

A spiral-bound notebook with a light beige, textured cover. The spiral binding is on the left side. The text is centered on the cover.

Update on contraceptive methods

Regina Kulier

Content

- ▶ Oral contraceptive pill (Yasmin®)
 - ethinylestradiol
 - drospirenone
- ▶ Vaginal contraceptive ring (NuvaRing®)
 - ethinylestradiol
 - etonorgestrel

Oral contraceptives - frequency and reasons for discontinuation

- ▶ Prospective follow-up study 1995 - 1996
- ▶ initiating or switching
- ▶ n = 1657
- ▶ 6 months: n = 887

Rosenberg 1998, Am J Obstet Gynecol;179:577

Oral contraceptives - frequency and reasons for discontinuation

Discontinuation after 6 months

- ▶ 32% of new starters
- ▶ 16% of 'switchers'

Rosenberg 1998

Oral contraceptives - frequency and reasons for discontinuation

- ▶ 37% side effects (bleeding irregularities, weight gain, nausea)
- ▶ 23% no further need
- ▶ 14% 'too difficult', 'too expensive'
- ▶ 9% medically indicated
- ▶ not specified

Contraceptive behaviour after discontinuation

▶ Women who did not wish to conceive

n = 250

– Male condom	46%
– None	19%
– Natural FP	17%
– Sterilisation	6%
– IUD, DMPA, Norplant	5%
– other	8%

Rosenberg 1998

Yasmin®

- ▶ Ethinylestradiol 30 mcg
- ▶ Drospirenone 3 mg
 - 17 alpha-spirolactone
- ▶ 21 days

Pharmacological profiles of progesterone and synthetic progestogens

	Androgenic activity	Antiandrogenic activity	Antimineralcorticoid activity	Glucocorticoid activity
Progesterone	-	(+)	+	-
Drospirenone	-	+	+	-
Cyproterone acetate	-	+	-	(+)
Desogestrel	(+)	-	-	-
Gestodene	(+)	-	(+)	-
Norgestimate	(+)	-	-	-
Levonorgestrel	(+)	-	-	-

Effectiveness

- ▶ Randomised, open-label (unblinded), multicentre company-sponsored trial
- ▶ 26 cycles n = 900
 - EE 30 mcg/DRSP 3 mg (n = 310)
- vs
- EE 30 mcg/Desogestrel 150 mcg (Marvelon®)
(n = 317)
- ▶ 3 pregnancies each group

Tolerability

- ▶ Cycle control
- ▶ Body weight

*Foidart 2000, European J Contracep Reprod Health
Care;5:124*

Vaginal Ring



Vaginal Ring (NuvaRing®)

- ▶ flexible ring (Ervatane)
 - outer diameter 54 mm
 - cross sectional diameter 4mm
- ▶ ethinylestradiol 2.7 mg
 - 0.015 mg/d
- ▶ etonorgestrel 11.7 mg
 - 0.120 mg/d

NuvaRing® Pharmacological properties

▶ Ethinylestradiol

- max. serum concentrations 35pg/ml after 3 days
- 18 pg/ml after 3 weeks

▶ Etonogestrel

- max. serum concentrations 1700 pg/ml after 1 week
- 1400 pg/ml after 3 weeks

Vaginal ring **How to use**

- ▶ First insertion between day 1-5
- ▶ intravaginally for 3 weeks
 - max. 4 weeks
 - max. 3 hours outside
- ▶ removed for 1 week
- ▶ new ring

Vaginal ring How to use



Vaginal ring Efficacy, tolerability, acceptability

- ▶ European multicentre study
- ▶ Prospective, single-cohort follow-up study, company sponsored
- ▶ 1145 women (18-40)
 - 806 completed (70.4%)
- ▶ 13 cycles

Vaginal ring Efficacy

- ▶ 6 pregnancies
- ▶ Pearl index 0.65 (95% CI 0.24 -1.41)

Roumen 2001

Vaginal ring Efficacy

- ▶ North American multicentre study
- ▶ 1177 women
- ▶ 13 cycles

Vaginal ring Efficacy

- ▶ North American, multicentre study
- ▶ 15 pregnancies
- ▶ Pearl index 1.75 (95% CI 0.98-2.89)

Dieben T, November 1 2001, Rome

Vaginal ring Tolerability

▶ Cycle control (cycle 1 - 12)

- irregular bleeding 2.6 - 6.4%
- withdrawal bleeding, absence 0.6 - 2.1%
- withdrawal bleeding, late 20.4 - 27.3%

Roumen 2001

Vaginal ring Acceptability

Discontinuation 30%

▶ adverse event 15%

– nausea, headache, vaginal discomfort

Roumen 2001

Vaginal ring Side effects

- ▶ Vaginitis 13.7%
- ▶ Headache 11.8%
- ▶ Device related event 4.1%

Roumen 2001

Vaginal ring Questions to answer

- ▶ Vaginal drug interactions
 - antimycotics
 - spermicides
- ▶ Expulsion rate?
- ▶ Effect on cervical and vaginal cytology
- ▶ Does the position affect the efficacy?
- ▶ Male exposure?

Conclusion

- ▶ The two new contraceptives have theoretical advantages
 - Yasmin - weight control, blood pressure, acne
 - NuvaRing - no daily tablet
- ▶ There is little data on:
 - acceptability (premenstrual symptoms)
 - side-effects (short and long term)
- ▶ independent research evidence