newly acquired cases of STIs annually [Guttmacher-2008]
- HPV infections account for half of the newly acquired STIs in this age group. The HPV vaccine, Gardasil, provides immunity against types 6, 11, 16 and 18, and is recommended for all girls and young women aged 9-26 [CDC-2007]
- Gardasil is also now approved for use in boys and men ages 9-26 for the prevention of warts ←
- Cervarix, another HPV vaccine for females ages 10-25 approved. Targets HPV types 16 ← and 18. Also given as series of 3 injections ←
- Annual screening for gonorrhea, Chlamydia, and HIV is recommended for all sexually active people in this age group. Treatment for gc and ct should be followed by a test for reinfection in 2 months.

## TEEN BIRTH RATES AND ABORTION RATES

U.S. teens have more partners than teens in many other developed countries. Teen birth, teen abortion, and sexually transmitted infection (STI) rates are higher than in most other industrialized countries. In 2002, 75 out of 1000 U.S. women ages 15-19 got pregnant— ← a rate 11 times greater than in the Netherlands and four times higher than in Germany. The teen abortion rate in the U.S. is more than three times that of France and nearly seven times that of the Netherlands. [Advocates for Youth-2005]

## CHAPTER 7

### Male Reproductive Health

[www.nlm.nih.gov/medlineplus/teenhealth.html](http://www.nlm.nih.gov/medlineplus/teenhealth.html)

Reproductive health is a term generally associated with women. Efforts are being made to include males in health education and outreach programs, acknowledging that men have important reproductive and sexual health needs of their own. Including men in discussions of contraception and STIs benefits their female partners as well.

#### MEN AND SEXUAL EXPERIENCE ←

- Most adult men and almost half of adolescent men (46%) have had sexual intercourse. This has decreased from previous years [*Guttmacher Inst.- 2008*]
- For men in the United States: Average age of first intercourse – 17.5
- 2/3 had physical exams in the past year, and less than 20% received reproductive health counseling [*NSFG-2002*]
- In 2002, only 25% of adolescent males who had ever had sex had ever been tested for HIV
- 5% of males aged 15-19 have had sexual contact with another male. These young men may or may not have female partners as well
- 37% of 9th grade boys report being sexually experienced [*Youth Risk Behavior Survey-2003*]

#### WHERE MEN GET THEIR REPRODUCTIVE HEALTH INFORMATION

- Of 15-19 year old males, 71% had physical exams in the past year but only 39% received reproductive health services. (*Porter, 2000*)
- One survey showed men get most of their STD/AIDS prevention information from the media rather than from a healthcare provider. (*Bradner, 2000*)
- Although most men get some form of sexuality education while they are in high school, for 3 out of 10 men this instruction comes too late – after they have begun having sexual intercourse. (*Sonfield, 2002*)

#### What can healthcare providers do?

- Make sure to talk to men about reproductive health at school and work physicals. Start early – many adolescents have sexual intercourse before age 17.
- When appropriate, talk to men about reproductive health issues such as STIs and contraception at doctor's visits for unrelated complaints – this may be the only time they visit a physician this year
- HPV vaccine, Gardasil, now approved for males ages 9-26 ←

#### MEN AND CONTRACEPTION

- Among sexually experienced adolescent males, 14% have made a partner pregnant and 2-7% are fathers. (*Marcell, 2003*)
- As men get older, condom use declines. 7 out of 10 men age 15-17 use condoms, compared to 4 out of 10 men in their 20s, and 2 out of 10 men in their 30s. (*Sonfield, 2002*)
- Vasectomy is a very effective male option for permanent birth control. However, it is estimated that approximately 500,000 men receive a vasectomy in the U.S. each year, in contrast to 700,000 women who have a female sterilization procedure. (*Havees, 1998*) In only 4 countries throughout the world, Great Britain, Netherlands, New Zealand and Bhutan, do vasectomies exceed tubal sterilization as a method of birth control. Vasectomy has not been found to cause any long-term adverse effects

### ***Men's support of women's birth control methods matter***

- Education of adolescent males about birth control (including female methods) leads to improvement in use of the method by their partner(s) (*Edwards, 1994*)

## **MEN AND SEXUALLY TRANSMITTED INFECTIONS**

### ***How many men acquire sexually transmitted infections?***

- 17% of men aged 15-49 have genital herpes
- Among men in their 20s, there are 500-600 new cases of gonorrhea and chlamydia per year, per 100,000 men (*Sonfield, 2002*)
- 8 out of 10 Americans living with HIV are men (*Sonfield, 2002*)
- Rates of STIs are higher among young, poor, and minority men

### ***Decreasing STI rates in men helps their female partner(s)***

- Treating men decreases initial infection rate and reinfection rate in women, which could decrease female complications such as pelvic inflammatory disease, ectopic pregnancy, and infertility.

### ***Decreasing STI rates in men helps themselves***

- While the link between gonorrhea and chlamydia infection and infertility in men has not been proven, there is some clinical evidence that it does have some effect:  
**gonorrhea/chlamydia infection ➤ urethritis ➤ epidymo-orchitis ➤ infertility**
  - If urethritis is treated promptly, there is less likelihood it will proceed to epidymo-orchitis (*Ness, 1997*)
  - The most common cause of epidymo-orchitis in men younger than 35 years old is gonorrhea and chlamydia infections (*Weidner, 1999*)

## **MEN AND REPRODUCTIVE CANCERS**

### ***Testicular cancer***

- "Testicular cancer is the most common solid malignancy affecting males between the ages of 15 and 35, although it accounts for only 1% of all cancers in men." (*Michaelson, 2004*)
- The number of deaths from testicular cancer has dropped recently from advances in therapy.
- Some signs or symptoms of testicular cancer are testicular enlargement, a dull ache in the abdomen or groin, scrotal pain, and fluid in the scrotum.
- The patient information website sponsored by the American Urological Association says that monthly testicular self exams are the most important way to detect a tumor early.
- The treatment for testicular cancer can be removal of the affected testicle. Removal of one testicle does not make a man infertile.

### ***Prostate cancer***

- The most important risk factor for prostate cancer is age. The older a man is, the greater his risk.
- Prostate cancer is screened for by digital rectal exam and prostate-specific antigen level.
- Some of the treatments for prostate cancer can affect male fertility. For instance, surgery to remove the prostate causes the male ejaculate to become "dry" so the ability to have children is usually lost. Prostate surgery can also cause erectile dysfunction

## CHAPTER 8

### Perimenopause and Menopause

[www.menopause.org](http://www.menopause.org) or [www.nams.org](http://www.nams.org)

**PERIMENOPAUSE:** Perimenopause is marked by changes in the menstrual cycle and is a time that lasts through menopause. Characterized by fluctuations in ovarian hormones resulting in intermittent vasomotor symptoms, menstrual changes and reduced fertility. A perimenopausal woman should use contraception until she is truly menopausal (amenorrheic for one year).

- Average age of onset: 45
- Average duration: 3-5 years
- Women over 40 have second highest abortion ratio due to unintended pregnancy (# abortions/1000 live births), second to women under 15
- All methods of birth control are available to healthy, nonsmoking women until menopause
- In US, 50% women >40 have been sterilized and another 18% have a partner with vasectomy
- Combined hormonal contraceptives have specific benefits for perimenopausal women: May regulate cycles, prevent osteoporosis, treat hot flashes. Should not be used for women >35 who smoke or have significant cardiac risk factors
- Smokers > 35 or women with hypertension may use any non-estrogen containing methods, POPs, DMPA, IUDs or barriers unless they have other risk factors

**MENOPAUSE:** cessation of spontaneous menses x12 months. Retrospective diagnosis.

- Avg age: 51.1-51.4, earlier in smokers

#### *Common Physiologic Changes after Menopause:*

- Hot flashes (~ 75% women – only 15% severe) /sleep disturbances, mood swings
- Thinning of genitourinary tissue (atrophic vaginitis, urinary incontinence)
- Osteopenia, osteoporosis, increased risk for fracture
- Increased risk for cardiovascular disease, unfavorable lipid profiles

One health recommendation to make to all patients, with increasing importance to the aging, is to add regular exercise for its health benefits

#### **BENEFITS OF EXERCISE:**

- To decrease risk, gradually add exercise to daily routine rather than immediately starting strenuous activity
- Decreased all-cause mortality
- Decreased CVD: ↓ VLDL, ↑ HDL, ↓ BP, ↓ risk stroke
- Glycemic control: better glycemic control, insulin sensitivity. May prevent development of type 2 DM in high risk populations
- Cancer prevention: may reduce risk of developing breast and prostate cancer
- Prevents obesity: greater reduction in body fat and enhanced preservation of lean body mass than a weight loss diet alone
- Smoking cessation: vigorous exercise aids smoking cessation, and prevents weight gain
- Gallstones: decreases risk
- Function and cognition: improved in elderly who exercise

#### **HORMONE THERAPY:**

- Most effective treatment for hot flashes
- Recommended for relief of vasomotor sx and GU atrophy to be used at lowest dose that is effective for short durations. Short duration is not defined (some say 2-5 yrs); re-evaluate every 6 months or year. Not recommended for prevention of CVD
- Combination HT using premarin (0.625mg) and provera (2.5mg) per day associated with a small inc relative risk of CVD (1.29), stroke (1.41), invasive breast cancer(1.26), VTE (2.13) and a small protection against fractures (0.66) and colorectal CA at an average of 5 years of use (WHI data)

- Estrogen therapy alone 0.625mg associated with small increased risk of stroke (1.39) and DVT and small decreased risk of fracture (.61). No increased risk of CVD, PE or breast cancer, which had a small nonsignificant decreased risk 0.77 (0.59-1.01) (WHI data)

### **PRESCRIBING PRECAUTIONS FOR HT:**

- Pregnancy, undiagnosed abnormal vaginal bleeding, active liver disease
- Recent or active thrombophlebitis or thromboembolic disorders
- Breast cancer or known or suspected estrogen-dependent neoplasm
- Recent MI or severe CVD

### **STARTING HORMONES FOR MENOPAUSAL WOMEN:**

- Patient counseling is key to success with HT. May takes weeks for relief of hot flashes. Explain risks and side effects especially vaginal spotting and bleeding
- Usual well woman care measures should be provided – mammogram, pap test, lipid profile – but are not essential (except mammogram) prior to providing HT. Endometrial biopsy not needed except when evaluating abnormal vaginal bleeding
- ➔ Consider starting with low doses and transdermal preparations (transdermal may have less of a risk for VTE)
- Re-evaluate need for HT/ET annually. The current products are:

<b>Generic names - Estrogens</b>	<b>Brand names</b>
Conjugated estrogen tablets, USP	Premarin®
Synthetic conjugated estrogens, A tablets	Cenestin®, Enjuvia
Esterified estrogens tablets	Menest®
Estropipate tablets	Ogen®, Ortho-est®
Estradiol tablets	Estrace® (micronized), Femtrace
Matrix estradiol transdermal systems	Alora®, Climara®, FemPatch®, Vivelle™, Escilin, Menostar, Vivelle-dot
Reservoir estradiol transdermal systems	Estraderm®
Topical estradiol ←	Estrasorb®, Estrogel®, Divigel®, Elestrin® ←
Transdermal spray ←	Evamist®
Vaginal estradiol	Vagifem® (tablet), Estrace® (cream), Estring® (ring), Femring® (ring)
Vaginal conjugated estrogen	Premarin®

<b>Generic names - Progestins</b>	<b>Brand names</b>
Megestrol acetate tablets (MPA) tablets	Provera®
Megestrol acetate tablets	Megace®
Norethindrone tablets	Micronor®, Nor-QD®, Errin®, Camila® ←
Norethindrone acetate tablets	Aygestin®
Micronized progesterone capsules	Prometrium®
Progesterone vaginal gel	Crinone®
Levonorgestrel IUS	Mirena

<b>Generic names - Combined Products</b>	<b>Brand names</b>
Estradiol and norgestimate tablets	Prefest®
Conjugated estrogens and MPA tablets	Premphase®, Prempro®
Esterified estrogens and methyl testosterone tablets	Estratest®, Estratest® H.S.
Ethinyl estradiol and norethindrone acetate tablets	Femhrt®
Estradiol and norethindrone acetate tablets	Activella™
Estradiol/ norethindrone acetate transdermal systems	CombiPatch™
Estradiol + levonorgestrel	Climara Pro®
Estradiol + drospirenone ←	Angeliq

### **FOLLOW-UP**

- Be available to answer questions when there are media reports about HT
  - Have the woman keep a menstrual calendar of any breakthrough bleeding or spotting
  - If hot flashes continue, consider thyroid dysfunction and other causes before increasing dose
- 24 or using other therapeutic approaches to hot flash treatment

## CHAPTER 9

### Prepregnancy Planning and Preparation

[www.plannedparenthood.org](http://www.plannedparenthood.org) or [www.aidsinfo.nih.gov](http://www.aidsinfo.nih.gov)

*Women in the reproductive years should take 0.4 mg (400 micrograms) of synthetic folic acid daily. This easy, safe step significantly reduces the risk of neural tube* ←

*defects in a developing fetus. All prenatal vitamins contain this minimum FA dose*

*• 400 micrograms of folic acid daily*

*• Women with a history of spina bifida, women on antiseizure medication and insulin dependent diabetics need 4 mg folic acid daily*

#### *Prepregnancy visit assess:*

- Reproductive, family and personal medical and surgical history with attention to pelvic surgeries
- Smoking, drug use, alcohol use: advise to stop and refer for help if needed
- Nutrition habits: identify excesses and inadequacies
- Medications: make adjustments in those that may affect fertility and/or pregnancy outcome. Advise patient not to make any changes without clinician's knowledge

#### *Review Medical History:* ←

- Glucose control in diabetics before conception and in early pregnancy decreases birth defects and pregnancy failure
- Hypertensive women on ACE inhibitors need to switch meds
- Some antiepileptics are more teratogenic than others
- Women on coumadin need to be transitioned to heparin or lovenox (low molecular weight heparin)
- Risk for sexually transmitted infection/infertility in both partners
- Impacts of any medications (over-the-counter, prescription, herbal). For example, Accutane and tetracycline (which are teratogenic) for acne requires extremely effective contraception and strong consideration of the use of 2 contraceptives correctly. Advise that patient delay pregnancy for at least one year after last Accutane. See p. 39. Helpful online databases include [micromedex.com/products/hcs/demos/Part3.html](http://micromedex.com/products/hcs/demos/Part3.html) ←
- Risk factors for preterm birth

#### **RISK FACTORS FOR PRETERM BIRTH:**

- |  |  |
|--|--|
| • non-white race   | • vaginal bleeding in more than one trimester          |
| • age < 17 or > 35   | • excessively physically stressful job (controversial) |
| • low socioeconomic status   | • smoking  |
| • low prepregnancy weight  | • twins  |
| • maternal history of preterm birth - especially in second trimester |  |

*Reference: ACOG Practice Bulletin, 2001*

#### *Offer Screening and/or Counseling for:*

- Infections (TB, gonorrhea, chlamydia, HIV, syphilis, hepatitis B & C, HSV as per CDC guidelines). Vaginal wet mount if discharge present
- Neoplasms (breast, cervical dysplasia, warts, etc.)
- Immunity (rubella, tetanus, chicken pox, HBV) HPV if applicable
- Alcohol use, tobacco use, substance abuse, obesity
- Advanced maternal and paternal age

### ***Provide Genetic Counseling:***

- For all women, but may need additional specialized counseling if going to be  $\geq 35$  y.o. when she delivers or has a significant personal or family history of genetic disorders, poor pregnancy outcome or partner of advanced paternal age
- Family history of mental retardation or genetic disorders such as sickle cell anemia, thalassemia, cystic fibrosis, Tay-Sachs, Canavan disease, neural tube defect
- High risk ethnic backgrounds: African Americans, Ashkenazi Jews, French Canadian, Cajun, etc
- Seizure disorders, Diabetes
- Other heritable medical problems

### ***Assess Environmental Hazards:***

- Chemical, radioactive and infectious exposures at workplace, home, hobbies
- Physical conditions, especially workplace
- Assess male partner as well!

### ***Assess Psychosocial Factors:***

- Readiness of woman and partner for parenthood
- Mental health (depression, etc.) and domestic violence
- Financial issues and support systems

### ***Recommend:***

#### ***Ideally, planning a pregnancy should involve both a woman and her partner***

- Balanced diet
- Do not eat shark, swordfish, mackerel, tilefish or fish caught in local waters
- Eat up to 12 oz (2 average meals) of fish lower in mercury, which can include up to 6 oz of albacore tuna per week. Non albacore tuna has less mercury. ←
- Vitamin with folic acid 0.4 mg for all women planning pregnancy or at risk for unintended pregnancy (women with previous pregnancy with a neural tube defect, insulin dependent diabetic, alcoholic, malabsorption or on anticonvulsants need 4 mg folic acid daily) ←
- Minimize STI exposure risk
- Weight loss, if obese (gradual loss until conception)
- Special planning for women with prior gastric bypass or current obesity ←
- Moderate exercise
- Avoiding exposure to cat feces (toxoplasmosis) if no known immunity
- Early in process of discussing pregnancy encourage breastfeeding as the best way to feed her baby
- Early prenatal care when pregnancy occurs ←

### ***Avoid***

- Raw meat (including fish) and unpasteurized dairy products
- Abdominal/pelvic X-rays, if possible
- Excesses in diet, vitamins, exercise
- Non-foods (pica), unusual herbs
- Sex with multiple partners or sex with a partner who may be HIV-positive, have other STI or have other sex partner(s). Use condom if any question.



# CHAPTER 10

## Pregnancy Testing

www.plannedparenthood.org, www.ovulation.com & 1-800-230-PLAN

### *Early testing gives a woman time to pursue pregnancy options*

- Prenatal care can be initiated promptly
- Unhealthy behaviors/exposures can be stopped sooner
- Ectopic pregnancies may be detected earlier
- Medical and surgical methods of abortion are safest at earlier gestations

### **PREGNANCY TESTS**

#### **Urine tests:**

- *Enzyme-linked immunosorbent assay (ELISA) test:*
  - Immunometric test uses antibody specific to placentally-produced HCG and another antibody to produce a color change. Commonly used in home pregnancy test and in offices and clinics. Performed in 1-3 minutes using urine samples
  - Most tests positive at levels of 25 mIU/ml. This level can be detectable 7-10 days after conception. May require 5-7 days after implantation to detect all pregnancies
  - Test results are positive for 98% of women 7 days after implantation ←
  - Urine pregnancy tests are used in most clinical settings and are available for women to purchase over-the-counter; teach patients that no lab test is 100% accurate and that false negative tests (tests read as negative when a woman actually is pregnant) usually occur when done too early in the pregnancy and are far more common than false positive tests (tests read as positive when a woman actually is NOT pregnant)
  - 29 one-step urine tests sensitive to 10-25 mIU/ml beta hCG are outlined in table 26-2 on pages 636 and 637 of 18th edition of *Contraceptive Technology*.

#### **Serum tests (blood drawn):**

- *Radioimmunoassay:*
  - Uses colorimetry, which detects HCG levels as low as 5 mIU/ml
  - Results available in 1-2 hours
  - Offers ability to quantify levels of HCG to monitor levels over time when clinically indicated as for ectopic pregnancy diagnosis and treatment

### **HCG QUICK FACTS**

- $\beta$ -HCG can be detected as early as 7-10 days after conception thereby, “ruling in” pregnancy, but pregnancy cannot be “ruled out” until 7 days after expected menses
- If needed for evaluation of early pregnancy, serial HCG testing should be done every 2 days until levels reach discriminatory levels of 1800-2000 mIU/ml, when a gestational sac can be visualized reliably by vaginal ultrasound. In normal gestations the levels of HCG double about every 2 days [Stenchever MA-2001]
- Average time for HCG levels to become non-detectable after first trimester surgical abortion ranges from 31-38 days

### **MANAGEMENT TIPS**

- Home tests can be misused or misinterpreted.
- Any test can have false-negative results at low levels. If in doubt, repeat urine test in 1-2 days or obtain serum tests with a quantitative HCG
- Recommend folic acid, 0.4 mg/day: every woman, every day (pregnancy test positive or negative)

### **PREGNANCY TEST NEGATIVE: A TEACHABLE MOMENT**

A negative pregnancy test for a woman not wanting to become pregnant clearly provides the counselor or clinician with a teachable moment and a time to offer a woman a better contraceptive and ECPs for future acts of intercourse that might be unprotected.

*“What a relief! The pregnancy test is negative.”* This must have been scary to worry that you might be pregnant.

1. If you haven't been using contraception, this is your “wake-up call.” What contraceptive method would work best for you now? You may be able to start your contraceptive without a pelvic exam.
2. Don't try to become pregnant in order to see if you can become pregnant.
3. Don't take a chance from this moment on: never, just never, have intercourse without knowing that you are protected against both infection and unintended or unwanted pregnancy, unless you want to get pregnant.
4. Remember, your negative urine pregnancy test does not rule out conception from acts of intercourse in the past 2 weeks.

*For Clinicians:*

5. Learn about emergency contraceptive pills and emergency IUD insertion.
6. Discuss keeping emergency contraceptive pills at home for future use; can buy ← OTC if  $\geq 17$  years. Otherwise, provide prescription

### **PREGNANCY TEST POSITIVE: A TEACHABLE MOMENT**

The pregnancy test is positive and she wants to continue the pregnancy. Whether or not this pregnancy was planned and prepared for,\* your patient has decided to continue this pregnancy, providing you, the counselor or clinician, with a teachable moment.

*The pregnancy test is positive and she is continuing her pregnancy to term*

1. Start vitamins containing folic acid (0.4 mg) today. Buy vitamins on the way home.
2. Stop drinking alcohol or using any recreational drugs today.
3. Stop smoking today.
4. Ask: “Are you on any medication? Are you taking OTC products?”
5. Use condoms if at any risk for HIV or other STIs.
6. Eat healthy foods. Gain 25-30 pounds during your pregnancy (if your weight is now normal).
7. Review current medical problems.
8. Learn about EC for the future
9. Establish prenatal care. Provide referral if needed ←

\* If she doesn't want to continue pregnancy, discuss other options including adoption or pregnancy termination or refer her to someone who feels comfortable doing this.

→ Find out what's new in *Managing Contraception 2010-2012* by scanning this pocket guide for arrows!

# CHAPTER 11

## Postpartum Contraception

[www.avsc.org](http://www.avsc.org) or [www.fhi.org](http://www.fhi.org)

Planning for postpartum (PP) contraception should begin during pregnancy and use should be initiated as early as possible postpartum. A newborn can place many demands on a woman's time, so her method should be as convenient for her to use as possible. In some women who are not breastfeeding, ovulation may return postpartum before a woman realizes she is at risk, which may be before her first period. The 6-week postpartum visit is too late. The visit should be at 2-4 weeks. By 6 weeks postpartum, 50% of women as early as 26-28 days postpartum have had vaginal intercourse. Involve her partner as often as possible. Advance provision of EC is always appropriate

- Pregnancies spaced at least 18-23 months apart are less likely to have: preterm delivery, low birth weight, and small for gestational age infants [2hr-2005]

### AT DELIVERY

- Tubal sterilization may be performed (at C-section or after vaginal delivery)
- Copper or levonorgestrel IUD may be inserted within 20 minutes of delivery of placenta (requires learning new technique) but rates of expulsion are higher than with insertion after uterine involution

### PRIOR TO LEAVING HOSPITAL

- Encourage breastfeeding. Reinforce education about lactational amenorrhea if patient is interested (see Chapter 15, p. 47-50)
- Pelvic rest (no douching, no sex, no tampons) is generally recommended for 4-6 weeks and/or until lochia stops. Many women choose NOT to follow this advice in spite of increased risk for infection. Some clinicians encourage women to become sexually active when they feel comfortable and ready
- At this time, sex may be the last thing the woman is thinking about. Nevertheless, encourage her to have a contraceptive plan for when she does initiate sexual activity. Options:

- Tubal sterilization, vasectomy

- Progestin-only methods: Depo-Provera (DMPA), progestin-only pills (POPs), Implanon

**NOTE:** There are three approaches to starting these progestin-only methods:

- 1) When the patient leaves the hospital (off-label) start POPs, DMPA or receive Implanon
- 2) Since progestin-only methods may prolong bleeding wait 2-3 weeks to start them (no data). Women with history of or high risk for postpartum depression may also benefit from a delay in starting progestin-only methods. In breastfeeding women, progestin-only methods have no effect on milk production or composition or long-term growth of the infant (Truit-2003)

- 3) Start at 6 weeks which is what labels recommend. Use condoms if intercourse prior to 6 weeks. Label does not include use in first 6 weeks because many studies did not include such women not because there is an established contraindication.

- Male or female condoms to reduce risk of sexually transmitted infections
- Estrogen containing contraceptive may be prescribed for nonlactating women to start 3 weeks postpartum (increased risk of thrombosis associated with pregnancy reduced by that time). Recommend to start the Sunday after 21st day PP. Give a prescription when she leaves the hospital (to be started in 3 weeks)
- Provide EC in advance or advise to buy OTC

### AT POSTPARTUM VISIT (2-6 WEEKS) - see CDC MEC A-3

- Best time is likely at 2 weeks to coincide with infant's first exam. Waiting 6 weeks will miss important issues like resumption of sex, problems with breastfeeding, postpartum depression and adaptation at home to having a baby ←
- Ask if woman has resumed sexual intercourse
- Pregnancy is possible 3 months after delivery even if she is fully breastfeeding and 3 weeks if she is not
- Support continued breastfeeding if applicable
- Lactational amenorrhea follow-up. Provide condoms as transitional method and discuss other methods before transition to decreased breastfeeding ←
- Emergency contraception may be given if needed
- Progestin-only methods may be provided (Depo-Provera, progestin-only pills, Mirena, Implanon). Provide backup method as needed if initiated when not on menses
- COCs, patch or ring may be started after 3 weeks in non-breastfeeding women\*. ←  
For breastfeeding women, start CHCs at 1 month PP, now a CDC category 2. Provide backup method as needed
- IUD may be inserted if uterus well involuted (whether or not she is breast-feeding). Usually at 4 + weeks
- Condoms (male or female) may be given as primary or backup contraceptive to provide STI risk reduction; withdrawal can be used at any time
- Tubal sterilization via laparoscopy or transcervical (Essure) may be provided after uterine involution, or vasectomy anytime
- Diaphragm, cervical cap may be fitted after pelvis/cervix return to normal configuration
- NFP and FAM should await resumption of normal cycles for at least 3 months ←
- Screen for postpartum depression ←

### A HARD LOOK AT MISTAKES MADE OVER AND OVER AGAIN

Often we see patients/clients who have made repeated mistakes; A postpartum woman who has already had several unplanned pregnancies, an individual with repeated infections who almost never uses a condom, a smoker, an abuser of alcohol or drugs, a person who eats far too much and exercises far too little. When this happens and the problem is inconsistent or incorrect use of a contraceptive we may want to share a message like this with our patient:

*"If you have made a mistake using a contraceptive method in the past, you may be able to learn to use it correctly in the future. BUT, you may also make the same mistake over and over again in the future. Such is human nature. We are creatures of habit. So, be very careful going back to a method that you have failed to use correctly in the past. Similarly, if you have had a certain side effect from using a method in the past, you may experience the same side effect in the future."*

—Robert A. Hatcher

\*CDC considering change to category 2 or 3 for the 3-6 week post partum period depending on a woman's risk factors for VTE.

# CHAPTER 12

## Elective Abortion

[www.prochoice.org/naf](http://www.prochoice.org/naf) or [www.earlyoptionpill.com](http://www.earlyoptionpill.com)

### OVERVIEW

Surgical abortion, accounting for 95% of abortions, are very safe with serious morbidity in less than 1% of procedures and a death rate of 4 per million if performed  $\leq 8$  weeks increasing to  $\sim 9$  per 100,000 for those done at  $\geq 21$  weeks (less than 2% of procedures) [Bartlett-2004] (compared to maternal mortality with a continued pregnancy of approximately 11.8/100,000 deliveries [MMWR-2005]). 60% of the 1.3 million U.S. abortions are done at  $< 9$  weeks and 27% are less than 7 weeks. The estimated mortality rate for early medical abortions in the U.S. is  $\sim 1/100,000$  procedures. The introduction of several agents for early medical abortion have added new options. ←

Safe, legal, elective abortion procedures are important for fertility control since 48% of pregnancies in the U.S. are unintended and 25% of pregnancies end in induced abortion [Jones-2002]. ←

Despite having one of the highest abortion rates among developed countries, 87% of U.S. counties had no abortion providers or facilities, an increase from 78% in 2000. Many state laws impose mandatory restrictions, waiting periods, and consent requirements. For current information on your state's abortion laws, contact Pro Choice America 202-973-3000 or [www.naral.org/](http://www.naral.org/).

- 47% of all women in the US have had one or more elective abortions
- In 2002, about 2% of all women aged 15-44 had an abortion [Fines, Hershaw-2005]
- Each year about 10,000-15,000 abortions occur as a result of rape or incest

### Features of Medical Compared to Surgical Abortion

Medical	Surgical
Generally avoids invasive procedure	Involves invasive procedure
Requires multiple visits	Usually requires one visit
Days to weeks until complete	Usually complete in a few minutes
Available during very early pregnancy	Available during early and later pregnancy
High success rate (94% - 97%)	Higher success rate (99%)
Requires follow-up to ensure completion of abortion	Does not require follow-up in most cases
May be more private in some circumstances; will vary for each individual patient	May be more private in some circumstances; will vary for each individual patient
Patient participation in multi-step process	Less patient participation in a single-step process
Analgesia available if desired	Allows use of sedation or anesthesia if desired
Does not require surgical training, but does require surgical back-up ←	Requires surgical training and sometimes licensed facility

## ELECTIVE SURGICAL ABORTION

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### DESCRIPTION

Voluntary termination of pregnancy using uterine aspiration in early intrauterine gestations. In later gestations (after 14 weeks) using instruments for tissue removal (standard dilation and evacuation [D & E] or intact dilation & extraction [D & X]). ←

### EFFECTIVENESS

- 98-99% effective; failures are mostly incomplete abortions with small amounts of retained tissue; rarely does the pregnancy continue

### PROCEDURE

- After informed consent obtained according to local law, type of procedure is determined by gestational age and patient preference
- Perform careful bimanual exam to assess size and position of uterus ←
- In second trimester, dilate the cervix with an osmotic dilator (laminaria, dilapan) OR with a prostaglandin analogue (misoprostol) with or without an osmotic dilator
- Peri-operative antibiotics reduce the risk of post-procedure infection. However, no studies demonstrate if a single regimen is better than others. The best study supports use of doxycycline. If chlamydia infection likely, a 7-day course of doxycycline, or a single dose of azithromycin 1 g may be given. If BV is present, treat with appropriate antibiotics
- Cleanse ectocervix and endocervix
- Administer cervical anesthesia; if desired, adjunctive sedation can also be used. NSAIDs are typically administered pre-operatively and post-operatively
- Place tenaculum and mechanically dilate cervix if not previously dilated adequately
- Using sterile technique, insert a plastic cannula and apply suction to aspirate products of conception either with a machine, or manually with a manual vacuum aspiration (MVA) syringe
- May confirm adequacy of procedure by checking uterine cavity with a sharp curette (optional)
- Evaluate tissue to confirm presence of placental villi/gestational sac if early pregnancy. If more than 9 weeks should be able to visualize fetal tissue. If no villi, consider possibility of ectopic pregnancy
- Administer Rh immune globulin if woman is Rh negative

### ADVANTAGES

- Provides woman complete control over her fertility
- Ability to prevent an unwanted or defective birth or halt a pregnancy that poses risk to maternal health or other aspects of her life
- Safe and rapid; preoperative evaluation and procedure can usually be done in a single visit from a medical perspective (local legal restrictions may affect this)
- No increase in risk of breast cancer, infertility, cervical incompetence, preterm labor, or congenital anomalies in subsequent pregnancy after uncomplicated first-trimester abortion
- Fewer risks to maternal health than continuing pregnancy
- Can be provided as early as intrauterine pregnancy is diagnosed

### DISADVANTAGES

- Cramping and pain with procedure; the noise of the vacuum machine (if electrical vacuum used) may cause anxiety.
- Possibility of later regret (regret is equally possible for undesired pregnancy that is continued)

## **COMPLICATIONS**

- Infection <1%, with an uncommon complication of infertility
- Incomplete abortion 0.5%-1.0%; Failed abortion 0.1%-0.5%
- Hemorrhage 0.03%-1.0%
- Post-abortion syndrome (hematometra) <1%
- Asherman's syndrome rare (more likely with septic abortion), with an uncommon complication of infertility
- Mortality: Elective surgical abortion deaths <1 per 100,000 and medical ~ 1 per 100,000

## **CANDIDATES FOR USE**

- Any woman requesting abortion. State laws often limit gestational age (typically available through 24 weeks). State laws may also affect access and consent procedures

*Adolescents:* State laws vary regarding requirements and consent requirements (See p. 19)

## **INITIATING METHOD**

- Carefully discuss all pregnancy options, including prenatal care for continuing pregnancy or for adoption and programs available for assistance with each option
- If patient chooses abortion, discuss available techniques when applicable (surgical versus medical)
- Obtain informed consent after answering all questions
- Offer emotional support, education, pre- and post-procedural instructions, and contraception
- Usually perform procedure in outpatient setting unless woman has severe medical problems requiring more intense monitoring or deeper anesthesia
- Initiate contraception immediately after procedure including intrauterine contraception

## **INSTRUCTIONS FOR PATIENT**

- Keep telephone number(s) nearby for any emergencies
- May resume usual activities same day if procedure done under local anesthesia
- One week pelvic rest (no tampons, douching or sexual intercourse)
- Use NSAIDs or acetaminophen for cramping, ergotamine (methergine) for heavy bleeding
- Showers are permitted immediately
- Seek medical care urgently if heavy bleeding, excessive cramping, pain, fevers, chills, or malodorous discharge
- After 1 week of abstinence, use contraception with every single act of intercourse and keep EC available for future use

## **FOLLOW-UP**

- Have you had a temperature >100.4°F
- What has your bleeding been like since the procedure?
- Have you had any new abdominal or pelvic pain?
- Are you using a contraceptive?

## PROBLEM MANAGEMENT

### *Infection*

- Always evaluate possibility of retained products and need for reaspiration
- Patients who develop endometritis can generally be treated using outpatient PID therapies described in the CDC Guidelines (see Chapter 30 p. 159 - PID)
- Cases that are more complicated may require hospitalization and IV antibiotics (uncommon)

### *Persistent or excessive bleeding*

- *Possible causes* : uterine atony, retained products, uterine perforation, cervical laceration
- *Treat likely cause(s)*: Use uterine-contracting agents for atony (methergine, hemabate, misoprostol). Reaspirate if retained products. If uterine perforation, give antibiotics, and evaluate surgically if there is concern for bowel or vascular injury. Suture external cervical lacerations; tamponade endocervical lacerations
- *For significant hemorrhage (rare)*: transfuse if large blood loss. Provide blood factors to patients with coagulopathies. In extremely rare cases, uterine artery embolization, further surgery or hysterectomy may be necessary

## ELECTIVE MEDICAL ABORTION

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### DESCRIPTION

- The first medication (mifepristone or methotrexate) is given to interrupt the further development of the pregnancy
- Misoprostol is then given to induce expulsion of the products of conception (see protocol p. 35)
- Misoprostol is a prostaglandin analogue which causes the cervix to soften and the uterus to contract. May be taken orally, vaginally or buccally, either at home or in the office. (Not as effective when given alone as when given with either mifepristone or methotrexate) [Goldberg, Greenberg, and Darney-NEJM 2001]

### INITIATING METHOD

- Discuss all pregnancy options, including prenatal care for continuing pregnancy or for adoption, and highlight programs available for assistance with each option
- If patient chooses elective abortion, discuss available techniques (surgical vs. medical)
- Review protocol, risks, benefits, and visit schedule
- Assess patient's access to provider if D&C is needed. Explain need for D&C if incomplete or if continuing pregnancy (some women think they can avoid surgery altogether)
- Obtain informed consent after all questions are answered
- Vaginal ultrasound to confirm dates if available

### Mifepristone (Ru-486) And Misoprostol (Mis)

**Most medical abortions in the U.S. and abroad now use mifepristone rather than methotrexate.** Mifepristone used as an abortifacient in France since 1988

**Mechanism** - Mifepristone acts as an antiprogesterone to block continued support of the pregnancy. It blocks progesterone receptors. This causes decidual necrosis and detachment of products of conception. Mifepristone also causes cervical softening

**Dose of mifepristone** - 600 mg is FDA approved dose - but 200 mg is just as effective in clinical trials



**Effectiveness** - 92-98% effective depending on gestational age and MIS doses used: for gestational age up to 49 days if using oral MIS, up to 63 days if vaginal or buccal MIS.

Process is generally more rapid than alternative regimens

**Contraindications** - Not effective for ectopics. Not for use by chronic corticosteroid users, chronic adrenal failures, porphyrias, or with history of allergy to mifepristone or prostaglandins

**Protocol** - (evidence-based regimens)

- **Screening:** Baseline labs including Rh, hemoglobin
- **Mifepristone:** administer 200 mg orally. Give Rh immune globulin if Rh negative at this time. Provide misoprostol for home use
- **Misoprostol:** can be used vaginally, buccally or orally. Timing should be based on the woman's needs/schedule (see table)
- **Follow-up:** Can be performed 2-14 days after misoprostol use. If assessed at 14 days, can be just history and exam with ultrasound as indicated. If assessed at one week or less, ultrasound to establish absence of gestational sac. Alternative follow-up with serum hCG testing can be used. Perform D&C for heavy bleeding, signs of infection or continuing pregnancy. If gestational sac not expelled, can perform D&C or repeat misoprostol with return evaluation in 1-2 weeks.

#### **MIFEPRISTONE MEDICAL ABORTION AND INFECTION**

Serious infections and bleeding (rarely, fatal) occur following spontaneous, surgical, and medical abortions, including following mifepristone use. No causal relationship between the use of mifepristone and misoprostol and these events has been established. Ensure that the patient knows whom to call and what to do, including going to an Emergency Room if none of the provided contacts are reachable, if she experiences *sustained fever, severe abdominal pain, prolonged heavy bleeding, or syncope*, or if she experiences *abdominal pain or discomfort or general malaise* (including weakness, nausea, vomiting or diarrhea) more than 24 hours after taking misoprostol.

**Atypical Presentation of Infection:** Patients with serious bacterial infections (e.g. *Clostridium sordellii*) and sepsis can present without fever, bacteremia or significant findings on pelvic examination following an abortion. *Very rarely, deaths have been reported in patients who presented without fever, with or without abdominal pain but with leukocytosis with a marked left shift, tachycardia, hemoconcentration, and general malaise.* A high index of suspicion is needed to rule out serious infection and sepsis.

#### **ALTERNATIVE REGIMENS:**

##### **Medical Abortion with Methotrexate (MTX) and Misoprostol (MIS)**

Methotrexate prevents reduction of folic acid to tetrahydrofolate by binding to dihydrofolate reductase, which interferes with DNA synthesis. This action, in early pregnancy, prevents continued implantation (inhibits syncytialization of the cytotrophoblast). MTX 50 mg/m<sup>2</sup> IM or 50 mg PO is combined with MIS 800 mcg vaginally 3-7 days later in women up to 49 days gestation. Efficacy within 1 week is typically 70-80%. If the remaining non-continuing pregnancies are managed expectantly, the overall success rate is as high as 95%. Because of the significant delay in abortion for many women and the limit of efficacy to gestations only up to 49 days, the combination of MTX and MIS is generally not recommended for medical abortion.

## **EARLY MEDICAL ABORTION WITH MISOPROSTOL ALONE**

Misoprostol, when used without mifepristone or MTX, can cause abortion after 1-3 doses in women up to 56 days gestation. Treatment regimens typically include MIS 800 mcg vaginally at intervals ranging from every 8 hours to every 24 hours. Efficacy rates are generally around 70% with one dose of misoprostol, 80% after two doses and near 90% after three doses. Given the existence and availability of safe alternative regimens, MIS alone is generally not recommended for medical abortion. However, in situations where mifepristone is unavailable, MIS alone is an option

### **CONTRACEPTION AFTER ABORTION ←**

- All methods may be started on the day of an abortion procedure
- Advantages of starting immediately: know patient is not pregnant, immediate contraceptive protection
- If inserting IUD after second-trimester abortion procedure, may have slightly higher expulsion rate
- For medication abortions, start contraceptives on day of follow-up visit when termination of pregnancy confirmed.
- Vaginal rings were inserted within 1 week following surgical and medical abortions in 81 women and were found to be highly acceptable [*Fine-2007*]

## CHAPTER 13

### Choosing Among Contraceptive Methods

[www.managingcontraception.com/choices](http://www.managingcontraception.com/choices), [www.plannedparenthood.org/library](http://www.plannedparenthood.org/library)

#### THE BEST METHOD IS THE ONE THAT IS MEDICALLY APPROPRIATE AND IS USED EVERY TIME BY SOMEONE HAPPY WITH THE METHOD

- Each contraceptive method has both advantages and disadvantages
- Be aware of your own biases
- Effectiveness and safety are important (see pages 38, 40)
- Convenience and ability to use method correctly influences effectiveness
- Protection against STIs/HIV needs to be considered for women and men at risk
- Effects of method on menses may be very important to a woman
- Ability to negotiate with partner may help determine method selected
- Religion, privacy, friend's advice and frequency of sex may influence decision
- Discuss all methods with patient, even those you may not use in your own practice
- Is partner supportive of contraception/condoms and will he help pay for them?
- Consider discussing with couple, particularly if there appears to be conflict

**EFFECTIVENESS:** measured by failure rates in 2 ways (see Table 13.2, p. 40)

**Correct and consistent use first year failure rate:** The percentage of women who become pregnant during their first year of use when they use the method perfectly.

**Typical use first year failure rates:** The percentage of women who become pregnant during their first year of use. This number reflects pregnancies in couples who use the method correctly and consistently and of those who do not. **This typical use failure rate is the relevant number to use when counseling new start users.**

- In spite of many very effective options, the U.S. has a high rate of unintended pregnancy. Just under 50% of all pregnancies in the U.S. are not planned. The U.S. also has the lowest rate of IUD use in the developed world. Our challenge is to help women and couples use available methods effectively

#### Counseling about effectiveness:

- Methods are divided into 3 groups:
  - A) *Highly effective:* female and male sterilization, Implants, IUDs, DMPA
  - B) *Moderately effective:* pills (COCs and POPs), ring, patch
  - C) *Slightly effective:* male latex condoms, diaphragm, cervical cap (no previous births or previous births), female condoms, spermicides (gel, foam, suppository, film), withdrawal, natural family planning (calendar, temperature, cervical mucus)

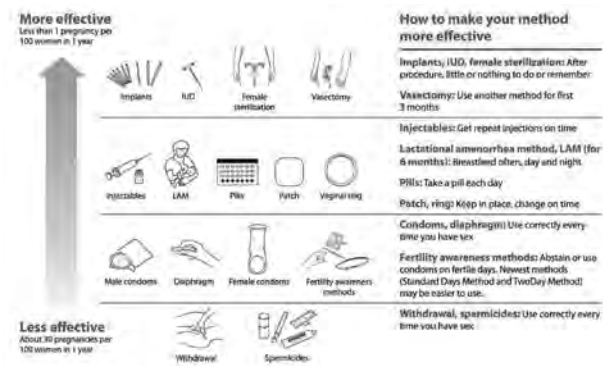
#### KEY QUESTIONS

- **What contraceptive did you come to this office today wanting to use?** Data show that giving the method they ask for is more likely to result in continuation. [Pariani S. et al. *Stud Fam Plann*, 1991]
- **When (if ever) do you want to have your next child?** Helps teach need for preconceptional care and guides in selection of method. Consider IUDs for spacing. After first 2 years of use, most cost-effective method. If she definitely wants no further pregnancies, be sure to discuss sterilization in addition to the highly effective reversible methods

- *Does your partner want to have children in the future? When?*
- *Will your partner help you using condoms and/or paying for contraceptives?*  
*Using abstinence when you do not have another method?*
- *What would you do if you had an accidental pregnancy? Is abortion an option or not?* When abortion is not an option, highly effective methods should be stressed. ←
- *What method(s) did you use in the past? What problems did you have with it/them?*
- *What are you doing to protect yourself from STIs/AIDS?* Inclusion of counseling about safer sex practices and condoms may be critical
- *Do you know what emergency contraception is?* Encourage her to purchase a package of ECPs to have on hand while encouraging use of a highly effective contraceptive ← thereby minimizing the potential need for EC
- *Do you have any serious medical problems?*
- *What side effects are you willing to accept?*

## Comparing Typical Effectiveness of Contraceptive Methods

This chart available at [www.who.int/reproductive-health/family-planning/tool.htm](http://www.who.int/reproductive-health/family-planning/tool.htm)



**Sources:**  
 Shuster KL, Trussell J, Makris N, Coombs S, Subissiemi S, Brown D. Generalizing contraceptive effectiveness to a combined population that is almost a World Health Organization family planning benchmark. *Sex J*. 2008; 49(4):219-23.  
 World Health Organization. Department of Reproductive Health and Statistics (RHDS). *Joint United Nations Programme for Demographic Statistics (JUNEPD) Report on Family Planning: A Global Perspective on Progress, Challenges, and Gender Equality*. 2007.  
 Trussell J. Choosing a contraceptive: efficacy, safety and personal environment. In: Hatcher RA, Trussell J, Brown T, Cullen AL, Cassell A, Gould F, Kowal E, eds. *Contraceptive Technology*. Amsterdam: Elsevier, 2004; 100-108.

**TABLE 13.1 Comparative risk of unprotected intercourse on unintended pregnancies and STI infections\***

Unintended pregnancy/coital act	PID per woman infected with cervical gonorrhoea
17%-30% midcycle <1% during menses	40% if not treated 0% if promptly and adequately treated
Gonococcal transmission/coital act	Tubal infertility per PID episode
50% infected male, uninfected female 25% infected female, uninfected male	8% after first episode 20% after second episode 40% after three or more episodes

\*Cates W Jr. *Reproductive tract infections*. In: Hatcher RA, et al. *Contraceptive Technology*, 18th ed. New York: Ardent Media, 2004:193.

**ACCUTANE SHOULD BE USED VERY CAUTIOUSLY IN REPRODUCTIVE AGE WOMEN** ←

Accutane (isotretinoin) is a vitamin A isomer used in the treatment of extremely severe acne. If taken by a woman who is pregnant, it may cause a wide range of teratogenic effects including:

**CNS:** hydrocephalus, facial nerve palsy, cortical blindness and retinal defects

**Craniofacial:** low-set ears, microcephaly, triangular skull and cleft palate

**Cardiovascular:** transposition of the great vessels, atrial and ventricular septal defects

Important contraceptive messages for women considering Accutane use, in view of the fact that no method of birth control is 100% effective:

- **Use Two Methods:** In addition to compulsive, careful and consistent use of a very effective hormonal contraceptive, also use condoms consistently and correctly. Use of any combined (E/P) method is likely to have a beneficial effect on acne.
- **Repeated Pregnancy Tests:** Pregnancy tests are essential prior to initiating and on a monthly basis thereafter. This is particularly important since the critical time of exposure to Accutane is believed to be 2-5 weeks after conception [Briggs-2002]
- **Consider Abortion if Contraceptive Failure:** Should pregnancy occur, strongly consider an abortion. In the 22 months following its introduction, the manufacturer, FDA and CDC received reports on 154 Accutane-exposed pregnancies, of which 95 (61.7%) were electively aborted. Another 12 (7.8%) aborted spontaneously. 26 were born without major defects and 21 had major malformations [Briggs-2002] **Many clinicians will not provide this drug unless the woman agrees to have an abortion should a pregnancy occur**
- **Use Accutane Sparingly:** This drug is dangerous to a developing fetus and should not be used unless other approaches to managing acne have been used first AND unless the reproductive-age woman using it agrees to use contraception consistently and correctly.

**Table 13.2 Percentage of women experiencing an unintended pregnancy within the first year of typical use and the first year of perfect use and the percentage continuing use at the end of the first year: United States\***

Method	% of Women Experiencing an Unintended Pregnancy within the First Year of Use		% of Women Continuing Use at One Year <sup>1</sup>
	Typical Use <sup>2</sup>	Perfect Use <sup>3</sup>	
No Method <sup>4</sup>	85	85	
Spermicides <sup>5</sup>	28	18	42
Withdrawal	28	4	43
Periodic Abstinence			51
Calendar	25	9	
Ovulation Method	25	3	
Symptothermal <sup>6</sup>	25	2	
Post-ovulation	25	1	
Cervical Cap with spermicide			
Parous Women	32	26	46
Nulliparous Women	16	9	57
Diaphragm with spermicide <sup>7</sup>	11.5	6	57
Condom <sup>8</sup>			
Reality Female Polyurethane condom	21	5	49
Male (Latex or polyurethane)	18	2	53
Pill (COCs and POPs)	9	0.3	68
Ortho Evra patch <sup>9</sup>	8	0.3	68
NuvaRing <sup>9</sup>	8	0.3	68
Depo-Provera injections - q.3 months	5	0.3	56
Lunelle monthly injection	3	0.05	56
Implanon	0.2	0.1	
IUD			
Copper T (Paragard)	0.8	0.6	78
Levonorgestrel-releasing (Mirena)	0.1	0.1	81
Female Sterilization	0.5	0.5	100
Male Sterilization	0.15	0.10	100

**Emergency Contraceptive Pills:** Treatment with COCs initiated within 120 hours after unprotected intercourse reduces the risk of pregnancy by at least 60-75%<sup>9</sup>. Pregnancy rates lower if initiated in first 12 hours. Progestin-only EC reduces pregnancy risk by 89%.

**Lactational Amenorrhea Method:** LAM is a highly effective, temporary method of contraception.<sup>10</sup>

- <sup>1</sup> Among couples attempting to avoid pregnancy, the percentage who continue to use a method for 1 year
- <sup>2</sup> Among typical couples who initiate use of a method (not necessarily for the first time), the percentage who experience an accidental pregnancy during the first year if they do not stop use for any other reason
- <sup>3</sup> Among couples who initiate use of a method (not necessarily for the first time) and who use it perfectly (both consistently and correctly), the percentage who experience an accidental pregnancy during the first year if they do not stop use for any other reason
- <sup>4</sup> The percentages becoming pregnant in columns 2 and 3 are based on data from populations where contraception is not used and from women who cease using contraception in order to become pregnant. Among such populations, about 89% become pregnant within 1 year. This estimate was lowered slightly (to 85) to represent the percentages who would become pregnant within 1 year among women now relying on reversible methods of contraception if they abandoned contraception altogether
- <sup>5</sup> Foams, creams, gels, vaginal suppositories, and vaginal film
- <sup>6</sup> Cervical mucus (ovulation) method supplemented by calendar in the pre-ovulatory and basal body temperature in the post-ovulatory phases
- <sup>7</sup> With spermicidal cream or jelly
- <sup>8</sup> With or without spermicides (No difference in efficacy)
- <sup>9</sup> The treatment schedule is one dose within 72 hours after unprotected intercourse, and a second dose 12 hours after the first dose. See page 70 for pills that may be used
- <sup>10</sup> However, to maintain effective protection against pregnancy, another method of contraception must be used as soon as menstruation resumes, the frequency or duration of breast-feedings is reduced, bottle feeds are introduced, or the baby reaches 6 months of age

\*Adapted from Trussell J, Kowal D. The essentials of contraception. In: Hatcher RA, et al. *Contraceptive Technology*, 18th ed. New York: Ardent Media, 2004.

Updated from Trussell J et al. *Contraception* Volume 78, Issue 1, July 2008.

\*Numbers for typical use failure of Ortho Evra and NuvaRing are not based on data. They are estimates based on pill data.

**Table 13.3 Major methods of contraception and some related safety concerns, side effects, and noncontraceptive benefits**

\*Trussell J, Kowal D. The essentials of contraception. IN: Hatcher RA, et al. *Contraceptive Technology*. 17th ed. New York: Ardent Media, 1998:235. Slight adaptations from CT table.

METHOD	NONCONTRACEPTIVE BENEFITS *	SIDE EFFECTS	COMPLICATIONS (RARE)
Combined pills, injections, patch and ring	Decreased dysmenorrhea, PMS, and blood loss; protects against symptomatic PID requiring hospitalization, ovarian and endometrial carcinomas; some benign tumors (leiomyomata, benign breast masses), ectopic pregnancies and ovarian cysts; reduces acne	Nausea, vomiting, headaches, dizziness, mastalgia, chloasma, spotting and bleeding, mood changes, including depression (rare)	Cardiovascular complications (DVT, PE, MI, hyperension), depression, hepatic adenoma, slight increase in adenocarcinoma of cervix
Progestin-only pills	Lactation not disturbed. Decreased menstrual pain & blood loss	Spotting, breakthrough bleeding, amenorrhea, mood changes, headaches, hot flashes	None
Progestin-only implants	Lactation not disturbed. Less blood loss per cycle. Reduced risk of ectopic pregnancy	Menstrual changes, mood changes, weight gain or loss, headaches, hair loss	Infection at implant site, reaction to anesthesia, complicated removal, depression
Progestin-only injections	Lactation not disturbed. Reduces risk of sickle cell crises, endometrial cancer, ovarian cysts, mittelschmerz. May reduce risk of PID, seizures, ovarian cancer. Can be used with anti-convulsants	Menstrual changes, weight gain, headaches, hair loss, adverse impact on lipids, mood changes, including depression (rare)	Allergic reaction, excessive weight gain, glucose intolerance, severe depression
IUD	Lactation not disturbed. Copper T & levonorgestrel IUDs reduce risk for ectopic preg. LNG IUD reduces cramping & pain & treats bleeding from DUB, menorrhagia, & fibroids	Copper-IUD increases menstrual flow, blood loss and cramping. LNG IUD causes irregular bleeding/amenorrhea/decreased flow	PID following insertion, uterine perforation, bleeding with expulsion
Sterilization	Women: reduced risk of ovarian cancer, endometrial cancer, ectopic pregnancy, PID Men: none known	Pain at surgical site, adhesion formation, subsequent regret	Surgical complications: hemorrhage, infection, organ damage, anesthetic complications, pain, ectopic pregnancy
Male latex condom	Reduces risk of STIs and cervical dysplasia	Decrease in spontaneity or sensation; allergic reaction to latex, skin irritation	Rare anaphylactic reactions to latex (use polyurethane condoms)
Female condom	May reduce STI and cervical dysplasia risk	Difficult to use, vaginal and bladder infection	Toxic shock syndrome (although no cases reported)
Diaphragm Cervical cap	Reduces risk of cervical STIs, PID and possibly cervical dysplasia	Vaginal and bladder infection, vaginal erosions from poorly fit device, allergy to spermicide/latex	Toxic shock syndrome, anaphylactic reaction to latex

## TIMING:

Couples considering contraceptives and their health care providers face myriad questions about the timing of contraceptive use. Sometimes our clients come to us with mistaken ideas. Sometimes we providers are actually the source of arbitrary misinformation about timing. In either case, timing errors, misconceptions, rigidity and oversimplifications can cause trouble; and trouble in family planning often can be spelled “unintended pregnancy”. In most instances, more important than advice about the timing of contraceptives is rapid initiation and then correct, **consistent** use of contraceptives. Below are several suggestions to consider in helping patients with timing questions:

1. For many women, a practical way to start pills, the patch or the ring is on the first day of the next period. Even easier, sometimes, is the Quick Start method which is to start pills on the day you first see a patient if you can be reasonably certain that she is not pregnant [Westhoff-2002]. Recommend backup method for 7 days unless pills started during the five days after the start of menses or within 5 days of miscarriage. Women with unprotected intercourse in preceeding 5 days should also receive EC
2. Switching from one hormonal method to another can be done immediately as long as the first method is used consistently and correctly, or if it is reasonably certain that she is not pregnant

***Reasonably certain a woman is not pregnant - no symptoms and signs of pregnancy AND meets any of following criteria:***

- no intercourse since last menses
  - has been using a method consistently and correctly
  - within first 7 days of normal menses
  - within 4 weeks postpartum, non-lactating
  - within first 7 days post abortion or miscarriage
  - fully or near fully breastfeeding, amenorrheic and < 6 months postpartum
- Ref: WHO - selected practice recommendations, 2004: Some experts recommend relying on lactational amenorrhea only through 3 months because 20% of fully nursing mothers ovulate at 3 months

3. Healthy women who tolerate pills well and do not smoke can continue pills indefinitely and/or until menopause unless a woman develops a complication or a contraindication to pill use. Periodic “breaks” from taking pills is still inappropriately recommended by some clinicians and is an unwise practice that can lead to unintended pregnancies
4. Extended use of combined pills with no pill free interval is an acceptable way for some women to take pills, with no increased risk of endometrial hyperplasia [Anderson-2003]. See p. 4
5. The first Depo-Provera injection may be given at any time in the cycle if reasonably certain a woman is not pregnant (see box above). If the day of the first shot is NOT within 5 days of the start of a period, recommend that patient use a back-up contraceptive for 7 days; give EC and repeat pregnancy test in 2-3 weeks if recent unprotected intercourse



6. Avoid overly dogmatic advice regarding when postpartum women should start progestin-only pills and the progestin-only injection, Depo-Provera. CDC category 1 for using progestin-only methods in the first month PP for non-breastfeeding women. CDC category 2 for ← using progestin-only methods within the first month PP in breastfeeding women. There are clinicians and entire programs starting these two methods in each of the following 3 ways:
- At discharge from hospital
  - 2-3 weeks postpartum
  - 6 weeks postpartum
7. Recommend that condoms be placed onto the erect penis OR onto the penis before it becomes erect. There are clear advantages and disadvantages to both approaches.
8. Offer Plan B (emergency contraceptive pills) to women in advance. Advance prescription of Plan B is one approach. Better yet, hand her the actual pills and instructions, or instruct her to purchase OTC and keep at home
9. Intrauterine contraceptives may be inserted at any time in a woman's menstrual cycle if she is not pregnant. If using an LNG-IUD, back-up is recommended for 7 days if not inserted in the first 10 days of the cycle. No back-up is needed for Copper IUD because of its high efficacy as an emergency contraceptive.
10. If in doubt about any timing question, use condoms until your timing questions have been resolved

## CHAPTER 14

### Abstinence or Delaying Sexual Intercourse

www.managingcontraception.com or www.sexrespect.com

#### DESCRIPTION

Surveys reveal a wide variety of opinions about what constitutes sexual activity. However, from a family planning perspective, the definition of abstinence is clear: it is delaying genital contact that could result in a pregnancy (i.e. penile penetration into the vagina). Some authors argue that abstinence is not a form of contraception, but is a lifestyle choice because a person not having intercourse needs no contraception. Regardless, abstinence is an important means of reducing unintended pregnancies and sexually transmitted infections. A woman or a man may return to abstinence at any time. Abstinence-only-until-marriage education programs receive more than \$100 million annually in U.S. government funding, most of it stemming from the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. There is currently little to no evidence that any of these programs, which promote sexual abstinence and restrict information about contraception, actually achieve their intended purposes.

#### EFFECTIVENESS

*When abstinence is adhered to, there is no pregnancy* ←

#### HOW ABSTINENCE WORKS

Sperm excluded from female reproductive tract, preventing fertilization

**COST:** None

**ADVANTAGES:** Can be used as an interval method

**Menstrual:** none

**Sexual/psychological:** May contribute to positive self image if consistent with personal values

**Cancers, tumors, and masses:** Risk of cervical cancer far less if no vaginal intercourse has ever occurred

**Other:**

- Reduces risk of STIs (unless vaginal intercourse replaced with oral/anal)
- Many religions and cultures endorse

#### DISADVANTAGES

**Menstrual:** None

**Sexual/psychological:** Frustration or possible rejection if abstinence not adhered to

**Cancers, tumors, and masses:** None

**Other:**

- Requires commitment and self control; nonunderstanding partner may seek other partner(s)
- Patient and her partner may not be prepared to contracept if they stop abstaining

#### COMPLICATIONS

- No medical complications
- Person may be in situation where she/he wants to abstain, but partner does not agree. Women have been raped/beaten for refusing to have intercourse

## CANDIDATES FOR USE

- Individuals or couples who feel they have the ability to refrain from sexual intercourse

### Adolescents:

- Very appropriate method but need maturity to effectively use abstinence. Obtain information about contraceptive methods for future, understand the consequences of various sexual activities
- Counseling may include discussions on masturbation (solo or mutual) and also “outercourse” alternative ways of expressing affection/attraction/sexuality with partner

## MAINTAINING ABSTINENCE USUALLY REQUIRES OPEN COMMUNICATION

- Provide negotiating skills, how to say no or “not now”, and how to resist peer (societal) pressures
- Recommend that patient ensure that partner explicitly agrees to abstain
- Stress that abstinence may just be a decision to delay intercourse. It may mean “not now”, instead of “never”. Remind her that she may use or return to abstinence at any time in life
- Prepare for time when (or if) decision to stop abstaining arises, contraceptive education
- Advise her to consider having condoms and emergency contraception in case of need

## PROBLEM MANAGEMENT

### Partner does not want to abstain:

- Recommend continued communication and be available to discuss options with couples together ←
- Provide counseling in other forms of sexual pleasuring if patient interested (masturbation or outercourse)
- Seriously consider birth control method or another partner

## FERTILITY ISSUE

- Protects against upper reproductive tract infection preserving a woman's fertility

### Are Abstinence-Only Education Programs Effective?

In a review by Kirby (2001), only three evaluation studies of abstinence-only programs met the criteria established for inclusion in the review (e.g. random assignment, large sample size, long-term follow-up, measurement of behavior). **None of the studies demonstrated a significant programmatic effect on the initiation of sex, frequency of sexual activity, or the number of sexual partners.** A report released 4/07 of a long-term study commissioned by Congress, found that abstinence-only sex ed programs are not effective in preventing or delaying teenagers from having sexual intercourse, and have no impact on the likelihood that if they do have sex, they will use a condom.

In addition, these programs often provide misinformation and withhold important information, e.g. about contraception, needed to make informed choices [Santelli-2006]. ←

Another recent study found the sexual behaviour of teenage virginity pledgers did not differ from matched non-pledgers, but were less likely to protect themselves from pregnancy and infection [Rosenbaum-2009] ←

Source: Kirby, D. (2001). *Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy*. Washington, DC: The National Campaign to Prevent Teen Pregnancy.

- Recent survey of parents in NC found they overwhelmingly support (89%) comprehensive sexual education yet their state mandates abstinence education [Ito-2006]
- Society for adolescent medicine position paper (2006) states: Abstinence is a healthy choice for adolescents, but this choice should not be coerced. Instead, teens should be informed about sexual risk reduction including abstinence, correct and consistent condom use and contraception

## WAYS TO ENCOURAGE ABSTINENCE

### *Ways to Think About Abstinence*

1. **Primary Abstinence** for a very long period of time
2. **Return to Abstinence** for a very long time
3. **Abstinence “for a while” - for example, until**
  - a) effective contraception has been achieved
  - b) STD tests are negative and effective approach to prevention of STDs carefully discussed and agreed upon by both partners
  - c) until 2, 4, or 6 week postpartum visit
  - d) trust and communication (and monogamy) well established in relationship and consequences of sex including unplanned pregnancy can be negotiated
4. **Abstinence right now - tonight or today.** Every day there are some 10 million acts of intercourse in couples NOT wanting to become pregnant and 700,000 of those acts of intercourse are completely unprotected acts of sexual intercourse. Today 700,000 couples could decide NOT to have intercourse.

With each of those 4 time frames for abstinence (avoiding penis-in-vagina intercourse), couples may or may not choose any of a variety of sexual interactions sometimes called **outercourse** (holding hands, hugging, kissing, deep kissing, petting, mutual masturbation, oral-genital contact).