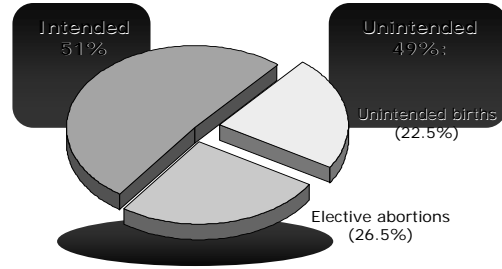


## Contraception in the Community

Adapted by Jill Gallin, CPNP  
Assistant Professor of Clinical Nursing

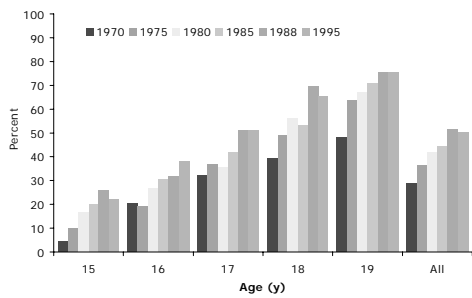
## U.S. Pregnancies: Unintended vs. Intended



Henshaw SK. *Fam Plann Perspect.* 1998;30:24-29.

www.contraceptiononline.org

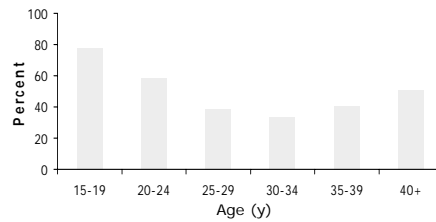
## Adolescents Who Have Had Intercourse



National Surveys of Family Growth, 1970, 1975, 1980, 1985, 1988, and 1995.

www.contraceptiononline.org

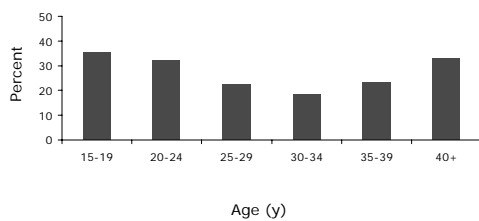
## The Need for Contraception Unintended Pregnancies (%) by Age



Henshaw SK. *Fam Plann Perspect.* 1998;30:24-29, 46.

www.contraceptiononline.org

## The Need for Contraception Pregnancies Ending in Abortion by Age

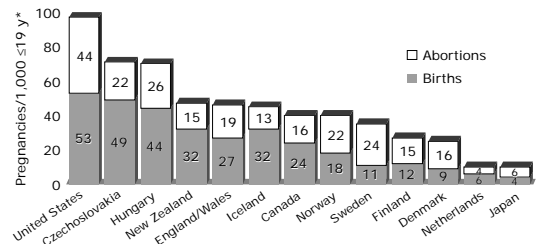


\*Does not include miscarriages.

Henshaw SK. *Fam Plann Perspect.* 1998;30:24-29, 46.

www.contraceptiononline.org

## Adolescent Pregnancy An International Perspective—Developed Countries

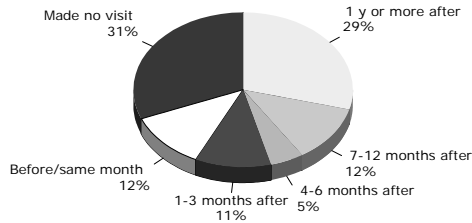


\*1988.

Reproduced with permission from The Alan Guttmacher Institute. *Sex and America's Teenagers.* 1994.

www.contraceptiononline.org

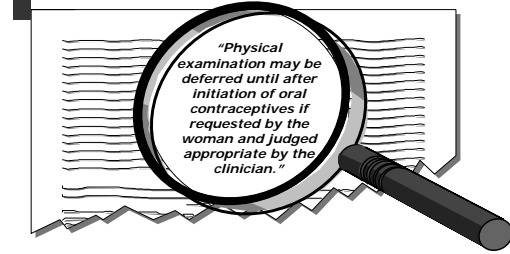
### Adolescents Delay Seeking Medical Contraceptive Services



Alan Guttmacher Institute. *Sex and America's Teenagers*, 1994

www.contraceptiononline.org

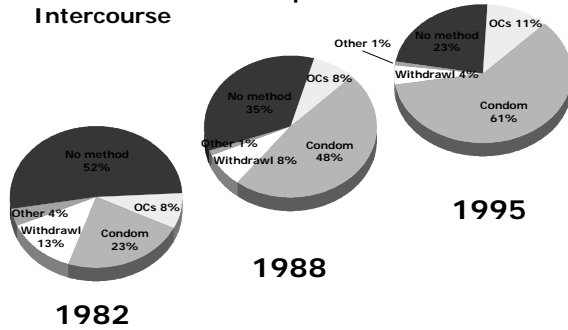
### FDA Advisory Committee's Recommendation on Delay of Pelvic Exam



FDA Advisory Committee Recommendation.

www.contraceptiononline.org

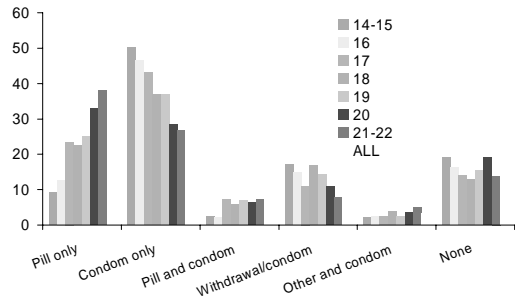
### Adolescents' Contraception at First Intercourse



National Surveys of Family Growth, 1992, 1988, and 1995.

www.contraceptiononline.org

### Method Use, Last Intercourse Young Women, 14 to 22 years old



Santelli JS et al. *Fam Plann Perspect.* 1997;29:261-267.

www.contraceptiononline.org

### Properties of Contraceptives Desired by Women

- Highly effective
- Prolonged duration of action
- Rapidly reversible
- Privacy of use
- Protection against STD
- Easily accessible

www.contraceptiononline.org

### Optimizing Patient Choices

- Effectiveness
  - Theoretical
  - Actual
- Importance of not being pregnant
- Likelihood and ability to comply
- Frequency of intercourse
- Age
- Cost and ability to pay
- Side effects
- Perceptions, misperceptions, risk/benefit
- Concomitant drug use
- Health status and habits

www.contraceptiononline.org

### Common Contraceptive Choices

- Oral contraceptives: combined, progestin-only
- Long-acting
  - Injectable
  - Implant
  - IUD: copper T, progestin-only
- Barrier contraceptives
- Spermicides
- Natural family planning
- Emergency contraceptives
- Female/male sterilization

www.contraceptiononline.org

### Current Trends in Contraception

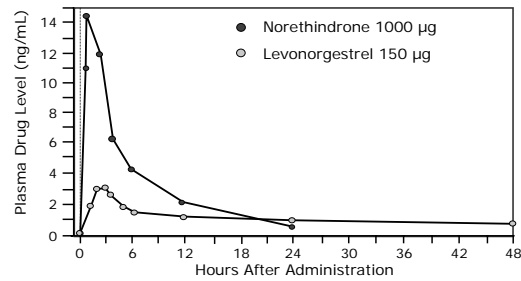
- Developing new delivery systems
- Increasing access to a full range of options
- Emphasizing better compliance
- Widening use of emergency contraception

www.contraceptiononline.org

### Oral Contraceptives

- Dosing: every day same time
- Rx refill
- Cost
- Not so private
- Side Effects
- Contraindications
- See handout
- Combined
- Progesterone only

### Levonorgestrel and Norethindrone Plasma Levels After Single Oral Dose



Stanczyk FZ. In: Lobo RA, ed. *Treatment of the Postmenopausal Woman: Basic and Clinical Aspects*. Raven Press, 1994.

www.contraceptiononline.org

### Drugs That Decrease the Effectiveness of OCs

- |   |                   |
|---|-------------------|
| ■ Anticonvulsants                                     | ■ Anti-infectives |
| ■ Barbituates (including phenobarbital and primidone) | ■ Rifampin        |
| ■ Phenytoin   | ■ Griseofulvin    |
| ■ Carbamazepine                                       |                   |
| ■ Toprimate   |                   |
| ■ Vigabatin   |                   |

American College of Obstetrics and Gynecology Practice Bulletin Number 18, July 2000

www.contraceptiononline.org

### Drugs That Do Not Decrease the Effectiveness of OCs

- Anti-infectives
  - Tetracycline
  - Doxycycline
  - Ampicillin
  - Metronidazole
  - Quinolone antibiotics

American College of Obstetrics and Gynecology Practice Bulletin Number 18, July 2000

www.contraceptiononline.org

### Noncontraceptive Benefits of OCs

- Cycle-related:
  - Irregular cycles
  - Dysmenorrhea
  - Menorrhagia
  - Anemia
  - Functional ovarian cysts
- Cancer reduction:
  - Ovarian
  - Endometrial
  - Colorectal

Adapted from Grimes DA et al, eds. *Modern Contraception: Updates from The Contraception Report*. Emron; 1997:1-100

www.contraceptiononline.org

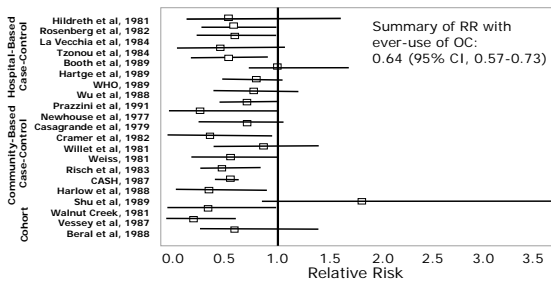
### Noncontraceptive Benefits of OCs

- Prevention of:
  - Bone loss
  - Fibrocystic/benign breast disease
  - Pelvic inflammatory disease (PID)
  - Ectopic pregnancy
- Treatment of:
  - Acne
  - Hirsutism
  - Perimenopausal symptoms

Adapted from Grimes DA et al, eds. *Modern Contraception: Updates from The Contraception Report*. Emron, 1997.

www.contraceptiononline.org

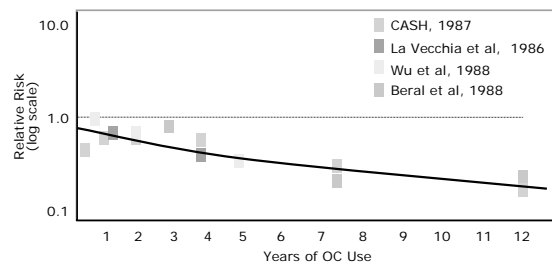
### Studies Show OCs Reduce Risk of Ovarian Cancer



Hankinson SE et al. *Obstet Gynecol*. 1991;80:708-714.

www.contraceptiononline.org

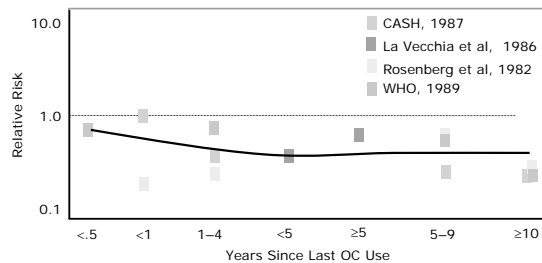
### Ovarian Cancer and OCs Risk Reduction by Years of Use



Adapted from Grimes DA et al, eds. *Modern Contraception: Updates from The Contraception Report*. Emron, 1997.

www.contraceptiononline.org

### OCs Protect Against Ovarian Cancer After Discontinuation



Stanford JL. *Contraception*. 1991;43:543-556.

www.contraceptiononline.org

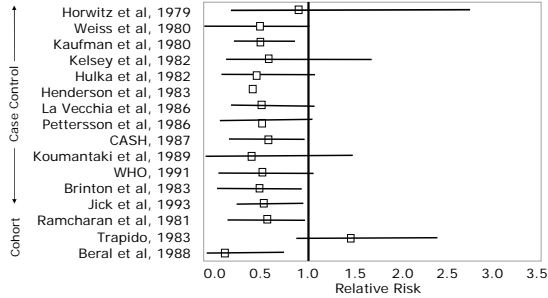
### OCs Reduce Risk of Ovarian Cancer in High-Risk Women

- *BRCA1* and *BRCA2* mutations increase ovarian cancer risk
  - 45% increased risk in carriers of *BRCA 1*
  - 25% increased risk in carriers of *BRCA 2*
- OCs reduce ovarian cancer risk in carriers of *BRCA1* or *BRCA2*
  - 20% reduction with short-term OC use (<=3 y)
  - 60% reduction with long-term OC use (>=6 y)

Narod SA et al. *N Engl J Med*. 1998;339:424-428.

www.contraceptiononline.org

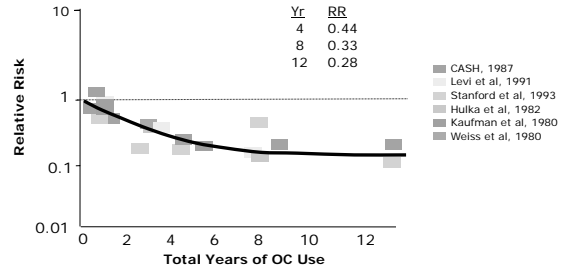
### Studies Show OCs Reduce Risk of Endometrial Cancer



Adapted from Grimes DA et al. *Am J Obstet Gynecol.* 1995;172:227-235.

www.contraceptiononline.org

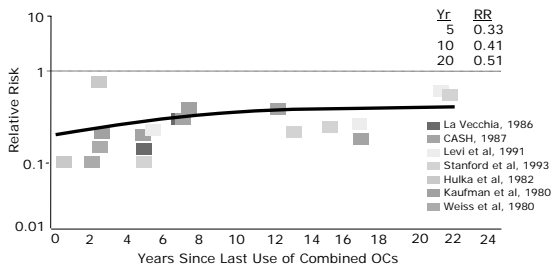
### OCs Reduce Risk of Endometrial Cancer By Years of Use



Adapted from Schlesselman JJ. *Hum Reprod.* 1997;12:1851-1863.

www.contraceptiononline.org

### OCs Protect Against Endometrial Cancer After Discontinuation



Adapted from Schlesselman JJ. *Hum Reprod.* 1997;12:1851-1863.

www.contraceptiononline.org

### Ovarian and Endometrial Cancers and Low-Dose OCs

- Ovarian cancer
  - If protective effect is due to prevention of "incessant ovulation," low-dose OCs are likely protective
- Endometrial cancer
  - Data on protective effect indicate no significant difference between 35 µg and >50 µg EE OCs

Cancer and Steroid Hormone Study/CDC/NICHD. *JAMA.* 1987;257:796-800; Rosenblatt KA et al. *Eur J Cancer.* 1992;28A:1872-1876.

www.contraceptiononline.org

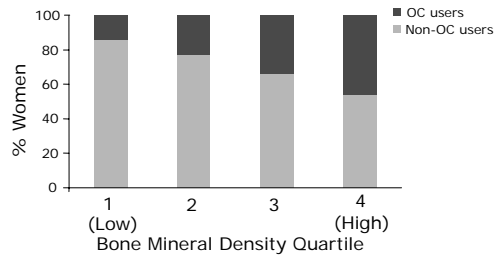
### Bone Mass and OC Use Studies Examining Association

- 9/13 studies show positive effects
  - Up to 12% increase in BMD vs. control subjects
  - Greatest protection with OC use of ≥10 y
  - Primarily an estrogen effect; progestins may be important
- 4 studies show neutral effect
- No studies show decreased BMD with OC use

Kuohung W et al. *Contraception.* 2000;61:77-82.

www.contraceptiononline.org

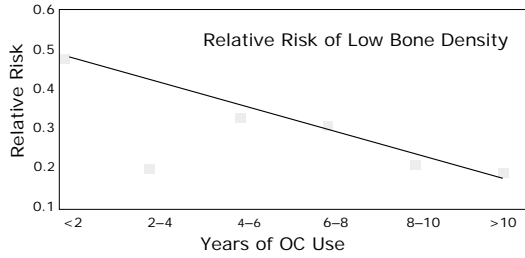
### Higher Bone Density More Likely in OC Users



Kleerekoper M et al. *Arch Intern Med.* 1991;151:1971-1976.

www.contraceptiononline.org

**Higher Bone Density Association With Longer OC Use**



Kleerekoper M et al. Arch Intern Med. 1991;151:1971-1976.

www.contraceptiononline.org

**Do 20 µg EE OCs Increase Bone Mineral Density?**

- 20 µg EE OCs: significant increases in vertebral bone density (oligomenorrheic, perimenopausal women)
- 0.625 mg conjugated equine estrogens (HRT) = ~ 5 µg EE
- 5 µg EE doses: demonstrate bone-sparing properties
- 20 µg EE OCs: protective benefits are maintained in perimenopausal women

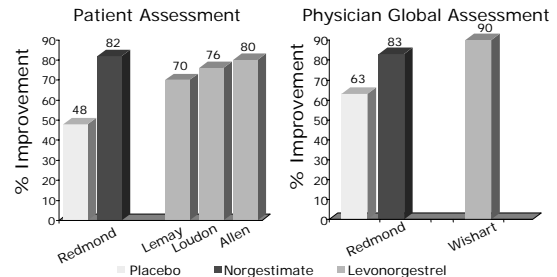
www.contraceptiononline.org

**Acne**

- Androgen-stimulated disorder
- All OCs:
  - Are antiandrogenic
  - Reduce free testosterone
  - Improve acne for most women

www.contraceptiononline.org

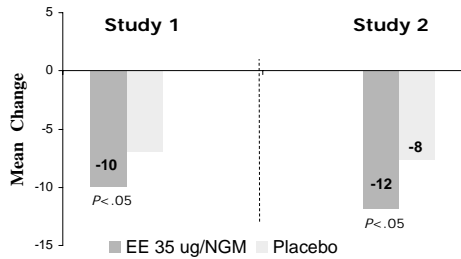
**Acne Improvement with OCs**



Allen HH et al. In: Update on Triphasic Oral Contraception. Excerpta Medica, 1982:82-99; Lemay A et al. J Clin Endocrinol Metab. 1990;71:8-14; Loudon NB et al. Update on Triphasic Oral Contraception. 1982:75-81; Redmond GP et al. Obstet Gynecol. 1997;89:615-622; Wishart JM. Australas J Dermatol. 1991;32:51-54.

www.contraceptiononline.org

**Reductions in Inflammatory Lesion Counts at Cycle 6\* EE 35 µg/NGM (Ortho Tri-Cyclen) vs. Placebo**

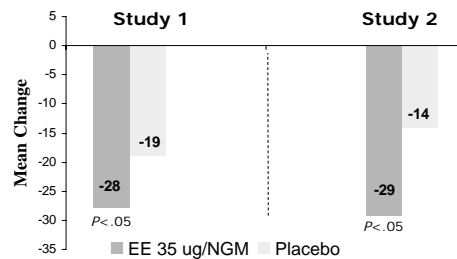


\*A negative change indicates improvement.

Redmond et al. Obstet Gynecol. 1997;89:615-22; Lucky AW et al. J Am Acad Dermatol. 1997;37:746-754.

www.contraceptiononline.org

**Reductions in Total Lesion Counts at Cycle 6\* EE 35 µg/NGM (Ortho Tri-Cyclen) vs. Placebo**

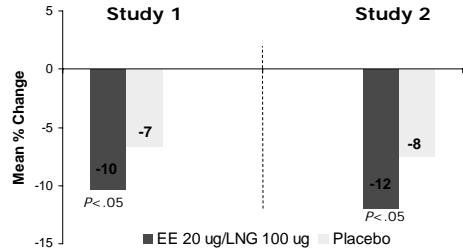


\*Negative change indicates improvement.

Redmond et al. Obstet Gynecol. 1997;89:615-22; Lucky AW et al. J Am Acad Dermatol. 1997;37:746-754.

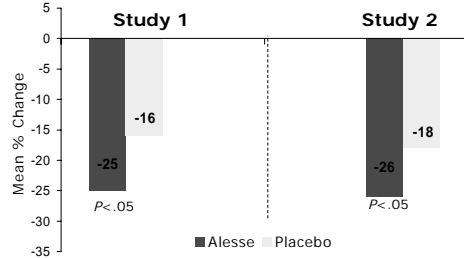
www.contraceptiononline.org

**Reductions in Inflammatory Lesion Counts at Cycle 6  
EE 20 µg/LNG 100 µg (Alesse) vs. Placebo**



Lemay A et al. *Gyneco Endocrinol.* 2000;14:RT61; Leyden JJ et al. *American Academy of Dermatology.* March 2001; Washington, DC. [www.contraceptiononline.org](http://www.contraceptiononline.org)

**Reductions in Total Lesion Counts at Cycle 6  
EE 20 µg/LNG 100 µg (Alesse) vs. Placebo**



Lemay A et al. *Gyneco Endocrinol.* 2000;14:RT61; Leyden JJ et al. *American Academy of Dermatology.* March 2001; Washington, DC. [www.contraceptiononline.org](http://www.contraceptiononline.org)

**How OCs Improve Acne**

- ↓ Ovarian and adrenal androgen secretion
  - ↑ SHBG to bind androgens
  - ↓ 5α-reductase activity
- } ↓ Free testosterone

van der Vange N et al. *Contraception.* 1990;41:345-352; Cassidenti DL et al. *Obstet Gynecol.* 1991;78:103-107. [www.contraceptiononline.org](http://www.contraceptiononline.org)

**Primary Dysmenorrhea  
Incidence**

Grade	Wilson (n=88) Mean age 15	Sundell (n=460)	
		Age 19	Age 24
0 (none)	9%	28%	33%
1 (mild)	27%	35%	35%
2 (moderate)	41%	23%	22%
3 (severe)	23%	15%	10%
Absenteeism*	26%	51%	34%

\* Missed classes or work.

Wilson CA et al. *J Adolesc Health Care.* 1989;10:317-22; Sundell G et al. *Br J Obstet Gynaecol.* 1990;97:588-94. [www.contraceptiononline.org](http://www.contraceptiononline.org)

**OC Use in Adolescents  
Decreased Dysmenorrhea and Compliance**

- Reduction of dysmenorrhea was the most statistically and clinically significant predictor of consistent OC use
- Adolescents with severe dysmenorrhea who experienced positive effects (decreased cramping or flow) were 8 times more likely to be consistent pill users (missed ≤3 pills per month) than others

Robinson JC et al. *Am J Obstet Gynecol.* 1992;166:578-583. [www.contraceptiononline.org](http://www.contraceptiononline.org)

**Primary Dysmenorrhea**

- 50% of women and 80% of adolescents report pain with menses
- OCs reduce menstrual fluid volume and prostaglandin levels
- OCs provide marked improvement of symptoms
- NSAIDs complement OC use

Dawood MY. *J Reprod Med.* 1985;30:154-67; Wilson CA et al. *J Adolesc Health Care.* 1989;10:317-22. [www.contraceptiononline.org](http://www.contraceptiononline.org)

### How OCs Improve Primary Dysmenorrhea

- By ovulation inhibition, progesterone-stimulated endometrial prostaglandin production is reduced
- By reducing menstrual flow, which contains prostaglandins

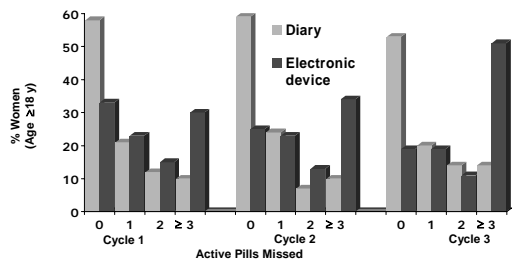
www.contraceptiononline.org

### OC Compliance A Real Concern with Adolescents

- Daily pill taking habit difficult
- Cost considerations
- Obtaining refills
- Misinformation about the pill

www.contraceptiononline.org

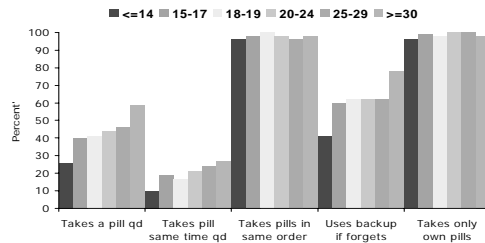
### Reported Pill Use vs. Actual Pill Use



Reproduced with permission from Potter L et al. *Fam Plann Perspect.* 1996;28:154-158.

www.contraceptiononline.org

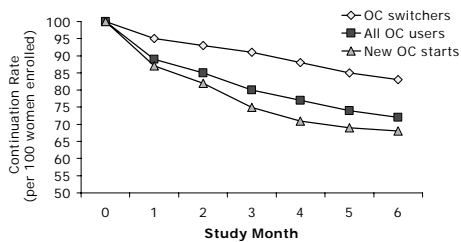
### Pill-Taking Behaviors by Age



Oakley D et al. *Fam Plann Perspect.* 1991;23:150-154.

www.contraceptiononline.org

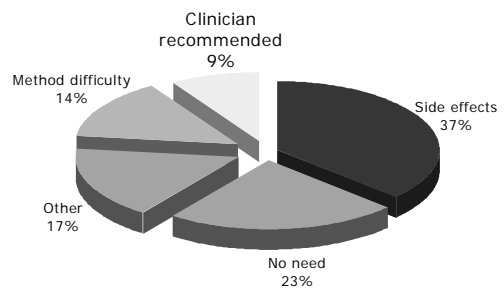
### OC Continuation Rates All Ages



Reproduced with permission from Rosenberg MJ et al. *Am J Obstet Gynecol.* 1998;179:577-582.

www.contraceptiononline.org

### Reasons for OC Discontinuation All Ages



Rosenberg MJ et al. *Am J Obstet Gynecol.* 1998;179:577-582.

www.contraceptiononline.org

### What Happens When Women Discontinue OCs

- 42% discontinue without consulting their health-care provider
- 19% discontinue without selecting another contraceptive method
- 69% choose a less-effective contraceptive method

Rosenberg MJ et al. *Am J Obstet Gynecol.* 1998;179:577-582.

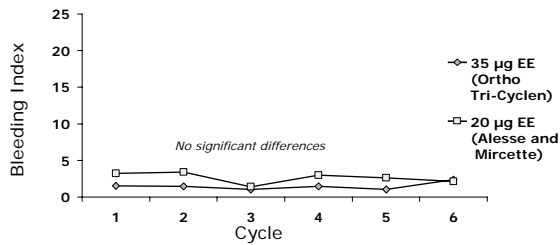
www.contraceptiononline.org

### Patients at Risk for BTB

- First-time users
- Inconsistent users
- Users at risk for chlamydial cervicitis and endometritis
- Smokers

www.contraceptiononline.org

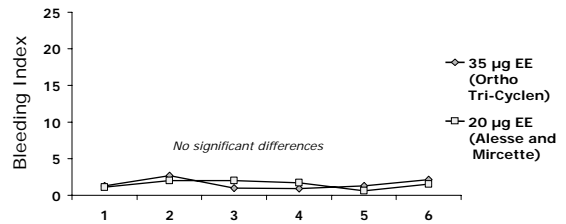
### Breakthrough Bleeding in OC New Starts 35 µg EE OC vs. Two 20 µg EE OCs



Adapted from Rosenberg MJ et al. *Contraception.* 1999;60:321-329.

www.contraceptiononline.org

### Breakthrough Bleeding in OC Switchers 35 µg EE OC vs. Two 20 µg EE OCs



Adapted from Rosenberg MJ et al. *Contraception.* 1999;60:321-329.

www.contraceptiononline.org

### OC Formulations and BTB

- Rates reported for different OCs are highly variable depending on study design and other factors
- Few randomized, prospective studies directly compare BTB between OCs
- Data do not support perception that 20 µg EE OCs generally have more BTB than 30–35 µg EE OCs

Lynch CM. *Contemporary OB/GYN.* 2000 (suppl)

www.contraceptiononline.org

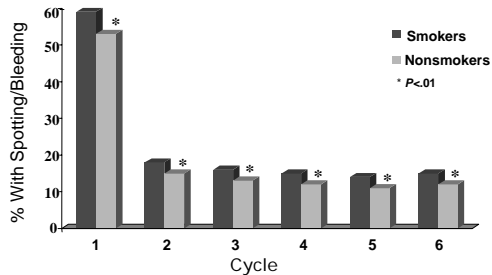
### BTB May Signal Chlamydia

- Chlamydial infections are common in women of childbearing age — detected in 9.2% of female military recruits
- BTB in women previously well regulated on OCs is an added marker for chlamydial infection
  - 29% of OC users with BTB tested positive for *Chlamydia trachomatis* vs. 11% without BTB but at high risk

Gaydos CA et al. *N Engl J Med.* 1998;339:739-744; Krettek JE et al. *Obstet Gynecol.* 1993;81:728-731.

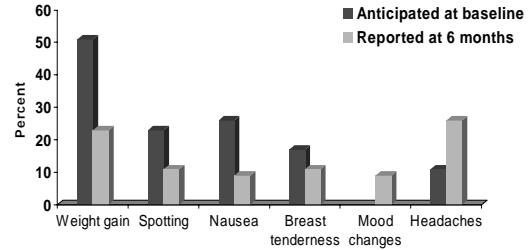
www.contraceptiononline.org

### Smoking Affects Rates of BTB



Reproduced with permission from Rosenberg M et al. *Am J Obstet Gynecol*. 1996;174:628-632. [www.contraceptiononline.org](http://www.contraceptiononline.org)

### Adolescents' Anticipated vs. Reported Side Effects EE 20 µg/LNG 100 µg Formulation



Rosenthal SL et al. 12th World Congress of Pediatric & Adolescent Gynecology. June 1998; Helsinki, Finland. [www.contraceptiononline.org](http://www.contraceptiononline.org)

### Relative Risk of Estrogen-Related Side Effects 35 µg EE OC vs. Two 20 µg EE OCs

Side Effect	Relative Risk of 35 vs. 20 µg EE OCs (Ortho Tri-Cyclen vs. Alesse and Mircette)
Breast tenderness	1.5*
Nausea	1.6*
Bloating	1.4*

\*P < .05.

Rosenberg MJ et al. *Contraception*. 1999;60:321-329. [www.contraceptiononline.org](http://www.contraceptiononline.org)

### Side Effects of EE 20 µg/LNG 100 µg (Alesse) vs. Placebo: No Significant Difference

	Alesse (n=349) %	Placebo (n=355) %	P-Value (Fisher's Exact)
Adverse event			
Headache	31.5	30.1	.74
Nausea	14.0	11.3	.31
Weight gain	3.4	2.3	.37
Breast pain	4.6	3.1	.33

Hordinsky M et al. 8th World Congress of the International Society of Gynecological Endocrinology. December 2000. Florence, Italy. [www.contraceptiononline.org](http://www.contraceptiononline.org)

### Weight Gain Is Not A Trivial Concern for OC Users

- Adolescents
  - Major fear leading to discontinuation
  - 85% of suburban teens cited weight gain as an important concern
- Adult women
  - Common reason for self-initiated discontinuation

Emans SJ et al. *JAMA*. 1987;257:3337-3381; Pratt WF et al. *Fam Plann Perspect*. 1987;19:257-266. [www.contraceptiononline.org](http://www.contraceptiononline.org)

### Women's Perceptions About Weight Gain and OCs

In a survey of 704 women aged 18-45 years:

- 20% report fear of weight gain is a reason they would not take or stop taking OCs
- 27% of those who had never taken OCs say, among other reasons, this was because of fear of weight gain
- 17% of current or previous OC users cite fear of gaining weight as a reason for discontinuation

NANPWH Survey, 1999. [www.contraceptiononline.org](http://www.contraceptiononline.org)

### Controlled Studies Fail to Show Weight Gain Linked to OC Use

Goldzieher et al, 1971	Placebo-controlled, double-blind crossover (N=380)	Weight gain ( $\geq 5$ lb) occurred in approximately 25% of women; no significant difference between placebo and OC groups ( $\geq 50$ $\mu$ g EE)
Reubinoff et al, 1995	Prospective, randomized (N=49)	No statistical difference in weight gain ( $>0.5$ kg) between OC users and nonusers (30 $\mu$ g EE)
Hordinsky et al, 2000	Placebo-controlled, double-blind crossover (N=721)	No statistical difference in mean weight change after 6 mo between OC users and nonusers (EE 20 $\mu$ g/LNG 100 $\mu$ g, Alesse)

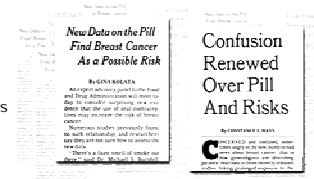
Goldzieher JW et al. *Fertil Steril*. 1971;22:609-623; Reubinoff BE et al. *Fertil Steril*. 1995;63:516-521; Hordinsky M et al. 8th World Congress of the International Society of Gynecological Endocrinology. December 2000. Florence, Italy.

www.contraceptiononline.org

### The Press Underreports Studies of OC Benefits

Media emphasizes negative rather than positive news about OCs

- 1986-1997: 9 studies on OC health effects published in *N Engl J Med* and *JAMA*
- All studies showed positive health effects
- 8 out of 9 studies ignored by major newspapers



Lebow MA. *Obstet Gynecol*. 1999;93:453-456. Copyright © 1989 by the New York Times Co. Reprinted by permission.

www.contraceptiononline.org

### Management of Side Effects Preventive/Anticipatory Guidance

- Acknowledge that side effects can be bothersome and uncomfortable
- Discuss breakthrough bleeding, nausea, weight gain at initial visit
- Set realistic expectations and counsel
  - Most side effects improve over time
  - Acne improvement is not immediate

www.contraceptiononline.org

### How to Improve Successful Use of OCs

- Emphasize the many noncontraceptive benefits
- Cue pill-taking to daily activity
- Provide spare pack; advise to keep as emergency backup
- Provide written instructions
- Train office contact person to respond to calls

www.contraceptiononline.org

### Improving Successful OC Use Anticipatory Guidance

- Individualize counseling to patient's concerns and history
- Breakthrough bleeding
- Amenorrhea
- Side effects decrease over time
- Demonstrate how to use the actual pill pack
- Missed pills
- "Don't stop taking the pills before calling me"

www.contraceptiononline.org

### Adolescent Counseling

- Caution that OCs do not prevent STDs
- Discuss condom use: "How are you protecting yourself from AIDS?"
- Ask how she plans to discuss condom use with her partner
- Discuss emergency contraception

www.contraceptiononline.org

### Depo Provera (3-month shot)

- Synthetic progesterone
- Private
- Requires clinic visit Q 3 months
- Effective in 24 hours
- Side Effects
- Contraindications
  - Unexplained vaginal bleeding
  - pregnancy

### Comparison of New Contraceptive Methods

	Depo-Provera	Depo-Syn	Depo-Sub	Depo-Test	Depo-Test
Efficacious	Yes	Yes	Yes	Yes	Yes
Office visits	1 month	Insertion & removal	Insertion & removal	Prescription	Prescription
Early resorption	Yes	Yes	Yes	Yes	Yes
Dosing frequency	1 month	1-5 yrs	5 yrs	Every 4 weeks	Weekly
Effect controlled	No	No	No	Yes	Yes
Reversible	Yes	Reversible	Yes	Yes	Reversible

### Contraceptive Implant: Implanon

- Single implant rod (4 cm in length and 2 mm in diameter) made of ethylene vinyl acetate
- Contains 68 mg of etonogestrel (3-keto-desogestrel), the active metabolite of desogestrel
- Effective for 3 years
- Inhibits ovulation during the entire treatment period



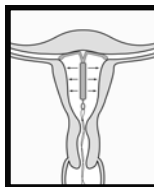
### Implanon Efficacy, Safety and Tolerability

- No pregnancies in 1,200 women-years of exposure
- Good safety profile
- Irregular bleeding is most common adverse effect
- Requires clinician visit for initiation and discontinuation
- Single implant systems using newer progestins may solve some of the adverse effects and problems presented by earlier implants

Zheng SR, et al. Contraception. 1999;60:1-8.  
 Croxatto HB, et al. Hum Reprod. 1999;14:976-81.

### Levonorgestrel Intrauterine System: Mirena

- Releases 20 µg of levonorgestrel per 24 hrs
- Duration: 5 years
- Packaged with sterile inserter
- High efficacy
  - Pearl Index of 0.1



(This is a schematic and is not anatomically proportional.)

### Mirena Cycle Control, Safety, and Tolerability

- Requires clinician visit for initiation and discontinuation
- Early spotting
- Significant reduction in menstrual blood loss and high rate of amenorrhea
- High rates of continuation

Hidalgo M, et al. Contraception. 2002;65:129-132.  
 Lahteenmaki P, et al. Steroids. 2000;65:693-697.

Lahteenmaki P, et al. Steroids. 2000;65:693-697.

### Vaginal Ring: NuvaRing

- NuvaRing releases 15 µg of ethinyl estradiol and 120 µg of etonogestrel daily
- Worn for 3 out of 4 weeks
- Self insertion and removal
- Pregnancy rate 0.65 per 100 woman-years



Roumen FJ, et al. Hum Reprod. 2001;16:469-475.

www.contraceptiononline.org

### NuvaRing Efficacy

	Intention to-Treat	Following Protocol
Women	1,145	1,019
Treatment cycles	12,109	9,680
Pregnancies	0	3
Pearl Index	0.65 (0.08-1.16)	0.40 (0.24-1.41)

Roumen FJ, et al. Hum Reprod. 2001;16:469-475.

www.contraceptiononline.org

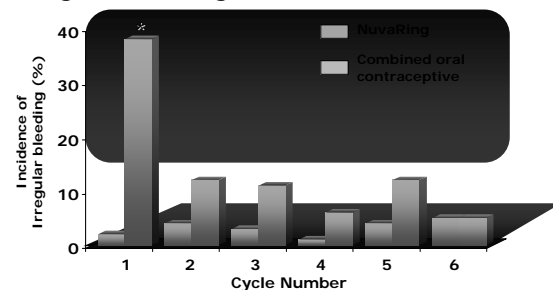
### NuvaRing Cycle Control and Tolerability

- Good cycle control
  - Irregular bleeding was rare (2.6% - 6.4% of evaluable cycles)
  - Withdrawal bleeding occurred (97.9% - 99.4% of evaluable cycles)
- Well tolerated and well accepted by users and their partners (only 5% of partners objected to use)

Roumen FJ, et al. Hum Reprod. 2001;16:469-475.

www.contraceptiononline.org

### NuvaRing Compared to OC: Irregular Bleeding



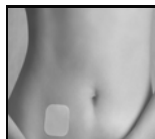
\*P<0.001 for COC vs NuvaRing

Bjarnadottir RI, et al. Am J Obstet Gynecol. 2002;186:389-395.

www.contraceptiononline.org

### Contraceptive Patch: Ortho Evra

- Patch contains 6 mg norelgestromin and 0.75 mg ethinyl estradiol
- Delivers continuous systemic doses of hormones
  - 150 µg norelgestromin (NGMN)
  - 20 µg ethinyl estradiol (EE)
- Direct comparisons to oral contraceptive delivery doses cannot be made



Per day

Roumen FJ, et al. Hum Reprod. 2001;16:469-475.

www.contraceptiononline.org

### Ortho Evra Efficacy and Compliance

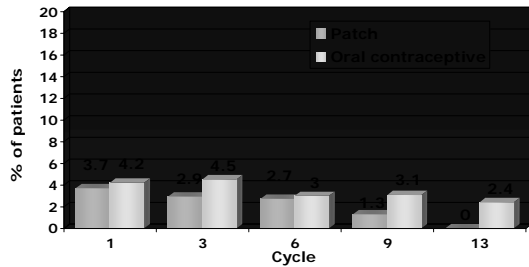
- High Efficacy
  - Overall Pearl Index of 0.88
  - After 6 cycles, overall pregnancy possibility is half that of OC users
- May be less efficacious in women ≥198 lb (90 kg)
  - NIH study in progress
- Compliance is superior with Ortho Evra compared to OC
  - Ortho Evra compliance unaffected by age
  - Lower compliance with OC in younger compared with older subjects

Audet MC, et al. JAMA. 2001;285:2347-2354.

Zieman M, et al. Fertility and Sterility 2002;77:513-8.

www.contraceptiononline.org

### Ortho Evra Compared to OC: Breakthrough Bleeding\*



\*The differences in the treatment groups were not statistically significant

Audet MC, et al. JAMA. 2001;285:2347-2354.  
©2001, American Medical Association.

www.contraceptiononline.org

### Ortho Evra Compared to OC: Adverse Events

	Patch (n=214)		OC (n=206)	
	Overall	Treatment limiting	Overall	Treatment limiting
Breast discomfort	1.9%	1.0%	6%	0.2%
Headache	2.2%	1.5%	2.3%	0.3%
Application site reaction	20%	2.6%	NA	NA
Nausea	20%	1.8%	18%	0.8%
Abdominal pain	6%	0.2%	8%	0.3%
Headaches	1.2%	1.0%	10%	0.2%

Audet MC, et al. JAMA. 2001;285:2347-2354.

www.contraceptiononline.org

### Conclusions

- Clinicians should not assume they know what a woman's contraceptive needs are
  - After listening to a woman's concerns, counseling should be non-directive and informative
- A menu of contraceptive options should be presented to all reproductive-aged women
  - Consider using computer-based instruction or videos before the clinician consult to optimize education
- With good counseling, women will select a contraceptive method that best suits their needs

www.contraceptiononline.org