

# CASES FOR DISCUSSION

**Case #1:** A 24 year-old is having severe menstrual cramps and pain as well as fairly heavy bleeding. Here is what she had unsuccessfully tried in an effort to control the pain:

- Aspirin
- Alcohol (became addicted)
- Demerol (after becoming an RN and gaining access to narcotics, she became addicted to Demerol)
- Massage (back and legs)
- Bed rest
- NSAIDS - several prostaglandin
- Exercise

**When she was married at 25 and needed contraception, things changed**

- A.** Pills taken 21/7, 21/7, 21/7 were started at age 25.  
**B.** Contraceptives which could have changed this person's life for the good:

- LNG IUG: Mirena, Liletta, Kyleena, or Skyla
- Pills taken continuously or for an extended period of time
- NuvaRing: vaginal contraceptive rings used continuously or 21/7, 21/7, 21/7
- Xulane patches (formerly Ortho Evra) - 3 weeks on, 1 week off
- Depo-Provera injections

**Case #2:** An 18 year-old asks if taking pills for 7 years will be dangerous or decrease her ability to be pregnant at age 25. "I have been thinking and dreaming about children for years and don't want to do anything that would make this dream less likely to occur. I take my pills in the usual way- 21/7, 21/7, 21/7, not continuously."

**How might taking pills improve a women's fertility compared to a woman with the same history who took no pills from age 18 to 25?**

**Case #3:** A 28 year-old woman has been using birth control pills for 5 years when her life is turned upside down. Her wonderful mother, who is 60, has been diagnosed with ovarian cancer and her cancer has spread. In the back of her head is the concern that the pills she has been taking could cause cancer. She asks if pills could increase her risk for ovarian cancer.

**Taking pills from age 23 to age 28 have already decreased this woman's risk for which types of cancer? And how much was the protective effect? And for how many years will the protective effect last after pills are stopped?**

# THE PILL

**HERE'S THE BIGGEST PROBLEM WITH PILLS.** Women using pills are more than 20 times more likely to become pregnant than women using an IUD or an implant. In fact, each year 1 million depending on pills as their contraceptive become pregnant. Just under half of those women proceed to obtain an abortion to end the pregnancy.

**MESSAGE:** Combined birth control pills simply are not in the top tier of contraceptive effectiveness in spite of the fact that the perfect use failure rate of combined pills is 0.3% (3 in 1000 women).

**1** One of eleven (9%) of women who start a year using pills as their contraceptive are pregnant by the end of the year. (Trussell IN Contraceptive Technology, 20th Edition, p. 50)  
Pill effectiveness may be improved for a woman if she takes a hormonal pill every single day (continuously) or if she takes a hormonal pill all but 2 days each month or if she takes pills from a package with only 4 placebo pills. [Dinger J 2011]

**2** Which pill should I be using? As you can see on the next page, there are far too many pills. A 20 microgram pill, any 20 microgram pill, is appropriate for most women.

**3 WHOOPS!!!**  
50% of the brilliant young women at the University of North Carolina in Chapel Hill and at the University of Michigan in Ann Arbor were found to miss 3 or more pills from the 3rd cycle of birth control pills.\* That's a lot of Whoops! Women who miss just one pill may begin spotting, may become the walking worried because of their concern about pregnancy. They may seek emergency contraceptive pills. They may seek emergency contraceptive pills repeatedly. This is expensive. They may also discontinue pills due to their frustration.

\*The average woman in the United States fails to take 4.2 pills each cycle.



**What could be the concerns of this woman?**

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This presentation was developed for a course on **The Technology of Fertility Control** at the Rollins School of Public Health at Emory University in Atlanta. This course is taught by Roger Roach, MD and Robert A Hatcher, MD.


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**FYI: It would take 60-80 PowerPoint slides to cover the information in this 11 x 17-inch presentation.**




**Women are 20 times more likely to become pregnant if they use pills, patches or rings than if they use an IUD or an implant.**  
**Teenage women are 40 times more likely to become pregnant if they use pills, patches or rings than if they use an IUD or an implant.<sup>1</sup>**

## PROGESTIN-ONLY PILLS UNPREDICTABLE BLEEDING


0.35 mg norethindrone




MICRONOR<sup>®</sup>  
JANSSEN



NOR-QD<sup>®</sup>  
ACTAVIS



CAMILA<sup>®</sup>  
TEVA



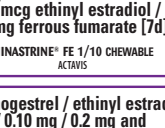
ERRIN<sup>®</sup>  
TEVA

JOLIVETTE<sup>®</sup>  
ACTAVIS

NORA-BE<sup>®</sup>  
ACTAVIS

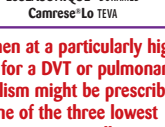
## THE ONLY THREE 10 microgram PILLS

1 mg norethindrone acetate /  
10 mcg ethinyl estradiol /  
75 mg ferrous fumarate [7d]



MINASTRINE<sup>®</sup> FE 1/10 CHEWABLE  
ACTAVIS

levonorgestrel / ethinyl estradiol  
/ 0.10 mg / 0.2 mg and  
ethinyl estradiol 0.01 mg



LoSEASONIQUE<sup>®</sup> DURAMED  
Camrese<sup>®</sup> Lo TEVA

Women at a particularly high risk for a DVT or pulmonary embolism might be prescribed one of the three lowest estrogen pills.

## COMBINED PILLS – 20 microgram PILLS

**PLEASE NOTE:**  
Pills within purple boxes  
throughout poster are  
pharmacologically the same.


90 mcg levonorgestrel/  
20 mcg ethinyl estradiol)

**NO SCHEDULED PERIODS**  
NO INACTIVE PILLS  
Hormones taken  
continuously.

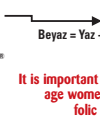


LYBREL<sup>®</sup>  
WYETH

3.0 mg drospirenone / 0.02 mg ethinyl estradiol



YAZ 28 TABLETS  
BAYER




BEVAZ  
Bayer = Yaz + 451mcg Folic Acid  
BAYER

VESTURA<sup>®</sup>  
ACTAVIS


GIANVI<sup>®</sup>  
TEVA

It is important for all reproductive age women to take extra folic acid daily


0.1 mg levonorgestrel / 20 mcg ethinyl estradiol



ALESSE  
WYETH



LEVILITE<sup>®</sup>  
BERLEX




LUTERA  
ACTAVIS



AMETHYST<sup>®</sup>  
ACTAVIS




SRONYX  
ACTAVIS




AVIANE<sup>®</sup>  
TEVA


1 mg norethindrone acetate / 20 mcg ethinyl estradiol /  
75 mg ferrous fumarate [7d]



LOESTRIN<sup>®</sup> FE 1/20  
TEVA



JUNEL<sup>™</sup>  
TEVA



JUNEL<sup>™</sup> Fe  
TEVA

MICROGESTIN<sup>®</sup> & MICROGESTIN FE<sup>®</sup>  
ACTAVIS

TILIA FE<sup>®</sup>  
ACTAVIS

desogestrel / estradiol tablets 0.15 mg /  
0.02 mg and ethinyl estradiol tablets 0.01 mg



KARIVA<sup>®</sup>  
TEVA



AZURETTE<sup>®</sup>  
ACTAVIS



MIRCETTE<sup>®</sup>  
DURAMED

MERCILON<sup>®</sup>  
MERCK

## COMBINED PILLS – 20 Microgram Estradiol PILL

norethindrone acetate and  
ethinyl estradiol  
and iron tabs

ZOELY<sup>®</sup>  
TEVA

Each year 5 to 10% of women using pills become pregnant. Each year there are 800,000 to 1 million pregnancies among women using pills and 40% of these women respond to their unintended pregnancy by having an abortion performed. These are not good numbers. To reduce pill pregnancies:

COMBINED PILLS –  
20 - 25 -30  
Microgram Pills

QUARTETTE  
A 91 day ascending-dose, extended-regimen oral contraceptive for the prevention of pregnancy. For each 91-day course, take in the following order:

1. Start the first light pink tablet (0.15 mg of levonorgestrel and 0.02 mg ethinyl estradiol) on the first Sunday after the onset of menstruation. Take one light pink tablet once a day for a total of 42 consecutive days.
  2. One pink tablet (0.15 mg of levonorgestrel and 0.025 mg ethinyl estradiol) once a day for 21 consecutive days.
  3. One purple tablet (0.15 mg of levonorgestrel and 0.03 mg ethinyl estradiol) once a day for 21 days.
  4. One yellow tablet (0.01 mg of ethinyl estradiol) once a day for 7 days. Bleeding should occur during yellow tablet use.
- TEVA

## COMBINED PILLS – 25 Microgram Pill

CAZINT<sup>™</sup> 3X28 TABLETS  
(0.1mg/0.025mg, 0.125mg/0.025mg,  
0.15mg/0.025mg)


Each 28-day treatment cycle pack consists of three active dosing phases:

7 white tablets containing 0.100 mg desogestrel and 0.025 mg ethinyl estradiol;  
7 light blue tablets containing 0.125 mg desogestrel and 0.025 mg ethinyl estradiol;  
7 blue tablets containing 0.150 mg desogestrel and 0.025 mg ethinyl estradiol.


ACTAVIS

## COMBINED PILLS – 30 microgram PILLS


3.0 mg drospirenone / 30 mcg ethinyl estradiol



YASMIN<sup>®</sup>  
BAYER



ZARAH<sup>™</sup>  
ACTAVIS



OCELLA<sup>™</sup>  
TEVA

SAFYRAL<sup>™</sup> • Safyral = Yasmin + 451mcg Folic Acid • BAYER

0.15 mg levonorgestrel / 30 mcg ethinyl estradiol

SCHEDULED PERIODS QUARTERLY



JOLLESSE<sup>™</sup>  
TEVA



SEASONIQUE<sup>™</sup>  
TEVA



SEASONALE<sup>™</sup>  
DURAMED



CAMRESE<sup>™</sup>  
TEVA

COMBINED PILLS –  
20 - 25 -30  
Microgram Pills

MONTHLY PERIODS



PORTIA<sup>™</sup>  
TEVA



LEVEN<sup>™</sup>  
MK DRUGHOUSE



QUASENSE<sup>™</sup>  
ACTAVIS



LEVORA TABLETS  
ACTAVIS



NORDETTE<sup>®</sup>  
WYETH

0.3 mg norgestrel / 30 mcg ethinyl estradiol



LO/OVRAL<sup>®</sup>  
WYETH




CRYSELLES<sup>®</sup>  
TEVA




LOW-OGESTREL  
ACTAVIS


0.15 mg desogestrel/ 30 mcg ethinyl estradiol



DESOPEN<sup>®</sup>  
MERCK



APRI<sup>®</sup>  
TEVA




ORTHO-CEPT<sup>®</sup>  
JANSSEN

SOLIA<sup>™</sup>  
PRASCO


MONTHLY PERIODS

RECLIPSEN<sup>™</sup>  
ACTAVIS


1.5 mg norethindrone acetate / 30 mcg ethinyl estradiol




LOESTRIN<sup>®</sup> 21 1.5/30  
TEVA



JUNEL<sup>™</sup>  
TEVA



MICROGESTIN<sup>®</sup> 1.5/30  
with or without Fe  
ACTAVIS




JUNEL<sup>™</sup> Fe  
TEVA


MONTHLY PERIODS

## COMBINED PILLS – 35 microgram PILLS MONTHLY PERIODS


0.25 mg norgestimate / 35 mcg ethinyl estradiol




ORTHO-CYCLEL<sup>®</sup> 28 TABLETS  
JANSSEN



SPRINTEC<sup>®</sup>  
TEVA




MONESSA<sup>®</sup>  
ACTAVIS



PREVIFEM<sup>®</sup>  
QUALITEST

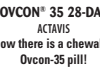
If money is an important issue, think first of Sprintec of all pills on this chart. It costs \$5-10 per cycle in most big box stores.

0.4 mg norethindrone/35 mcg ethinyl estradiol




OVCON<sup>®</sup> 35 28-DAY  
ACTAVIS


Now there is a chewable Ovcon-35 pill!



BALZIVA<sup>™</sup>  
TEVA



ZEOSNA<sup>™</sup>  
ACTAVIS



FEMCON FE<sup>™</sup>  
ACTAVIS

norethindrone and ethinyl estradiol tablets, USP 1/0.035 mg



NORETHIN 1/35E-28  
SHIRE



NORINYL<sup>®</sup> 1+35 28-DAY TABLETS  
ACTAVIS



NORTREL<sup>®</sup>  
TEVA

0.5 mg norgestrel /  
50 mcg ethinyl estradiol



OVRAL<sup>®</sup> 21 TABLETS  
WYETH



OGESTREL  
ACTAVIS

1 mg norethindrone /  
50 mcg mestranol



NECON 1/50 - 28 TABLETS  
ACTAVIS



NORINYL<sup>®</sup> 1/50  
ACTAVIS

ethynodiol diacetate 1 mg. and ethinyl estradiol 35 mcg, USP



DEMULEN<sup>®</sup> 1/35-28  
PFIZER




KELNOR<sup>™</sup>  
TEVA



ZOVIA<sup>®</sup> 1/35E-28  
ACTAVIS

1 mg norethindrone /  
50 mcg ethinyl estradiol



OVCON<sup>®</sup> 50 28-DAY  
WARNER-CHILCOTT

## COMBINED PILLS – Estrodiol Valerate

NATAZIA<sup>™</sup>

- 2 dark yellow tablets each containing 3mg estradiol valerate
- 5 medium red tablets each containing 2mg estradiol valerate and 2mg dienogest
- 17 light yellow tablets each containing 2mg estradiol valerate and 3mg dienogest
- 2 dark red tablets each containing 1 mg estradiol valerate
- 2 white tablets (inert)

BAYER

## COMBINED PILLS – 50 microgram MONTHLY PERIODS

0.5 mg norgestrel /  
50 mcg ethinyl estradiol



OVRAL<sup>®</sup> 21 TABLETS  
WYETH



OGESTREL  
ACTAVIS

1 mg norethindrone /  
50 mcg mestranol




NECON 1/50 - 28 TABLETS  
ACTAVIS




NORINYL<sup>®</sup> 1/50  
ACTAVIS


ethynodiol diacetate 1 mg. and ethinyl estradiol 35 mcg, USP



DEMULEN<sup>®</sup> 1/35-28  
PFIZER



KELNOR<sup>™</sup>  
TEVA



ZOVIA<sup>®</sup> 1/35E-28  
ACTAVIS

1 mg norethindrone /  
50 mcg ethinyl estradiol



OVCON<sup>®</sup> 50 28-DAY  
WARNER-CHILCOTT

## COMBINED PILLS – PHASIC PILLS

norgestimate / ethinyl estradiol  
0.18 mg / 25 mcg (7d),  
0.215 mg / 25 mcg (7d),  
0.25 mg / 25 mcg (7d)




ORTHO TRI-CYCLEL<sup>®</sup> LO  
28 TABLETS  
JANSSEN

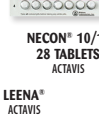
norethindrone / ethinyl estradiol  
0.5 mg / 35 mcg (10d),  
1 mg / 35 mcg (11d)




NECON<sup>®</sup> 10/11  
28 TABLETS  
ACTAVIS




ORTHO-NOVUM<sup>®</sup> 10/11  
28 TABLETS  
JANSSEN



LEENA<sup>®</sup>  
ACTAVIS




ARANELLE<sup>™</sup>  
TEVA




TRI-NORINYL<sup>®</sup>  
ACTAVIS

0.5 mg norgestrel /  
50 mcg ethinyl estradiol



OVRAL<sup>®</sup> 21 TABLETS  
WYETH



OGESTREL  
ACTAVIS

1 mg norethindrone /  
50 mcg mestranol



NECON 1/50 - 28 TABLETS  
ACTAVIS



NORINYL<sup>®</sup> 1/50  
ACTAVIS

ethynodiol diacetate 1 mg. and ethinyl estradiol 35 mcg, USP



DEMULEN<sup>®</sup> 1/35-28  
PFIZER



KELNOR<sup>™</sup>  
TEVA



ZOVIA<sup>®</sup> 1/35E-28  
ACTAVIS


1 mg norethindrone /  
50 mcg ethinyl estradiol




OVCON<sup>®</sup> 50 28-DAY  
WARNER-CHILCOTT

## MONTHLY PERIODS


desogestrel / ethinyl estradiol-triphasic regimen  
0.1 mg/25 mcg (7d),  
0.125 mg/25 mcg (7d),  
0.150 mg/25 mcg (7d)



CYCLESSA  
MERCK

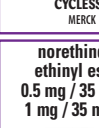


CESIA<sup>®</sup>  
PRASCO

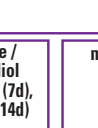


VELIVET<sup>®</sup>  
TEVA


norethindrone / ethinyl estradiol  
0.5 mg / 35 mcg (7d),  
1 mg / 35 mcg (14d)




NECON<sup>®</sup> 10/11  
28 TABLETS  
ACTAVIS




ORTHO-NOVUM<sup>®</sup> 10/11  
28 TABLETS  
JANSSEN



LEENA<sup>®</sup>  
ACTAVIS




ARANELLE<sup>™</sup>  
TEVA

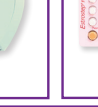


TRI-NORINYL<sup>®</sup>  
ACTAVIS

0.5 mg norgestrel /  
50 mcg ethinyl estradiol




OVRAL<sup>®</sup> 21 TABLETS  
WYETH




OGESTREL  
ACTAVIS

1 mg norethindrone /  
50 mcg mestranol



NECON 1/50 - 28 TABLETS  
ACTAVIS



NORINYL<sup>®</sup> 1/50  
ACTAVIS

ethynodiol diacetate 1 mg. and ethinyl estradiol 35 mcg, USP



DEMULEN<sup>®</sup> 1/35-28  
PFIZER



KELNOR<sup>™</sup>  
TEVA




ZOVIA<sup>®</sup> 1/35E-28  
ACTAVIS

1 mg norethindrone /  
50 mcg ethinyl estradiol




OVCON<sup>®</sup> 50 28-DAY  
WARNER-CHILCOTT


0.18 mg / 35 mcg (7d),  
0.215 mg / 35 mcg (7d),  
0.25 mg / 35 mcg (7d),  
placebo (7d)




TRI-SPRINTEC<sup>®</sup>  
TEVA




ORTHO TRI-CYCLEL<sup>®</sup>  
JANSSEN




TRI-NORINYL<sup>®</sup>  
ACTAVIS



TRI-LEGEST<sup>®</sup> FE  
28 TABLETS  
ACTAVIS




TRI-NORINYL<sup>®</sup>  
ACTAVIS




TRI-LEGEST<sup>®</sup> FE  
28 TABLETS  
ACTAVIS


levonorgestrel / ethinyl estradiol-triphasic regimen  
0.050 mg / 30 mcg (6d),  
0.075 mg / 40 mcg (5d),  
0.125 mg / 30 mcg (10d)




TRIPHASIL<sup>®</sup> 28 TABLETS  
WYETH



TRI-LEVEN<sup>®</sup> 28 TABLETS  
MK DRUGHOUSE



TRIVORA<sup>®</sup>  
ACTAVIS



ENPRESSE<sup>®</sup>  
TEVA

0.18 mg / 35 mcg (7d),  
0.215 mg / 35 mcg (7d),  
0.25 mg / 35 mcg (7d),  
placebo (7d)



TRI-SPRINTEC<sup>®</sup>  
TEVA



ORTHO TRI-CYCLEL<sup>®</sup>  
JANSSEN



TRI-NORINYL<sup>®</sup>  
ACTAVIS



TRI-LEGEST<sup>®</sup> FE  
28 TABLETS  
ACTAVIS




TRI-NORINYL<sup>®</sup>  
ACTAVIS




TRI-LEGEST<sup>®</sup> FE  
28 TABLETS  
ACTAVIS


levonorgestrel / ethinyl estradiol-triphasic regimen  
0.050 mg / 30 mcg (6d),  
0.075 mg / 40 mcg (5d),  
0.125 mg / 30 mcg (10d)



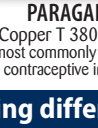
TRIPHASIL<sup>®</sup> 28 TABLETS  
WYETH



TRI-LEVEN<sup>®</sup> 28 TABLETS  
MK DRUGHOUSE



TRIVORA<sup>®</sup>  
ACTAVIS



ENPRESSE<sup>®</sup>  
TEVA

levonorgestrel / ethinyl estradiol-triphasic regimen  
0.050 mg / 30 mcg (6d),  
0.075 mg / 40 mcg (5d),  
0.125 mg / 30 mcg (10d)



TRIPHASIL<sup>®</sup> 28 TABLETS  
WYETH



TRI-LEVEN<sup>®</sup> 28 TABLETS  
MK DRUGHOUSE




TRIVORA<sup>®</sup>  
ACTAVIS



ENPRESSE<sup>®</sup>  
TEVA


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0.075 mg / 40 mcg (5d),  
0.125 mg / 30 mcg (10d)



TRIPHASIL<sup>®</sup> 28 TABLETS  
WYETH



TRI-LEVEN<sup>®</sup> 28 TABLETS  
MK DRUGHOUSE



TRIVORA<sup>®</sup>  
ACTAVIS



ENPRESSE<sup>®</sup>  
TEVA

## P