

DROSPIRENONE ieren Oral kontraseptivler

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Drosetil

Drospirenon 3 mg

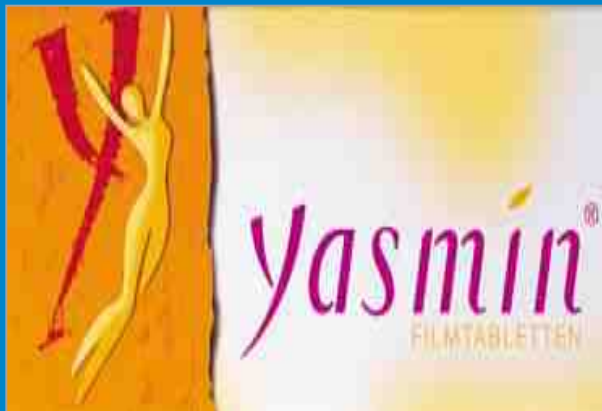
Ethinilestradiol 0.03 mg

Drospera

Drospirenon 3 mg

Ethinilestradiol 0.02 mg

24+4



When prescribing an OC, you have a lot of options

Choices among OCs are based on differences in:

- Type of Estrogen
- Type of progestin
- Dosage of ethinyl estradiol
- Regimen

Soru:

Türkiyede ilk 30 ve 20 microgram
EE ne zaman ruhsat almıştır

- 1979-1995
- 1965-1980
- 1990-2010
- 2000-2010

Türkiye'de Mevcut Kombine Oral Kontraseptifler

Östrojen Etinil estradiol (micrograms)	Ticari ismi	Progestin	Doz (mg)
20 mcgm	Miranova® 21 draje	levonorgestrel	0.10
	Myralon® 21 tablet	desogestrel	0.15
	Yazz® 24+4 tablet	drospirenone	3.0
	DROSPERA® 24+4 tablet	drospirenone	3.0
30 mcgm	Microgynon® 21 draje	levonorgestrel	0.15
	Desolett® 21 tablet	desogestrel	0.15
	Yasmin® 21 tablet	drospirenone	3.0
	Ginera® 21 draje	gestoden	0.075
	DROSETİL® 21 tablet	drospirenone	3.0
	Qlairista Estradiol Valerat 28 tablet	Dienogest	2-3

1995

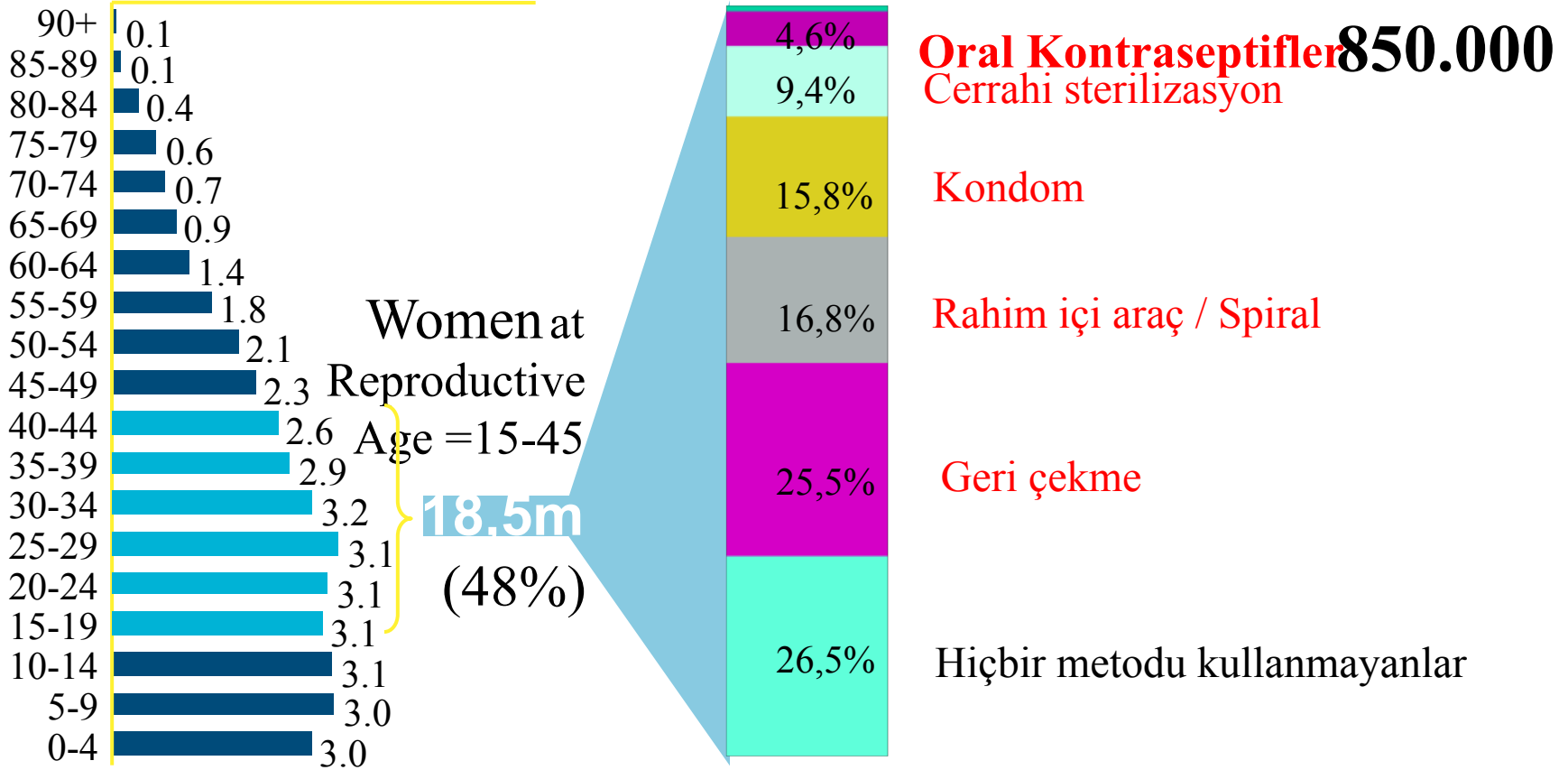
1979

Türkiye'de üreme çağında çok sayıda kadın var ve bu kadınlardan modern doğum kontrol yöntemlerini kullananların sayısı oldukça az!

Female Population by Age

FC Method Preference, 2013, %

of Women, m



2000

Androjenik etkisi az
yeni progestinler

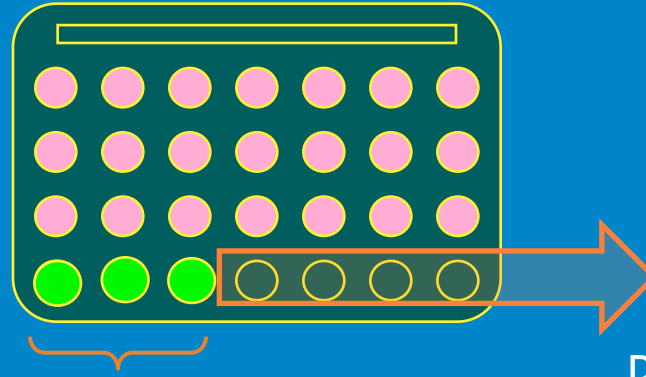
Östrojen dozunda
azalma
30-20

21/ 7 -----24/4 kullanım

2015

24 + 4 Nedir?

- Düşük doz oral kontraseptif: 3mg drospirenon / 20µg etinil estradiol (EE) içerir
- 24+4 rejimi: 24 gün süreyle, hormon içeren tabletlerin günde bir kez kullanılmasını takiben, 4 günlük hormonsuz aralıkta hormon içermeyen tabletler kullanılır.



3 gün daha fazla
antimineralokortikoid ve
antiandrojenik etkinlik

Drospirenonun etkinliği, 30-saatlik yarı
ömrü sayesinde kısaltılmış hormonsuz
aralık süresince devam eder.

Yüksek östrojene bağlı istenmeyen etkilerde de azalma sağlanır:

Etinil Östradiol (EE) 20 µg

Bulantı

Baş ağrısı

Duygu-durum değişiklikleri

Kilo artışı

VTE riski

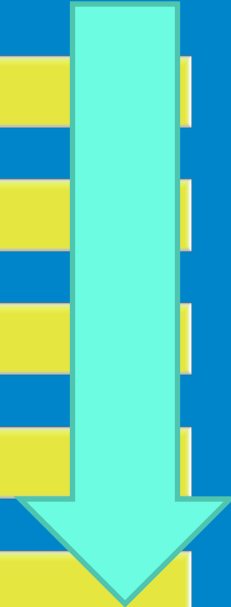


Table 1**Activity of Progestin Agents**

Generation	Progestin	Estrogenic	Progestational	Androgenic
First	Norethindrone	++	++	++
	Ethinodiol diacetate	++	+++	+
	Norgestrel	-	+++	+++
	Norethindrone acetate	++	++	++
Second	Levonorgestrel	-	++++	++++
Third	Norgestimate	-	++	++
	Desogestrel	+/-	++++	++
Fourth	Drospirenone	-	+/-	-

+/- indicates low to no activity.

- indicates no activity.

Source: References 3, 8, 18.

Table 5**Adverse Effects Associated with Type of Hormonal Activity**

Estrogenic	Progestational	Androgenic
Bloating	Headache	Acne/oily skin
Nausea/vomiting	Breast pain/tenderness	Weight gain
Breast fullness	Hypertension	Hirsutism
Breakthrough bleeding		Fatigue
Irritability		Depression
Headache		
Hypertension		

Source: References 3, 8, 18.

Drospirenonun Farmakolojik Profili

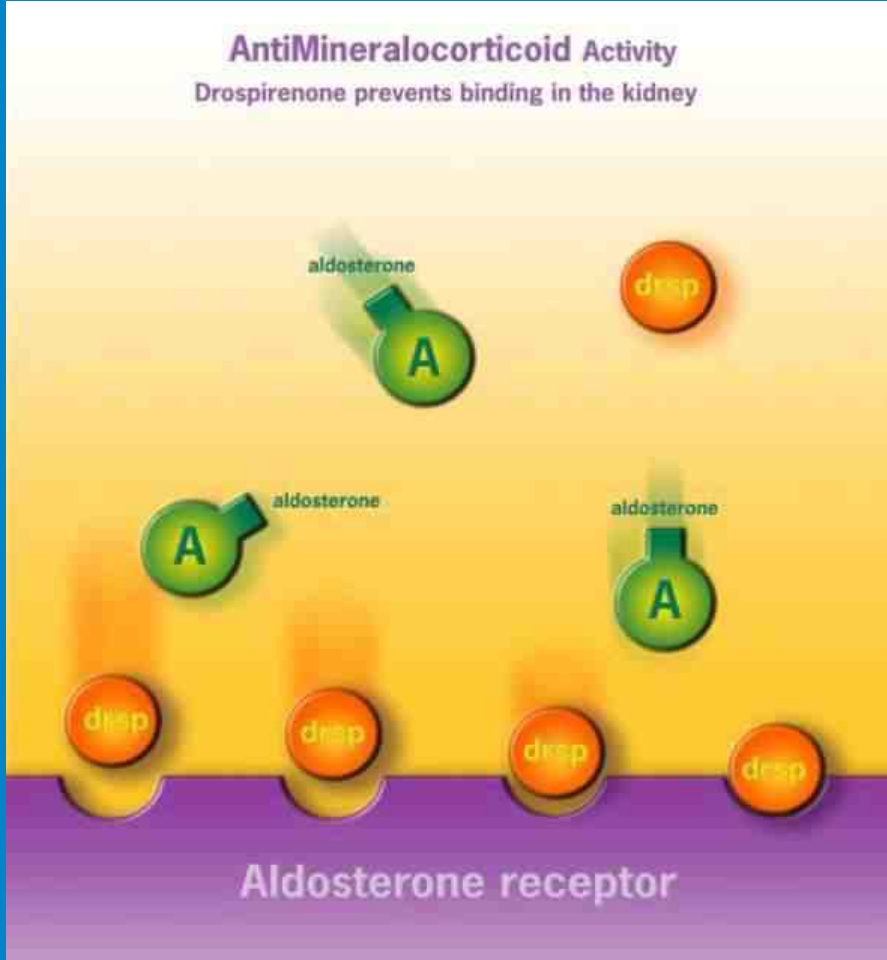
- **17- α -spirolakton türevidir.**
- **Progesterojenik, antimineralokortikoid ve antiandrojenik özellikler**
- **Estrojenik olmayan, androjenik, glukokortikoid ya da antiglukokortikoid aktivite**
- **Endojen progesterona benzer farmakolojik profil**

Comparing drsp with Other Progestins

	Progestogenic activity	Androgenic activity	Anti-androgenic activity	Anti-aldosterone activity	Glucocorticoid activity
Progesterone	+	-	(+)	+	-
Drsp	+	-	+	+	-
CPA	+	-	+	-	(+)
Desogestrel	+	(+)	-	-	-
Dienogest	+	-	+	-	-
Gestodene	+	(+)	-	(+)	-
Levonorgestrel	+	(+)	-	-	-
Norgestimate	+	(+)	-	-	-
MPA	+	(+)	-	-	(+)
Norethisterone	+	(+)	-	-	-

CPA = Cyproterone acetate; + relevant activity; (+) activity not clinically relevant; - no activity

Drsp'nin AntiMineralokortikoid Etkisi



- **Drsp, aldosteron reseptörlerine bağlanır ve böbreklerdeki aldosteron etkinliğini bloke eder**

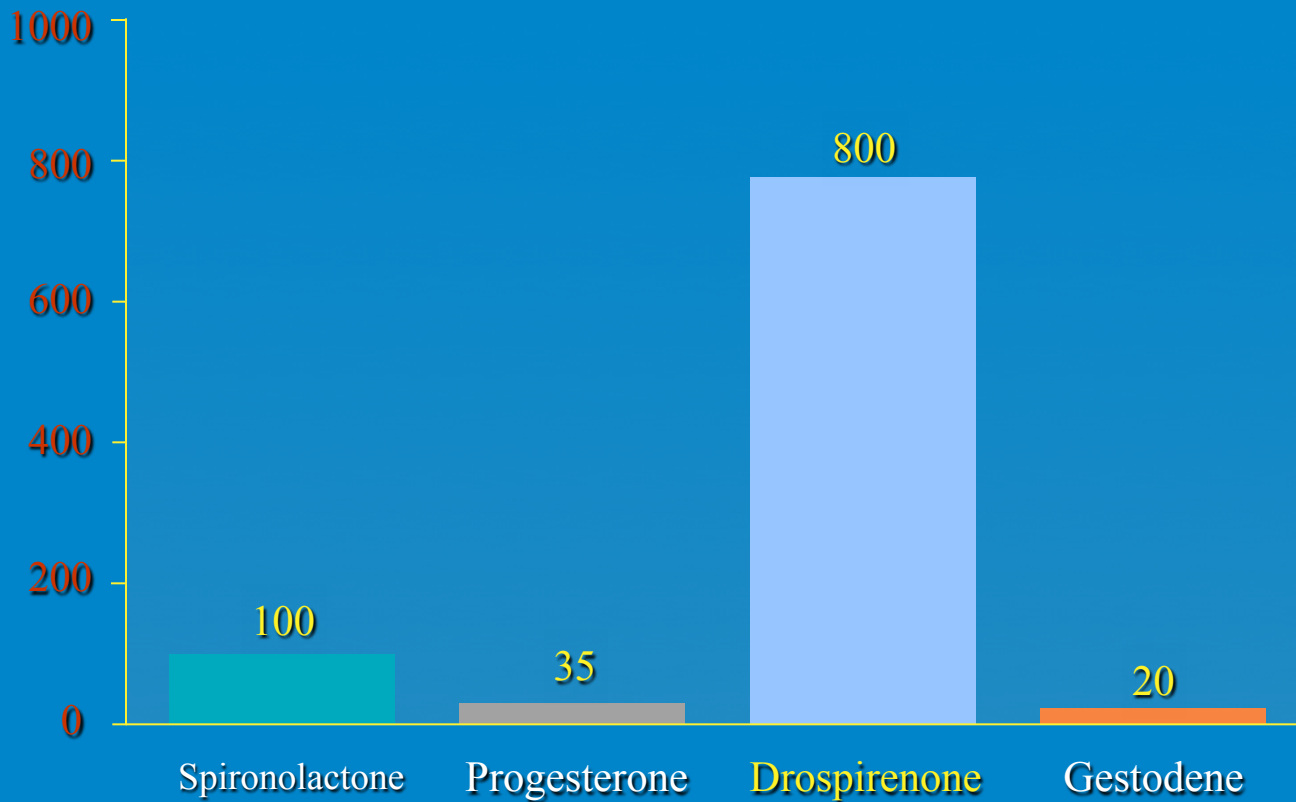
Etkiler



Sodyum ve su atılımı

Potasyum tutulumu

Relatif antimineralokortikoid aktivite



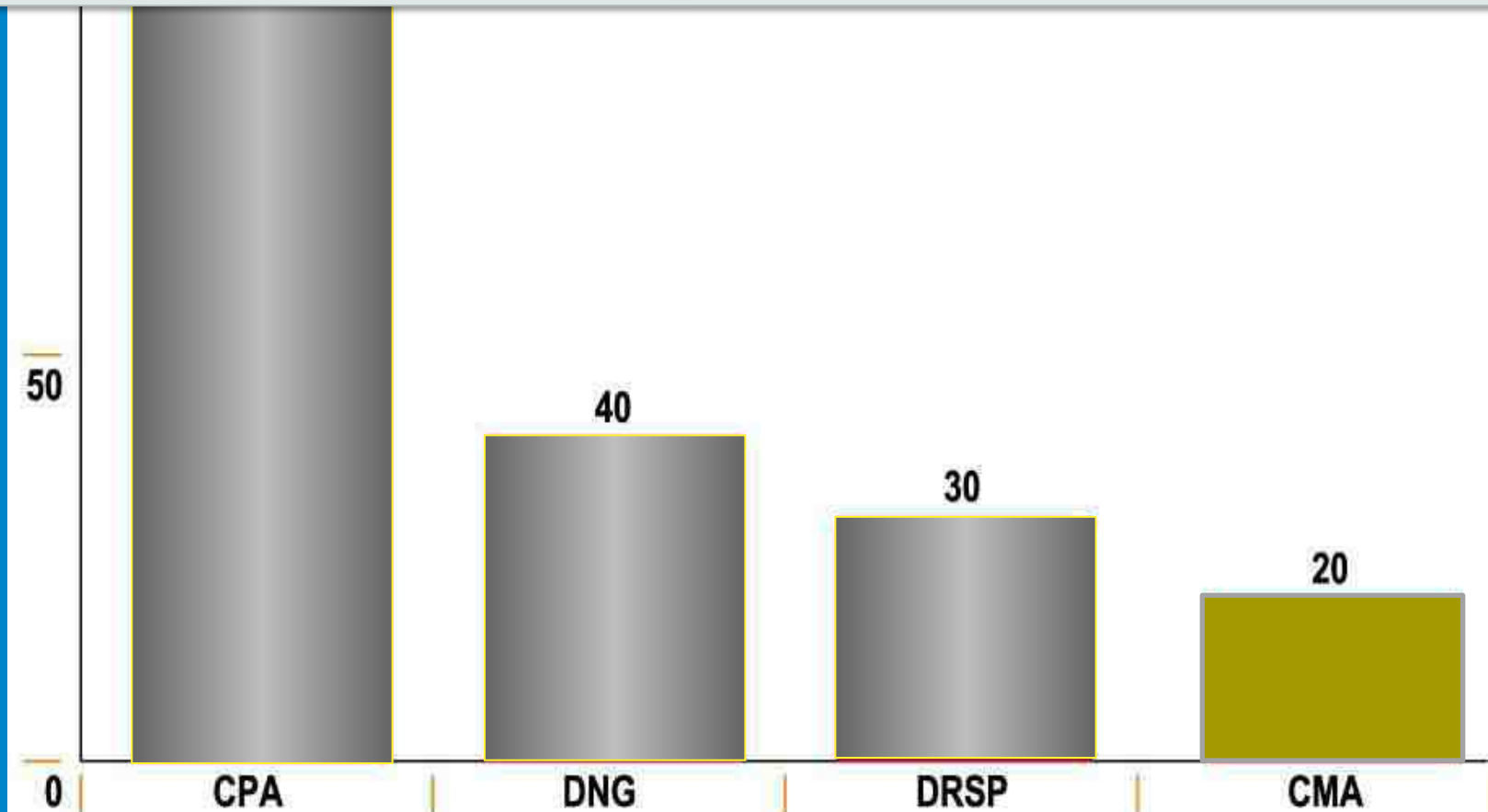
Soru:

Anti anrojen etki hangisinde en yüksek ve en düşüktür

- CPA-DSP
- DRSP-CMA
- CPA-CMA
- DRSP-Dienogest
- Dienogest-LNG

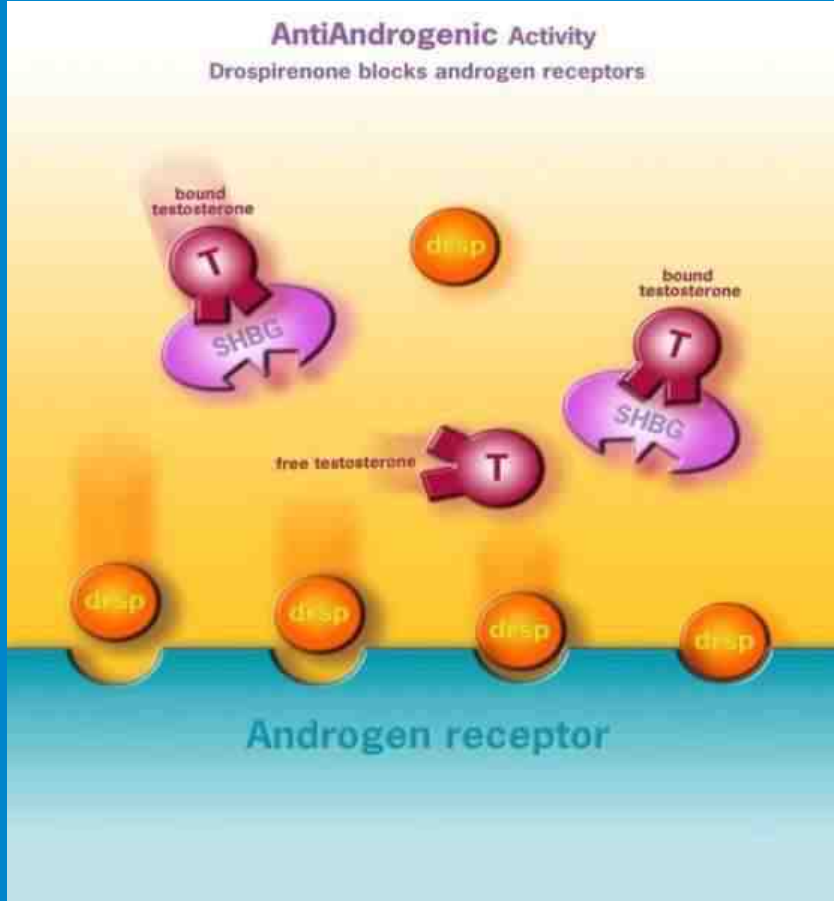
Relative anti androgenic efficacy

3 mg drospirenone (the dose used in OCPs) is roughly equivalent to 25 mg spironolactone and 1 mg CPA .



Hershberger-Test

Drsp'nin AntiAndrojenik* Etkisi



- Androjen reseptörüne bağlanarak doğrudan etki
- İn vitro androjenik etkinlik yok
- Antiandrojenik etki

drsp = Drospirenon.

*Antiandrojenik etkinlik

linik öncesi hayvan

ve *in vitro* çalışmalarda görülmüştür.

Drospirenon 24+4 Rejimi

Antimineralokortikoid Yararlar

Sodyum ve su tutulumu
yok

Kilo artışı yok

PMS/PMDD
semptomlarında
klinik ve anlamlı iyileşme

Antiandrojenik Yararlar

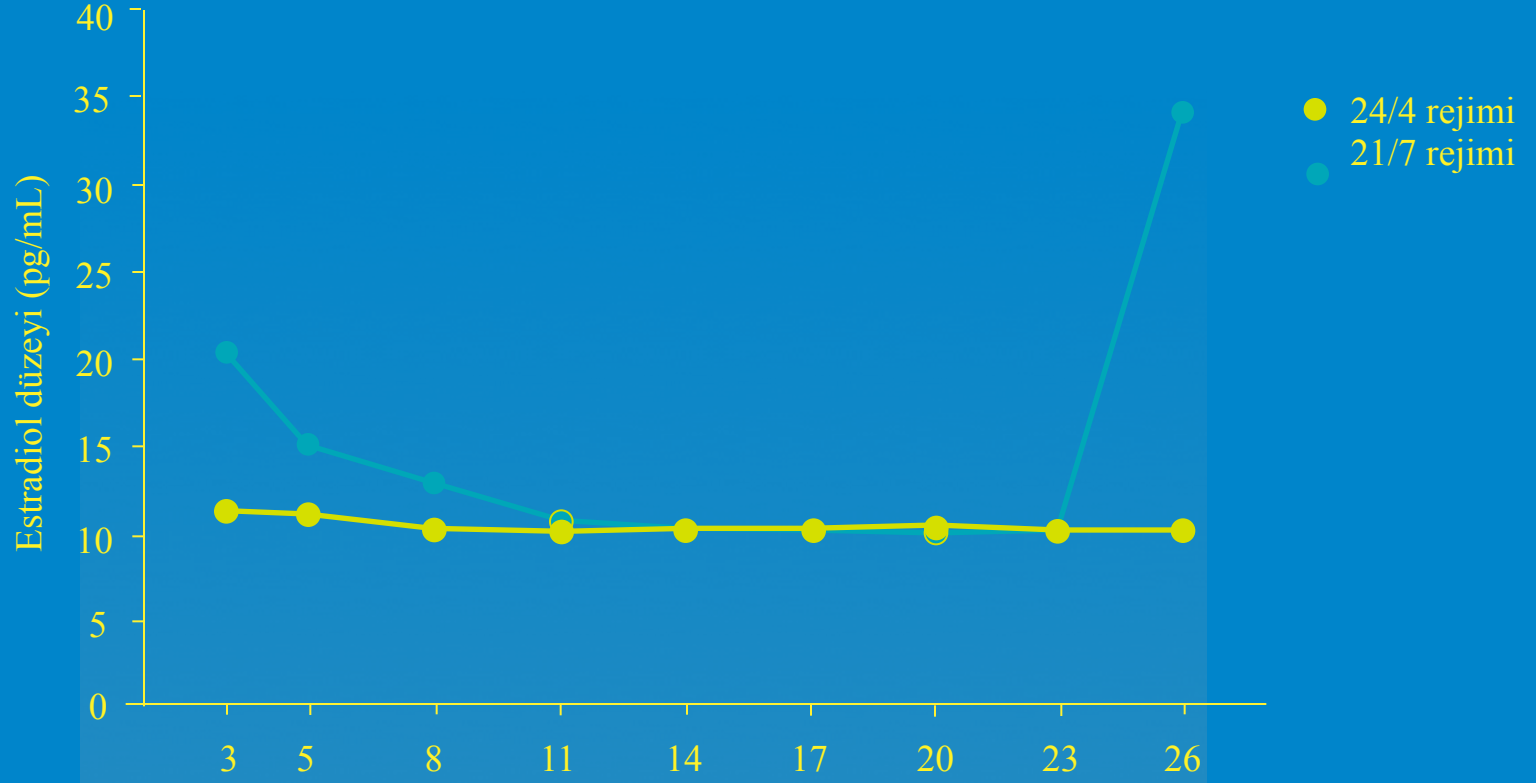
Akne ve sebore
tedavisinde
klinik ve anlamlı
iyileşme

21/7 rejiminde gözlenen hormonal dalgalanmaya bağlı şikayetler

Symptoms	Hormon tedavisi (21 gün) %	Hormonsuz Aralık (7 gün) %	P-value
• Pelvik ağrı	21	70	<0.001
• Baş ağrısı	53	70	<0.001
• Göğüslerde hassasiyet	19	58	<0.001
• Şişkinlik	16	38	<0.001
• Ağrı kesici kullanımı	43	69	<0.001

24+4 Rejimi

Endojen Estradiol Dalgalanması Olmaz



İLAÇSIZ ARALIĞIN KISALTILMASI HORMONAL FLUKTUASYONA BAĞLI SEMPTOMLARI AZALTIR

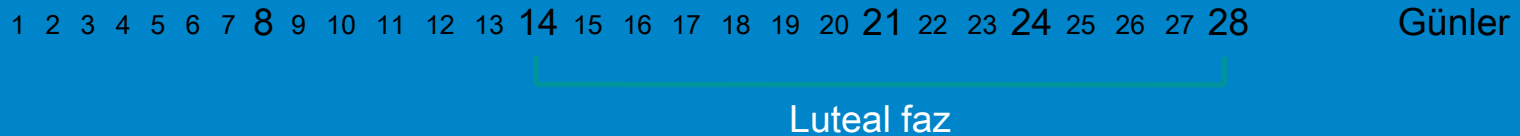
Hormonsuz Aralığın Kısaltılmasının mantığı

- Östrojen dozunu azaltmak östrojene bağlı ya etkileri azaltırken aynı zamanda östrojene bağlı kontraseptif etkinliği de standart 7-gün hormonsuz aralıkta azaltmaktadır¹
- Hormonsuz aralığı 3 ya da 4 güne kısaltmak daha yüksek folikül gelişiminde inhibisyon ve over steroid sentezinde süpresyon sağlar²
- 24/4 tedavi rejimiyle kısaltılmış hormonsuz aralık konvansiyonel rejim hormon-geriçekme semptomlarını azaltabilir— örnek hormonsuz aralıkta baş ağrısı, kramplar, göğüslerde hassasiyet ve şişkinlik³

1. Sullivan H et al. *Fertil Steril* 1999; 72: 115–120.
2. Mishell DR, Jr. *Contraception* 2005; 71: 304–305
3. Sulak PJ et al. *Obstet Gynecol* 2000; 95: 261–266.

Yeni 24+4 doz uygulaması sürekli drospirenon etkinliđi

- 3 gün daha antimineralokortikoid ve antiandrojenik faydalar
- Anlamli olarak daha fazla over supresyonu
- Hormonal dalgalanmanın ortadan kalkması
- Estrojene bađlı istenmeyen etkilerde azalma
- Hafiften Őiddetliye tüm premenstruel semptomlarda düzelme
- Kaçak folikül gelişimini engelleyerek daha etkili kontrasepsiyon sağlar
- 28 gün boyunca kesintisiz ilaç kullanımı kullanım kolaylıđı ve daha yüksek kullanıcı uyumu sağlar

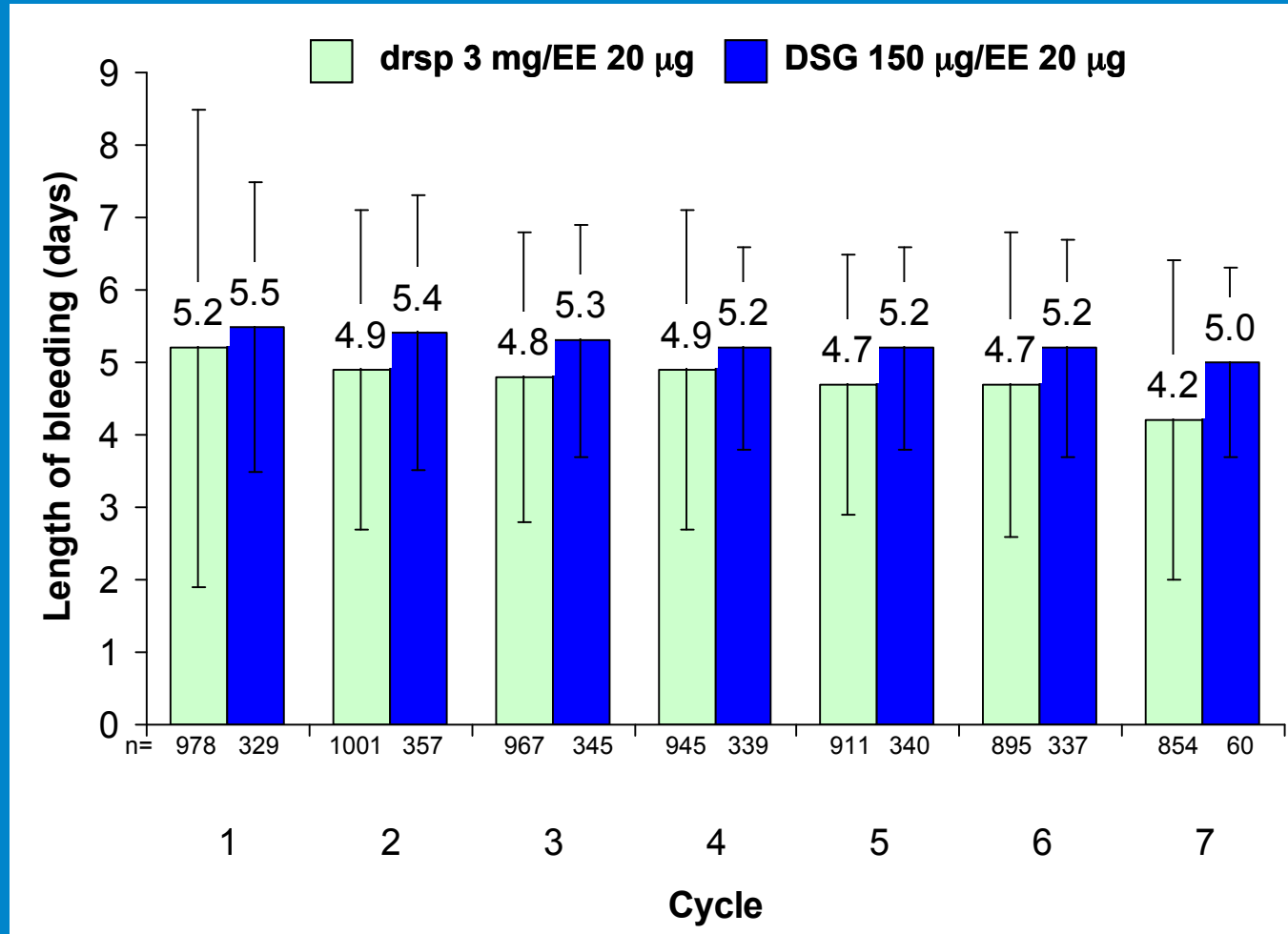


- Drospirenon yarı ömrü ($t^{1/2}$)= 30 saat
- Dozu ve farmakokinetiđi arasında lineer bir iliŐki mevcuttur.
- 24+4 drsp/EE kararlı kan düzeylerine ulaşması = 8 gün

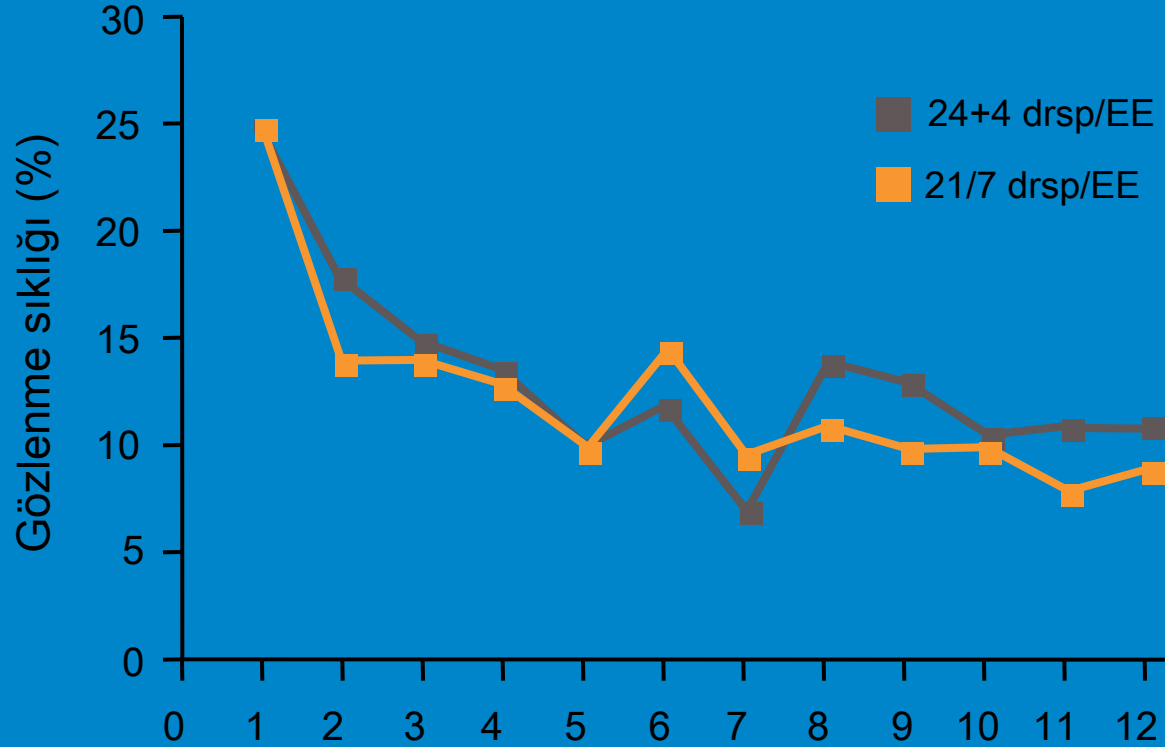
- **24+4 provides comparable cycle control to other 20µg EE oral contraceptives**
 - **Only 10.1% of patients reported bleeding/spotting episodes during the first reference period (three months), this decreased significantly to 3.8% and 2.8% in reference periods 2 and 3**

Mean duration of withdrawal bleeds

DRSP 3 mg/ethinylestradiol (EE) 20 µg in a 24/4 regimen or desogestrel (DSG) 150 µg/EE 20 µg in a 21/7 regimen. Error bars denote standard deviation.



24+ 4 21/7 drsp/EE ile benzer intermenstrüel kanama oranları



Soru:
**Hangisi DRSP lu OK lar icin
doğrudur**

- **Tansiyonu yükseltirler**
- **Kontraseptif etkinlikleri diger 3. kuşak progestinlere göre azalmıştır**
- **İnsülin direncini arttıırırlar**
- **PKOS unda etkinlikleri gösterilmistir**
- **Akne tedavisinde endikasyonları yoktur**



Effects of a contraceptive containing drospirenone and ethinyl estradiol on blood pressure and autonomic tone: a prospective controlled clinical trial

Marcelo Gil Nisenbaum^{a,*}, Nilson Roberto de Melo^a, Cassiana Rosa Galvão Giribela^a,
Tércio Lemos de Moraes^c, Graziã Maria Guerra^b, Katia de Angelis^c, Cristiano Mostarda^b,
Edmund Chada Baracat^a, Fernanda Marciano Consolim-Colombo^{b,c}

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^bHypertension Unit, Heart Institute (InCor), University of São Paulo, São Paulo 05403-000, Brazil

^cUniversidade Nove de Julho, (UNINOVE), São Paulo 01504-000, Brazil



2014

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Table 2

Clinical and hemodynamic parameters at baseline and after 6 months of contraceptive use.

Variable	Group	Baseline	After 6 months
BMI (kg/m ²)	Users	25.32 ± 0.62	25.30 ± 0.66
	Nonusers	24.78 ± 0.59	25.14 ± 0.59
AC (cm)	Users	85.29 ± 2.59	84.84 ± 2.79
	Nonusers	85.00 ± 1.58	85.92 ± 1.89
SBP (mmHg)	Users	112.5 ± 2.01	111.6 ± 1.79
	Nonusers	115.5 ± 2.00	117.13 ± 2.3
DBP (mmHg)	Users	66.49 ± 1.23	65.01 ± 1.04
	Nonusers	67.12 ± 1.53	67.47 ± 1.57
MBP (mmHg)	Users	85.39 ± 1.55	84.10 ± 1.24
	Nonusers	87.29 ± 1.68	88.41 ± 1.77
HR (bpm)	Users	74.31 ± 1.86	74.25 ± 1.67
	Nonusers	71.83 ± 1.07	71.25 ± 1.32
CO (l/min)	Users	5.66 ± 0.16	5.72 ± 0.20
	Nonusers	5.84 ± 0.23	5.81 ± 0.18
TPR (nu)	Users	0.93 ± 0.03	0.94 ± 0.04
	Nonusers	0.91 ± 0.03	0.94 ± 0.03

Values are expressed as the mean ± S.E. Statistical significance was set at $p < .05$. All parameters with $p > .05$. BMI—body mass index; AC—abdominal circumference; SBP—systolic blood pressure; DBP—diastolic blood pressure; MBP—mean blood pressure; HR—heart rate; CO—cardiac output; TPR—total peripheral resistance.



Effects of a contraceptive containing drospirenone and ethinylestradiol on blood pressure, metabolic profile and neurohumoral axis in hypertensive women at reproductive age

Tercio Lemos de Morais^a, Cassiana Giribela^{b,c}, Marcelo Gil Nisenbaum^c, Grazia Guerra^b, Nilson Mello^c, Edmundo Baracat^c, Fernanda M. Consolim-Colombo^{a,b,*}

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N:56

2014

Table 3

Metabolic assessment of hypertensive women using EE+DRSP and nonusers (control) using COHC: baseline and after 6 months of follow-up.

	Non OC (n=26)		p	EE+DRSP (n=30)		p
	Baseline	6 months		Baseline	6 months	
Renin (ng/mL/h)	4.8 ± 1.3	4.0 ± 1.1	0.70	4.9 ± 0.8	4.6 ± 0.9	0.87
Aldosterone (ng/dL)	12.3 ± 1.6	11.0 ± 1.7	0.82	9.8 ± 1.0	13.9 ± 1.7	0.13
Aldosterone/renin ratio	2.65 ± 1.5	2.57 ± 1.54	0.88	2.1 ± 1.0	3.0 ± 1.5	0.78
Potassium (mEq/L)	4.1 ± 0.1	4.2 ± 0.1	0.26	4.1 ± 0.0	4.1 ± 0.1	0.56
Sodium (mEq/L)	139.4 ± 0.7	141.2 ± 0.7	0.05	139.9 ± 0.7	138.1 ± 0.7	0.54
Creatinine (mg/dL)	0.8 ± 0.0	0.7 ± 0.0	0.41	0.8 ± 0.0	0.7 ± 0.0	0.33
Urea (mg/dL)	32.1 ± 1.6	29.4 ± 1.7	0.33	28.1 ± 1.2	27.0 ± 1.3	0.79
Glucose (mg/dL)	94.7 ± 2.1	96.3 ± 3.2	0.31	96.7 ± 1.8	94.1 ± 2.5	0.27
Insulin (UI)	14.4 ± 3.2	12.3 ± 1.4	0.55	13.7 ± 2.2	13.3 ± 2.1	0.86
HOMA1 (IR) ^a	3.2 ± 0.5	3.0 ± 0.4	0.59	3.1 ± 0.5	2.9 ± 0.4	0.59
Cholesterol (mg/dL)	188.1 ± 7.9	186.3 ± 6.9	0.74	197.6 ± 8.6	195.9 ± 10.9	0.73
LDL-col. (mg/dL)	109.8 ± 7.9	110.5 ± 6.7	0.88	118.1 ± 9.3	102.7 ± 11.6	0.27
HDL-col. (mg/dL)	58.2 ± 2.7	55.6 ± 2.5	0.46	54.6 ± 2.0	60.2 ± 2.3	0.06
Triglycerides (mg/dL)	100.2 ± 9.1	100.6 ± 10.5	0.98	124.3 ± 12.1	174.7 ± 14.7	0.01
Hemoglobin (g/dL)	13.3 ± 0.2	13.1 ± 0.3	0.81	13.5 ± 0.2	12.9 ± 0.1	0.08
Platelet (mil/mm ³)	268.6 ± 16.5	268.9 ± 15.8	0.67	286.2 ± 15.3	296.4 ± 13.2	0.42

Mean values standard error.

^a $p < 0.05$ baseline vs 6 months.

^b HOMA1 ≤ 2.8 normal cut-off value, according to Geloneze et al. [31].

Table 1

Anthropometric and clinical variables in women using EE+DRSP and nonusers (non OC) at baseline and after 6 months of follow-up.

	Non OC (n=26)			EE+DRSP (n=30)		
	Baseline	6 months	p	Baseline	6 months	p
Weight (kg)	74.4 ± 3.3	73.8 ± 3.4	0.08	77.5 ± 2.6	76.4 ± 2.6	0.04*
AC (cm)	95.9 ± 2.6	94.8 ± 2.6	0.76	97.9 ± 2.0	97.2 ± 2.0	0.66
BMI (kg/m ²)	29.0 ± 1.1	28.7 ± 1.2	0.20	30.3 ± 0.9	29.8 ± 0.9	0.04*
SBP (mmHg)	129.0 ± 2.5	130.3 ± 2.4	0.70	127.8 ± 2.1	126.6 ± 2.5	0.57
DBP (mmHg)	87.6 ± 1.9	87.0 ± 1.4	0.57	83.9 ± 1.3	83.7 ± 1.8	0.93

Mean values standard error.

AC=abdominal circumference; BMI=body mass index; SBP=systolic blood pressure; DBP=diastolic blood pressure.

* p < 0.05 baseline vs 6 months.



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journal homepage: www.elsevier.com/locate/ejogrb

Influence of an oral contraceptive containing drospirenone on insulin sensitivity of healthy women^{*}

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2014

N:11

Table 2

Glucose metabolism, insulin sensitivity and lipid profile before after oral contraceptive pill containing drospirenone parameters.

Parameters	Pretreatment	Posttreatment	Net difference	P
Glucose mg/dL	80.7 ± 6.9	80.7 ± 12.4	0.00 ± 10.8	0.99
Insulin mU/mL	10.6 ± 8.2	8.2 ± 2.6	-2.3 ± 7.9	0.33
HOMA/IR	2.2 ± 1.7	1.7 ± 0.76	-0.5 ± 1.7	0.34 ²
SI	3.7 ± 2.6	3.29 ± 2.93	0.2 ± 3.9	0.73
Sg	0.03 ± 0.02	0.032 ± 0.014	-0.01 ± 0.02	0.87
Total Chol. mg/dl	171.2 ± 31.2	179.8 ± 26	8.6 ± 28.9	0.44 ²
HDL-choL mg/dl	70.2 ± 9.3	79.7 ± 8.1	9.4 ± 9.8	0.05 ²
LDL-choL mg/dl	83.2 ± 32.3	75.6 ± 35.9	-4.64 ± 1.704	0.6 ²
Triglycer. mg/dL	106 ± 82.5	153.2 ± 133	46.9 ± 75.1	0.046 ²

The values are given as Mean (SD).

^{*} Wilcoxon-signed rank test.

24+4 : Ruhsatlı Endikasyonlar

- **Gebeliğin önlenmesinde onaylanmıştır***
- **Kontrasepsiyonda isteyen kadınlarda emosyonel ve fiziksel semptomların PMDD tedavisinde onaylıdır****
- **Orta derecede akne tedavisinde onaylıdır*****

*US FDA approved: March 2006; **US FDA approved: Oct. 2006; ***US FDA approved: Jan 2007

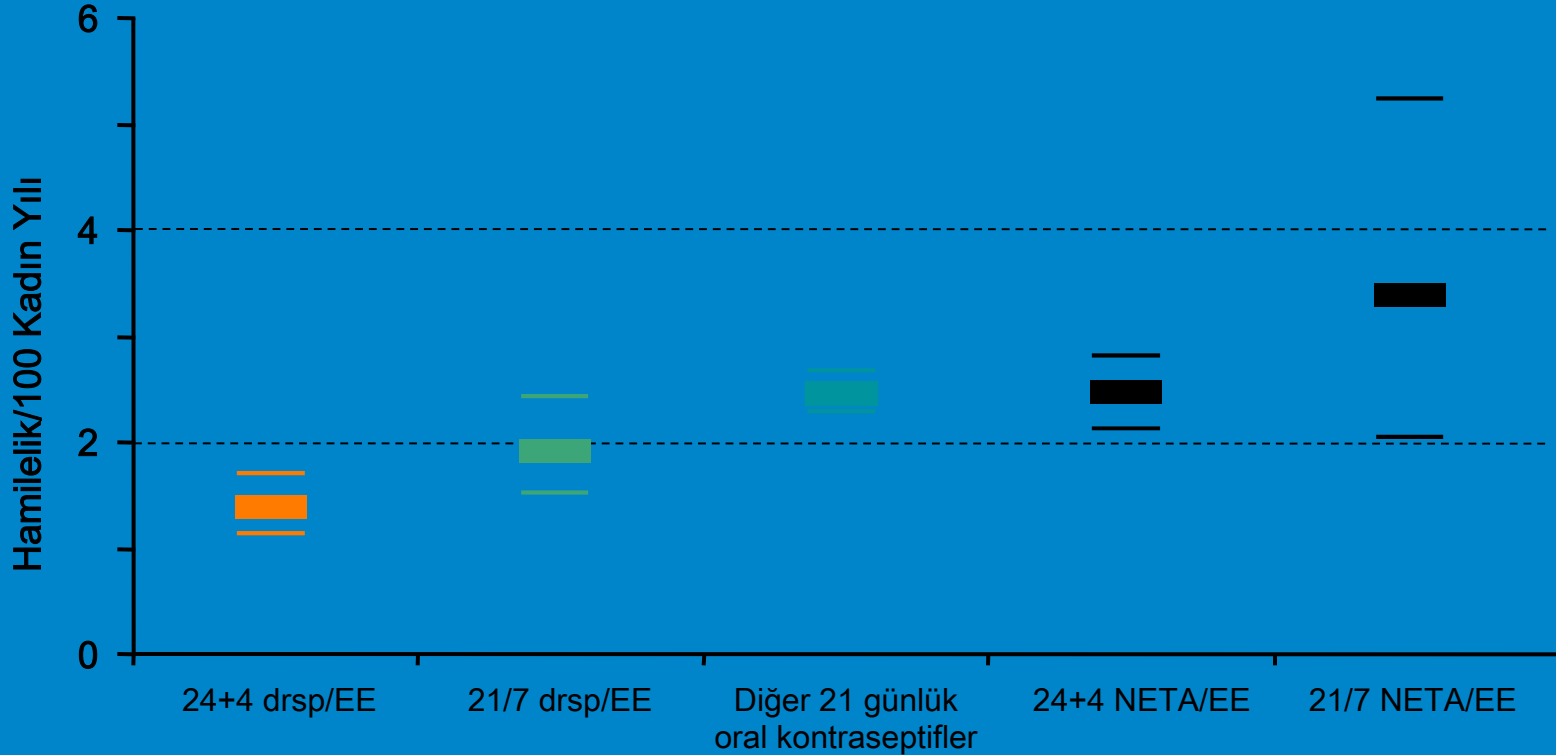
24 + 4 ün Kontraseptif Etkinliđi

- **Pearl Index*’lerine bakıldıđında:**
 - **0.80 (1.30’un %95 Güven Aralıđının altında) tipik kullanım**
 - **0.41 (0.85’in %95 Güven Aralıđının altında) mükemmel kullanımda**

•100 kadın yılı kullanımda oluřan toplam planlanmayan hamilelik toplamı

Antilla L, et al. Proceedings of the XIX FIGO World Congress of Gynecology & Obstetrics. 2009 (abstract plus poster)

Tedavi Gruplarına Göre Kontraseptif Etkinlik



NETA = Noretindron asetat. Dinger JC, Assmann A, Westhoff C. Contraceptive effectiveness of oral contraceptives: the impact of a 24-day regimen. Abstract plus oral presentation at the 57th Annual Clinical Meeting of the American College of Obstetricians & Gynecologists; 2009 May 2–6: Chicago, IL, USA.

Türkiye genelinde, 16–46 yaş arasında *İstanbul, Ankara, İzmir, Adana ve çevresinde yaşayan* bayanların adet dönemleri süresince farklılaşan davranış ve yaklaşımlarını anlamak amacıyla 3368 görüşme gerçekleştirilmiştir. Bu çalışmada PMS (Premenstruel Sendrom) ve PMDD (Premenstruel Dysphoric Disorder)'nin kadınların yaşam kalitesi üzerindeki etkileri incelenmiştir.

Bu çalışmada, PMS görülme sıklığı %32, PMDD görülme sıklığı ise %9 oranında tespit edilmiştir.

ADET ÖNCESİ BULGULARI DEĞERLENDİRME FORMU PREMENSTRUAL SYMPTOMS SCREENING TOOL (PSST)

(Üreme çağıında, adet gören ve gebe olmayan kadınlara sorulmak üzere)

Yaş: 16-20 21-30 31-40 41-45 46 ve üzeri

Şehir: İSTANBUL ANKARA İZMİR ADANA ESKİŞEHİR DİĞER

Toplam kaç doğum (normal doğum ve sezaryen) yaptınız?: _____
(Lütfen düşüklerinizi dikkate almayınız)

Şu dönemde doğum kontrol hapi kullanmakta mısınız?: EVET HAYIR

Her ay düzenli adet görüyor musunuz?: EVET HAYIR

Adet kanamanızın ağrısını tanımlar mısınız?: YOK HAFİF ORTA ŞİDDETLİ

Adet kanamanızdan önce başlayan ve kanamanız başladıktan sonraki bir kaç gün içinde kaybolan aşağıda belirtilen bulgulardan bazılarını veya herhangi bir tanesini yaşıyor musunuz? Lütfen uygun kutuya "X" koyunuz.

Semptom	Yok	Hafif	Orta	Şiddetli
1) Kızgınlık / asabiyet				
2) Endişe / kaygı / gerginlik				
3) Ağlamaklı olma / reddedilmeye karşı hassasiyet				
4) Kararsız ruh hali / ümitsizlik				
5) İşle ilgili faaliyetlere karşı azalmış ilgi				
6) Ev ile ilgili faaliyetlere karşı azalmış ilgi				
7) Sosyal faaliyetlere karşı azalmış ilgi				
8) Konsantrasyon güçlüğü				
9) Bütünlük / enerji eksikliği				
10) Açık yeme / aşırı yemek krizleri				
11) Uykusuzluk				
12) Açık uyku (daha fazla uykuya gereksinim duyma)				
13) Yenik düşünüş ve kontrolden çıkmış hissetme				
Fiziksel belirtiler:				
14) Göğüslerde hassasiyet, baş ağrısı, eklem - kas ağrısı, karında şişlik, kiloda artış				

Yukarıda belirtilmiş olan yakınmalarınız aşağıdaki durumları etkiler mi?

	Yok	Hafif	Orta	Şiddetli
A) İş verimliliğinizi veya üretkenliğinizi				
B) İş arkadaşlarınız ile olan ilişkilerinizi				
C) Ailenizle olan ilişkilerinizi				
D) Sosyal hayatınızı				
E) Ev ile ilgili sorumluluklarınızı				

Drospirenone/EE içeren OK ve PMS/PMDD

- **Drospirenone 3 mg, 30 EE**
- **7 çalışmada yararı gösterilmiş**
 - 1 randomize kontrollü çalışma
 - 4 kohort çalışma
 - 2 Open-label çalışma
- **Fiziksel ve ruhsal durumda düzelme**

1. Freeman EW et al. J Womens Health Gend Based Med 2001; 10: 561-569.
2. Brown C et al. J Reprod Med 2002; 47: 14-22.
3. Apter D et al. Eur J ContraceptReprod Health Care 2003; 8: 37-51.
4. Foidart JM et al. Eur J ContraceptReprod Health Care 2000; 5: 124-134.
5. Sangthawan M, Taneepanichskul S. Contraception 2005; 71: 1-7.
6. Borenstein J et al. J Reprod Med 2003; 48: 79-85.
7. Sillem M et al. Eur J ContraceptReprod Health Care 2003; 8: 162-169.

OCs with Drospirenone/EE and PMS/PMDD

- **Drospirenone 3 mg, 20 EE**
 - **New regimen 24 active days / 4 placebo days**
- **2 RCT (Randomized Control Trial) trials showing benefit**
 - **Improvement in both physical and mood sx.**
- **Now FDA approved for use in women with PMDD who also need contraception**

24+4 in acne

- Two placebo-controlled studies conducted in a total of 1072 women over 6 cycles
- Participants were aged 14–45 and had moderate facial acne
- In both studies, 24+4 resulted in significantly ($p < 0.0001$) greater reductions in mean change from baseline in inflammatory, noninflammatory and total lesion counts vs. placebo

Table 2 FDA-approved combined oral contraceptive pills for acne

Trade name	Estrogen*	Progestin
Ortho Tri-Cylen®	35 µg	Norgestimate 180, 215, 250 mg
Estrstep®	20, 30, 35 µg	Norethindrone acetate 1 mg
Yaz®	20 µg	Drospirenone 3 mg

Ortho Tri-Cylen®, McNeil Janssen Pharmaceuticals, Raritan, NJ; Estrstep®, Warner-Chilcott, Rockaway, NJ; Yaz®, Bayer, Morristown, NJ.

* All three contain ethinyl estradiol.



Journal of Medical Economics

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Use of drospirenone/ethinyl estradiol (DRSP/EE) among women with acne reduces acne treatment-related resources

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^b Novosys Health, Flemington, NJ, USA

Published online: 05 Sep 2011.

2015

Conclusion:

DRSP/EE-24/4 use was associated with substantial reductions in acne-related healthcare resource utilization, and reductions occurred regardless of age or type of acne medication. DRSP/EE-24/4 therefore represents a cost-effective option for the treatment of acne among women using DRSP/EE-24/4 for oral contraception.

Data for 1340 women were evaluated

Effect of oral contraceptive containing ethinyl estradiol combined with drospirenone vs. desogestrel on clinical and biochemical parameters in patients with polycystic ovary syndrome

- A prospective randomized trial
- Sixty women were randomized into study group [ethinylestradiol (EE) 30 mcg+drospirenone 3 mg] and control group (EE 30 mcg+desogestrel 150 mcg), treated for 6 months and followed up at 1 month, 3 months, 6 months, during treatment and 3 and 6 months posttreatment.
- Conclusion: In women with PCOS, a drospirenone containing COC has better outcome in terms of persistent regular cycles, antiandrogenic effect, fall in BMI and BP, better lipid profile, favorable glycemic and hormonal profile than desogestrel-containing COC.

Effect of oral contraceptives on markers of hyperandrogenism and SHBG in women with polycystic ovary syndrome

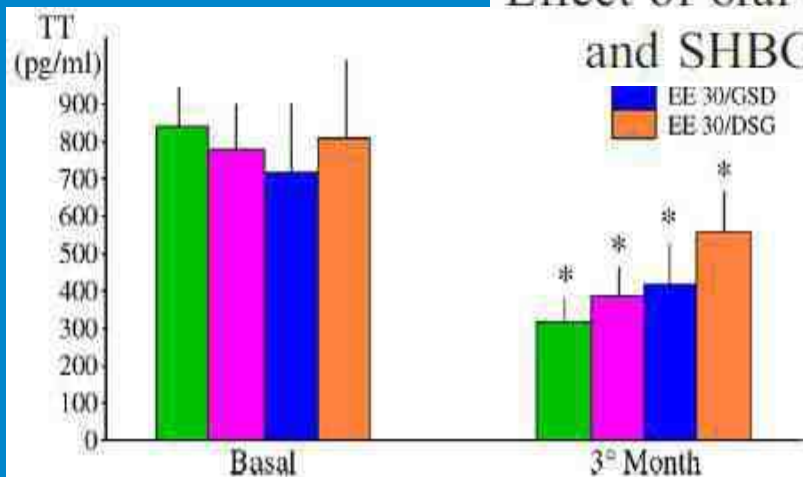


Fig. 3. Comparison of effects of four oral contraceptives (30EE/DRSP, 30EE/CMA, 30EE/GSD, 30EE/DSG) on serum concentrations of total testosterone

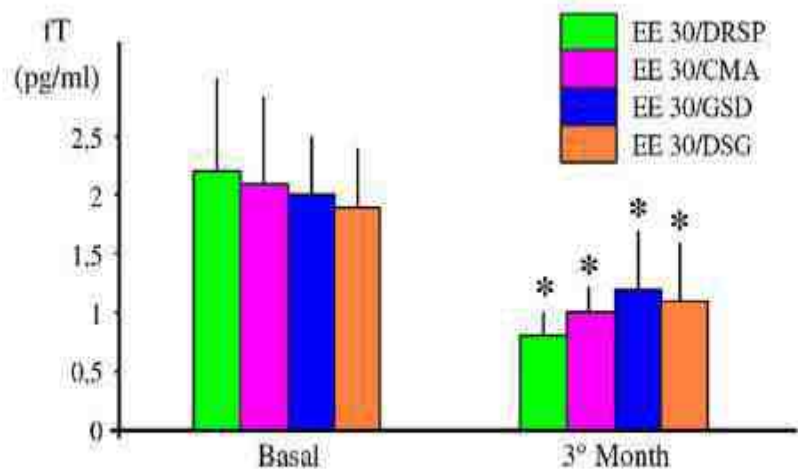


Fig. 2. Comparison of effects of four oral contraceptives (30EE/DRSP, 30EE/CMA, 30EE/GSD, 30EE/DSG) on serum concentrations of free testosterone (fT) before and in the third month of therapy (mean±S.D.). *p<.05.

N:40

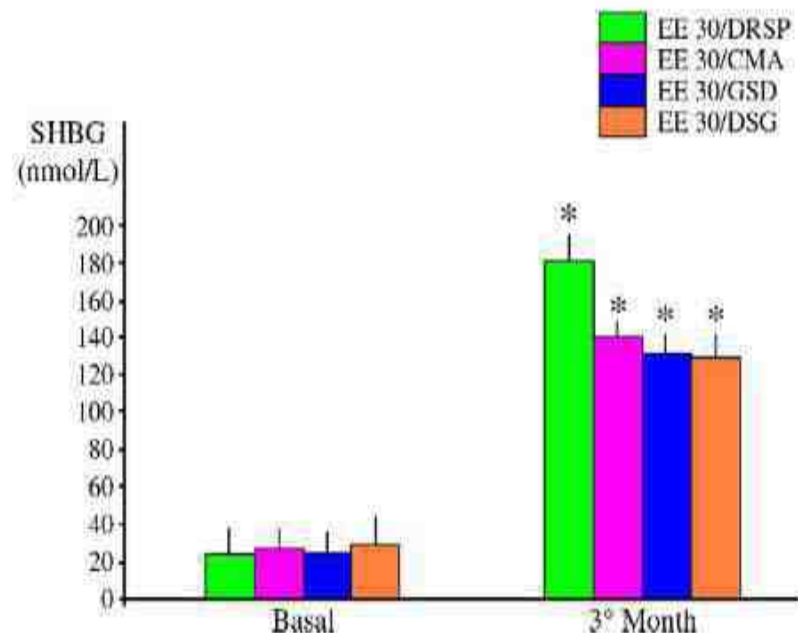


Fig. 5. Comparison of effects of four oral contraceptives (30EE/DRSP, 30EE/CMA, 30EE/GSD, 30EE/DSG) on serum concentrations of sex hormone binding globulin (SHBG) before and in the third month of therapy (mean±S.D.). *p<.05.

Clinical efficacy and metabolic impact of two different dosages of ethinyl-estradiol in association with drospirenone in normal-weight women with polycystic ovary syndrome: A randomized study

2013

D. Romualdi¹, S. De Cicco¹, M. Busacca¹, D. Gagliano¹, A. Lanzone^{1,2}, and M. Guido¹

¹Department of Obstetrics and Gynaecology, Università Cattolica del Sacro Cuore, Roma; ²OASI Institute for Research, Troina, Italy

N:30

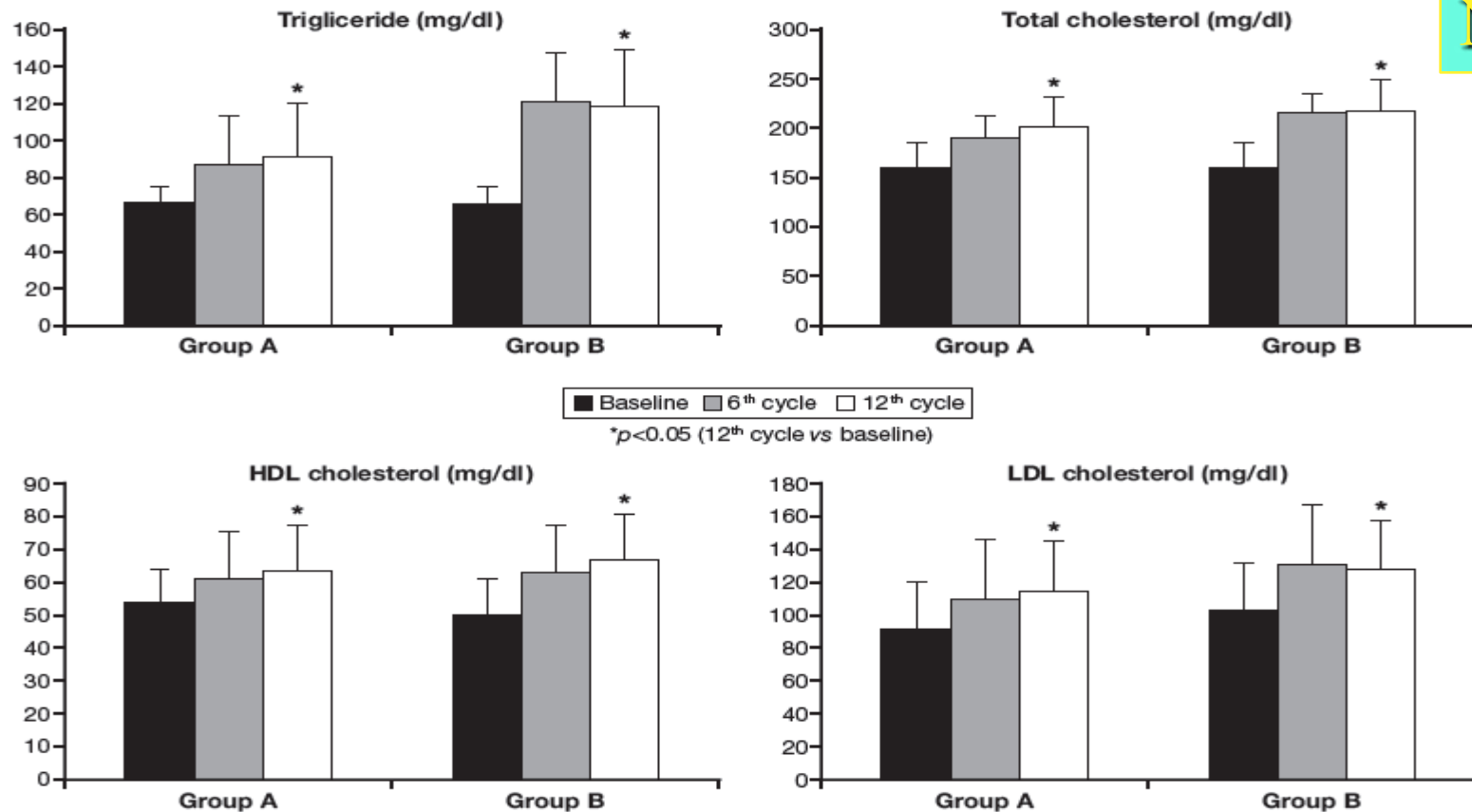


Fig. 1 - Main changes in lipid profile during the 12 cycles in Group A [20 µg ethinyl-estradiol (EE) + drospirenone (DRSP) 3 mg, no. -13] and Group B (30 µg EE + DRSP 3 mg, no. -13).

Table 2 - Metabolic features at baseline, at 6 and 12 months in Group A (20 µg ethinyl-estradiol (EE) + drospirenone (DRSP) 3 mg, no.=13) and Group B (30 µg EE + DRSP 3 mg, no.=13).

	Group A (no.=13)				Group B (no.=13)			
	Baseline	After 6 months	After 12 months	p	Baseline	After 6 months	After 12 months	p
AUC-insulin (µIU/ml/240min)	7983.69±2593.61	8659.27±4359.86	7804.04±3763.62	0.36	10742.88±5215.17	12999.43±7443.83	9934.38±4836.30	0.33
AUC-glucose (µIU/ml/240min)	24035.77±1910	22133.08±2445.93	21785.77±2496.76	0.09	24108.75±3101.70	25277.50±3550.90	23530.0± 2351.53	0.29
FHIE	0.79±0.06	0.75±0.05	0.77±0.05	0.09	1.01±0.45	0.78±0.08	0.85±0.05	0.33
M (mg ×kg ×min ⁻¹)	6.94±2.28	7.16±1.98	7.34±1.90	0.86	5.50±1.41	5.48±1.96	5.98±2.07	0.40

Data are presented as mean±SD. AUC: area under the curve; FHIE: fractional hepatic insulin extraction; M: peripheral insulin sensitivity.



Effects of low dose oral contraceptive pill containing drospirenone/ethinylestradiol in patients with endometrioma

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2015

Forty-nine 23- to 45-year-old patients

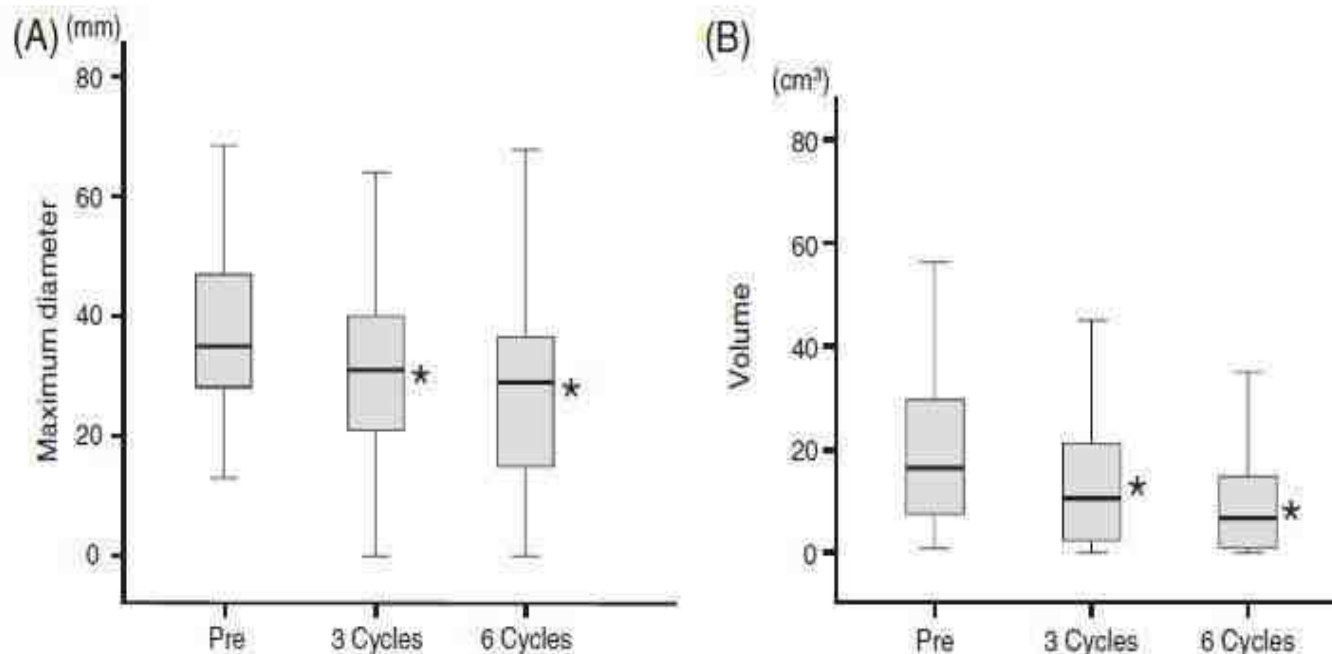


Fig 1. Comparison of (A) maximum diameter and (B) volume of ovarian endometriomas in 49 patients taking the DRSP/EE during 6 cycles. The boxes represent the interquartile ranges and the whiskers extend to the maximum and minimum values. The bars within the boxes show the median values. Pre: pretreatment * $p < 0.001$ vs. pretreatment.

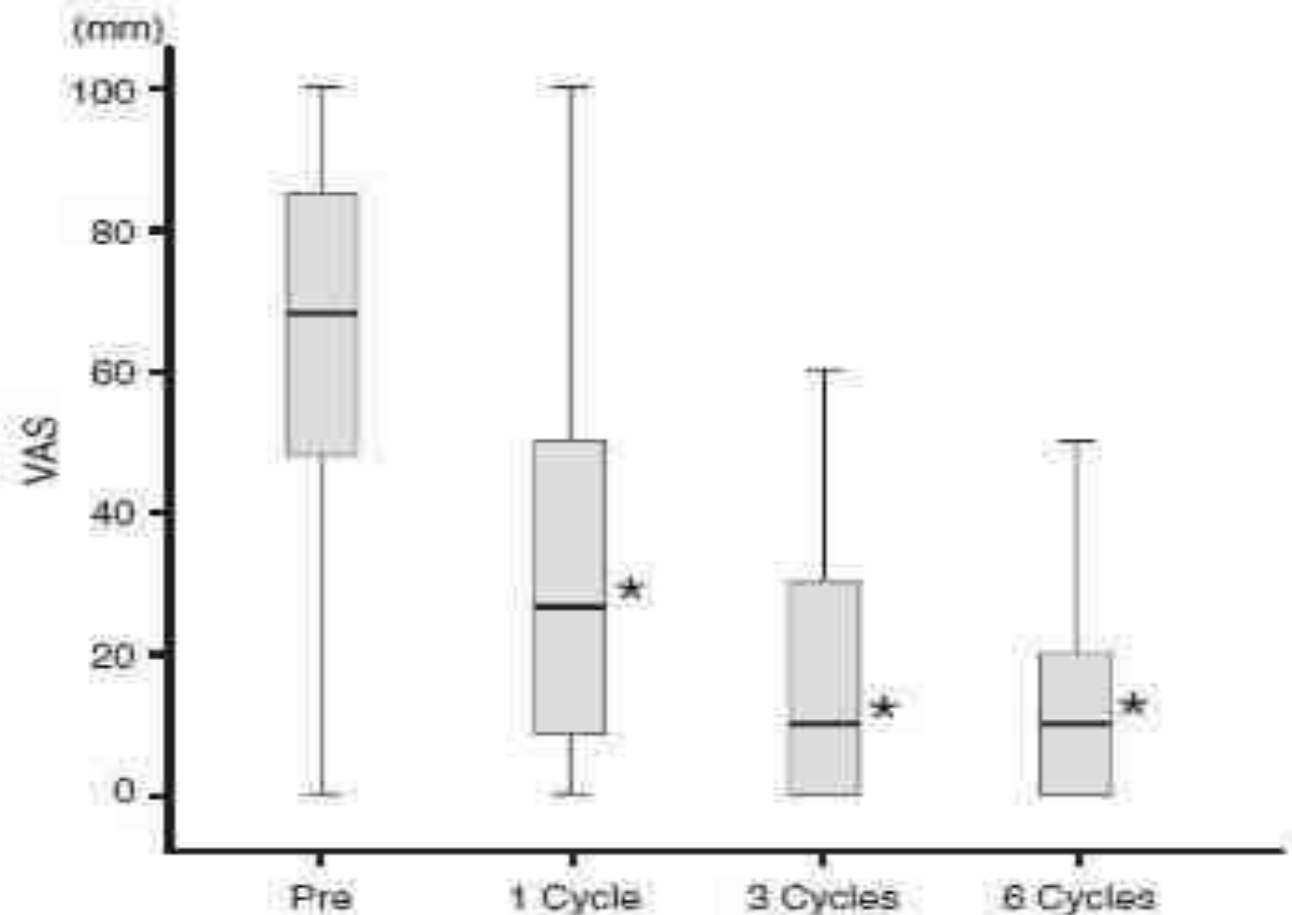


Fig. 2. Comparison of VAS score in dysmenorrhea during 6 cycles. The boxes represent the interquartile ranges and the whiskers extend to the maximum and minimum values. The bars within the boxes show the median values. Pre: pretreatment * $p < 0.001$ vs. pretreatment.

Alman & Avusturyalı 1091 kadın jinekoloğun uzatılmış OC reçeteleme gerekçeleri

The most commonly employed combinations were 30 μ g ethinylestradiol (EE) + 2 mg dienogest (n = 114; 37.5%) and 30 μ g EE + 3 mg drospirenone (n = 69; 22.7%).



Kombine oral kontraseptiflerin yan etkileri

Depresyon/ premenstrüel mood bozukluğu

Libido azalması

Amenore

Siklus içinde kanamalar

Sıvı retansiyonu/ şişkinlik

Kilo artışı

Baş ağrısı ve Migren

Bulantı

Akne

24 + 4 kullanımında görülen yan etkiler

<u>Yan Etki*</u>	<u>Kadın %</u>
Baş ağrısı	6.5
Göğüslerde ağrı	6.3
Bulantı	2.5
Kusma	1.2
Emosyonel değişkenlik	1.2
Akne	1.2
Düzensiz kanamalar	1.2
Vajinal moniliiasis	1.2
Libido azalması	1.1
Abdominal Ağrı	1.0

*Kadınların =>%1'nde gözlenen (N=1,027)

Table reproduced from Bachmann G, et al. Contraception. 2004; 70:191-8

Hormonal Kontrasepsiyonda Riskler

- **Venöz Tromboemboli (VTE)**
- **Arteriyel tromboz**
 - **Miyokard İnfarktüsü (MI)**
 - **İnme (stroke)**
- **Kanser riskinde artış (meme, serviks, karaciğer)**
- **Safra kesesi hastalıkları**
- **Karbonhidrat metabolizması değişiklikleri**
- **Hipertansiyon**

Soru:

Hangisi DRSP lu OK ların riskleri için yanlıştır

- Sağlıklı kadınlarda VTE riski tüm 3. kuşak progestin içerenlerde aynıdır
- Arteriyel tromboz riski artmaz veya çok az artar
- OK kullanmayanlara göre VTE riski artmaz
- Sigara ve trombofili VTE için major risk faktörleridir
- Drospirenone içeren 24 +4 ile 21 +7 nin riski aynıdır

Table 2. Relative importance of various causes of deaths
(from Trussel [37])

	Risk per year
Skydiving	1 in 1 000
Car accident	1 in 5 000
Riding a bicycle	1 in 130 000
COC, nonsmoker, 15–34 years	1 in 1 667 000
COC, nonsmoker, 35–44 years	1 in 33 300
COC, smoker, 15–34 years	1 in 57 800
COC, smoker, 35–44 years	1 in 5 200
Pregnancy	1 in 8 700
Tubal sterilization	1 in 66 700

Trussell J. Reproductive health risks in perspective. *Contraception* 2006;
73:437–439

Risk of Venous Thromboembolism with Drospirenone in Combined Oral Contraceptive Products

- Five studies were identified for evaluation
- Use of a COC is associated with a 3- to 6-fold increase in VTE risk compared to nonuse. This risk may vary among different oral contraceptives due to the progestin component. Studies evaluated showed that women **utilizing a drospirenone-containing COC did not have a higher risk of VTE** when compared to women utilizing other progestins. The crude incidence rate ratio for VTE in women taking a COC containing drospirenone compared to a COC containing other progestins ranged from **0.9 to 1.7 (95% CI 0.5 to 2.4)**

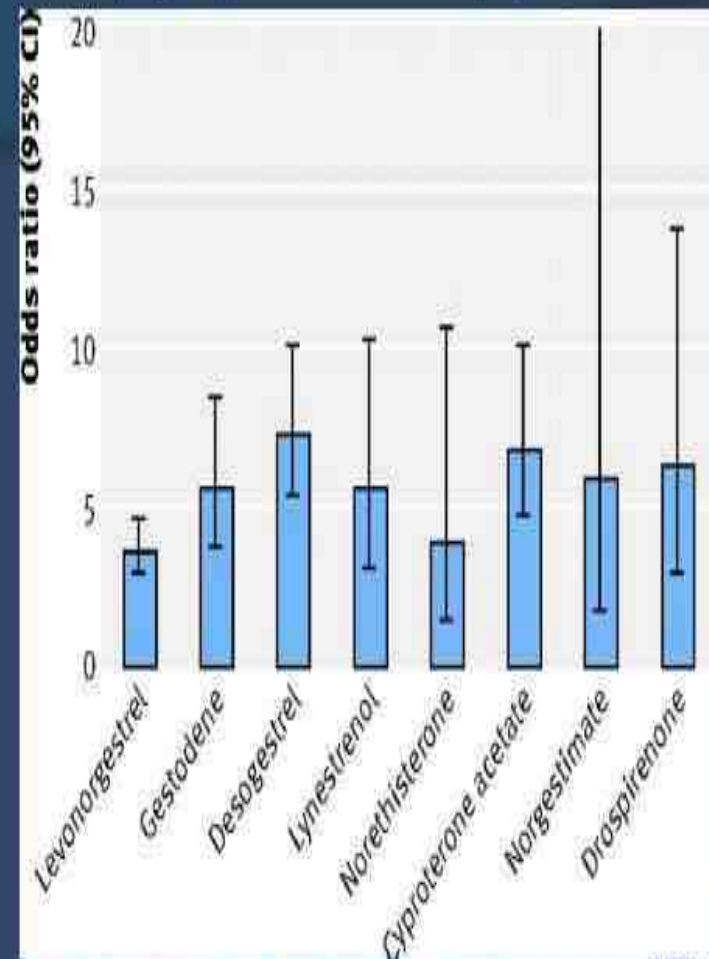
VTE Risk By Progestin Type

30-40 mcg EE Oral Contraceptive		Corrected OR (95% CI)
Progestin	Norethisterone	0.98 (0.71 -1.37)
	Levonorgestrel	1.0 (reference)
	Norgestimate	1.19 (0.96 -1.47)
	Desogestrel	1.82 (1.49 -2.22)
	Gestodene	1.86 (1.59-2.18)
	Drospirenone	1.64 (1.27-2.10)
	Cyproterone	1.88 (1.47 - 2.42)

Lidegaard, O., E. Lokkegaard, et al. (2009) BMJ 339: b2890



Risk of venous thrombosis associated with different types of progestogens in combined oral preparations.



van Hylckama Vlieg A et al. BMJ 2009;339:bmj.b2921



VT and drospirenone

	VT	IR	Rate ratio
Dinger ⁰⁷	118	9.1	1.0 (0.6-1.8) 4th/2nd
Vlieg ⁰⁹	1,524	na	1.7 (0.7-3.9) 4th/2nd
Lidegaard ⁰⁹	4,213	7.8	1.6 (1.3-2.1) 4th/2nd
Dinger ¹⁰	680	na	1.0 (0.5-1.8) 4th/2nd
Parkin ¹¹	61	2.3	2.7 (1.5-4.7) 4th/2nd
Jick ¹¹	186	3.1	2.8 (2.1-3.8) 4th/2nd
Lidegaard ¹¹	4,246	9.3	2.1 (1.6-2.8) 4th/2nd
FDA Kaiser ¹¹	625	7.6	1.5 (1.2-1.9) 4th/2nd
Gronich ¹¹	518	8.6	1.7 (1.0-2.7) 4th/2nd
Bird ¹³	354	18.0	1.9 (1.5-2.4) 4th/2nd



3

Hormonal contraceptives and venous thromboembolism: An epidemiological update



2013

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 Lorraine Maitrot-Mantelet, MD, Clinical Gynecologist^a,
 Justine Hugon-Rodin, MD, Clinical Gynecologist^a,
 Marianne Canonico, PhD, Research Fellow^{b,c}

Table 2

Risk of venous thrombotic events among drospirenone-containing combined oral contraceptive (COC) users compared with second generation COC users.

Authors, year of publication	Year of recruitment	Type of study	Number of cases	OR (95% CI)
Seeger et al., 2007 ³⁶	2001–2004	Cohort	44/67,287	1.0 (0.5–1.9)
Dinger et al., 2007 ³⁷	2000–2004	Cohort	51/58,674	1.1 (0.7–2.0)
Van Hylckama et al., 2009 ²⁵	1999–2004	Case control	504/387	1.7 (0.7–3.9)
Liedegaard et al., 2011 ⁴	2001–2009	Cohort	319/1,296,120	2.1 (1.7–2.8)
Jick et al., 2011 ³⁸	2002–2008	Nested case control	186/681	2.4 (1.7–3.4)
Parkin et al., 2011 ³⁹	2002–2009	Nested case control	61/215	3.3 (1.4–7.6)
FDA, 2011 ⁵	2001–2007	Cohort	305/246,381	1.5 (1.2–1.9)
Gronich et al., 2011 ⁴⁰	2002–2008	Cohort	122/95,175	1.6 (1.0–2.7)
			Pooled OR	1.7 (1.4–2.2)

Original research article

Cardiovascular and general safety of a 24-day regimen of drospirenone-containing combined oral contraceptives: final results from the International Active Surveillance Study of Women Taking Oral Contraceptives^{☆,☆☆}

Jürgen Dinger^{*}, Kristina Bardenheuer, Klaas Heinemann

ZEG-Berlin Center for Epidemiology and Health Research, Berlin, Germany
Received 4 December 2013; revised 27 January 2014; accepted 27 January 2014

2014

A total of 2285 study centers enrolled 85,109 women. Study participants were followed for 2 to 6 years, which generated 206,296 woman-years

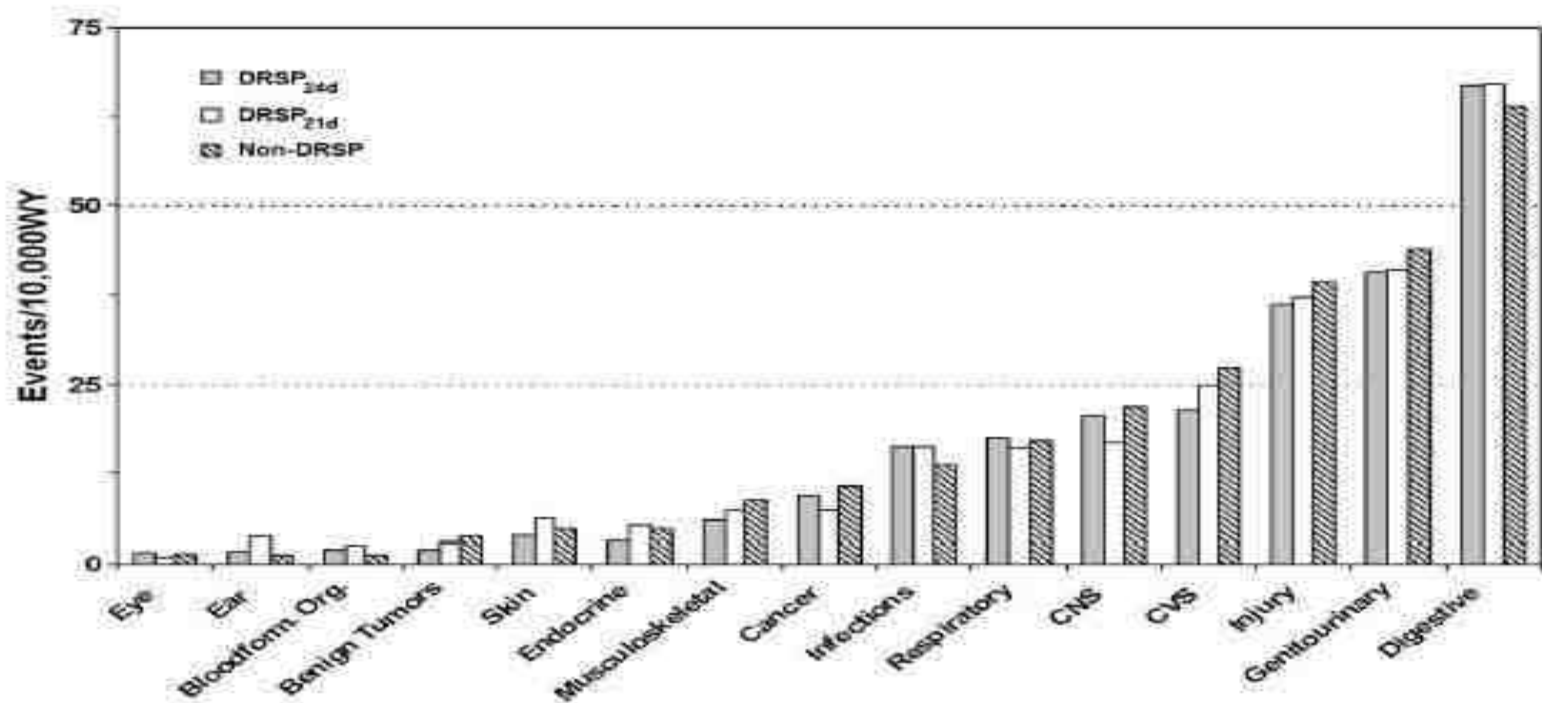


Fig. 1. SAEs by organ system (according to *International Classification of Diseases, 10th Edition*).

Table 4

VTE incidence rates, crude and adjusted HRs, and 95% CIs

VTE	(Sub)Cohort	Incidence (events/10,000 WY)		HR (DRSP _{24d} vs. comparators)			
		Point estimate	95% CI	Crude estimate	95% CI	Adjusted ^a estimate	95% CI
Confirmed	DRSP _{24d}	7.2	4.3-11.2	-	-	-	-
	Non-DRSP	9.6	7.8-11.6	0.8	0.5-1.3	0.8	0.5-1.3
	LNG	9.8	5.9-15.2	0.8	0.5-1.6	0.8	0.4-1.6
"Idiopathic"	DRSP _{24d}	4.9	2.6-8.4	-	-	-	-
	Non-DRSP	7.2	5.7-9.0	0.7	0.3-1.2	0.7	0.4-1.3
	LNG	7.2	3.9-12.1	0.7	0.3-1.6	0.7	0.3-1.6
Confirmed and potential	DRSP _{24d}	1.5	0.4-3.9	-	-	-	-
	Non-DRSP	2.8	1.9-4.1	0.8	0.5-1.3	0.8	0.5-1.3
	LNG	3.6	1.4-7.4	0.8	0.4-1.6	0.8	0.4-1.6

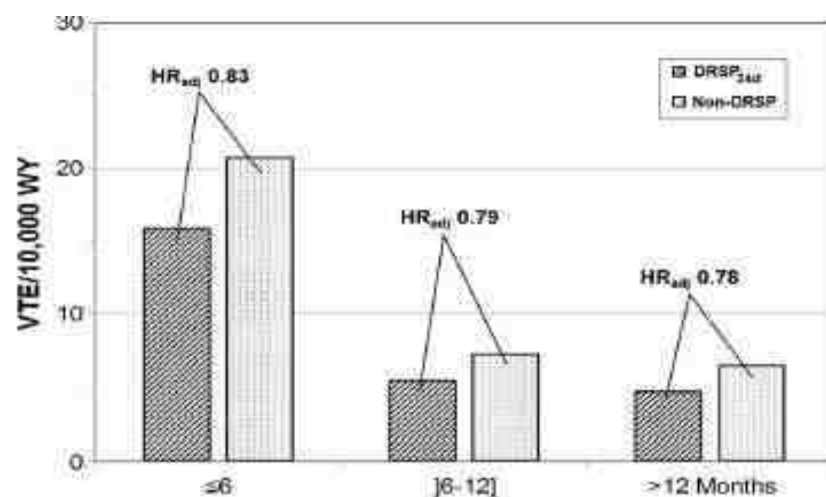
^a Adjusted for age, BMI, current duration of use and family history of VTE.

Table 5

Cox regression analysis of the risk of VTE: crude and adjusted HRs for additional comparisons of cohorts of interest.

Comparison groups	Crude		Adjusted	
	HR	95% CI	HR	95% CI
DRSP _{24d} vs. other OCs ^a	0.7	0.5-1.2	0.8	0.5-1.3
DRSP _{24d} vs. OCs _{21d}	0.8	0.5-1.2	0.8	0.5-1.3
DRSP _{24d} vs. non-DRSP _{24d}	0.6	0.3-1.2	0.8	0.4-1.6
DRSP _{20µg EE} vs. DRSP _{30µg EE}	0.8	0.4-1.7	0.9	0.5-1.9
DRSP _{24d} vs. OC _{3p}	0.7	0.4-1.2	0.8	0.5-1.3
DRSP _{30µg} vs. LNG _{30µg}	1.0	0.4-2.3	0.9	0.4-2.1
DRSP _{20µg} vs. LNG _{20µg}	0.8	0.3-1.8	0.7	0.3-1.8

OC_{21d}, all COCs with a 21-day regimen (including DRSP-containing OCs); non-DRSP_{24d}, 24-day regimens of all OCs without DRSP; DRSP_{20µg EE}, DRSP-containing COC with 20 µg of EE; DRSP_{30µg EE}, DRSP-containing COC with 30 µg of EE; OC_{3p}, OC without gestodene, desogestrel and DRSP; LNG_{30µg}, levonorgestrel-containing COC with 30 µg of EE; LNG_{20µg}, levonorgestrel-containing COC with 20 µg of EE.

Fig. 2. VTE risk for different exposure periods: incidence rates and adjusted HRs for DRSP_{24d} vs. non-DRSP for each exposure period.

68,168

Risk of venous thrombosis in users of hormonal contraceptives in German gynaecological practices: a patient database analysis

M. Ziller · V. Ziller · G. Haas · J. Rex ·
K. Kostev

1 y1

Fig. 2 Share of women with a recorded diagnosis of thrombosis within 12 months after initial prescription of defined contraceptive substance

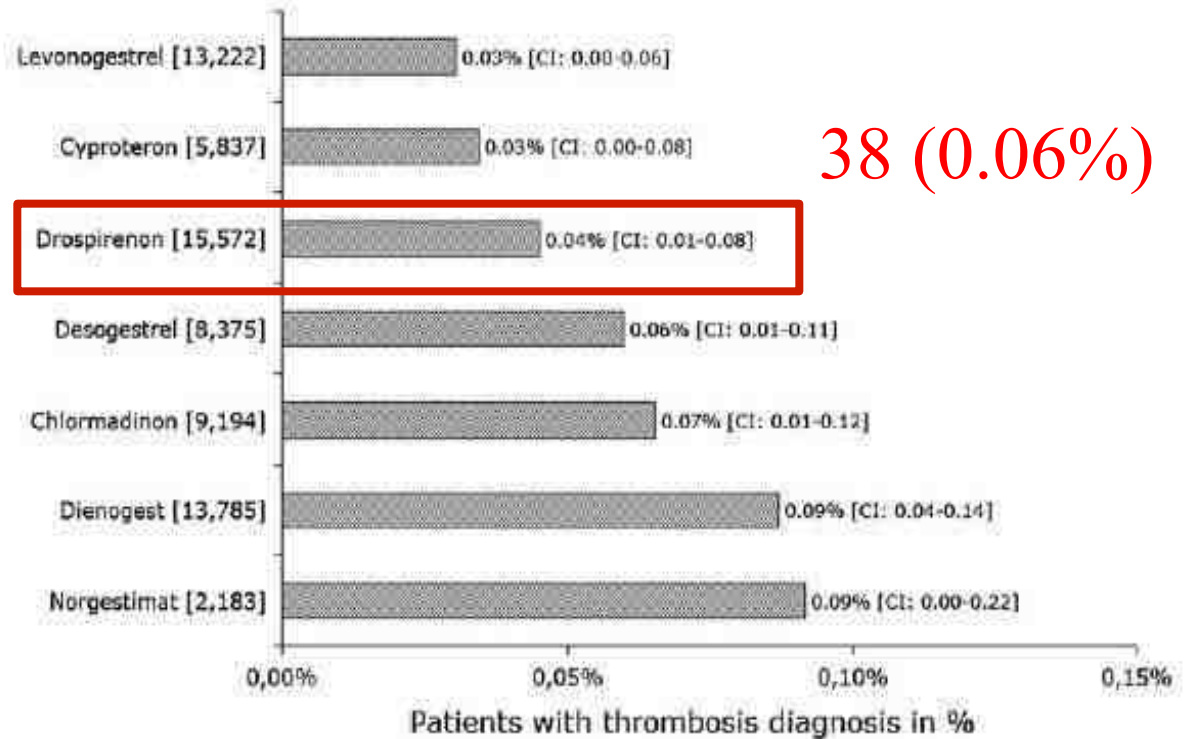
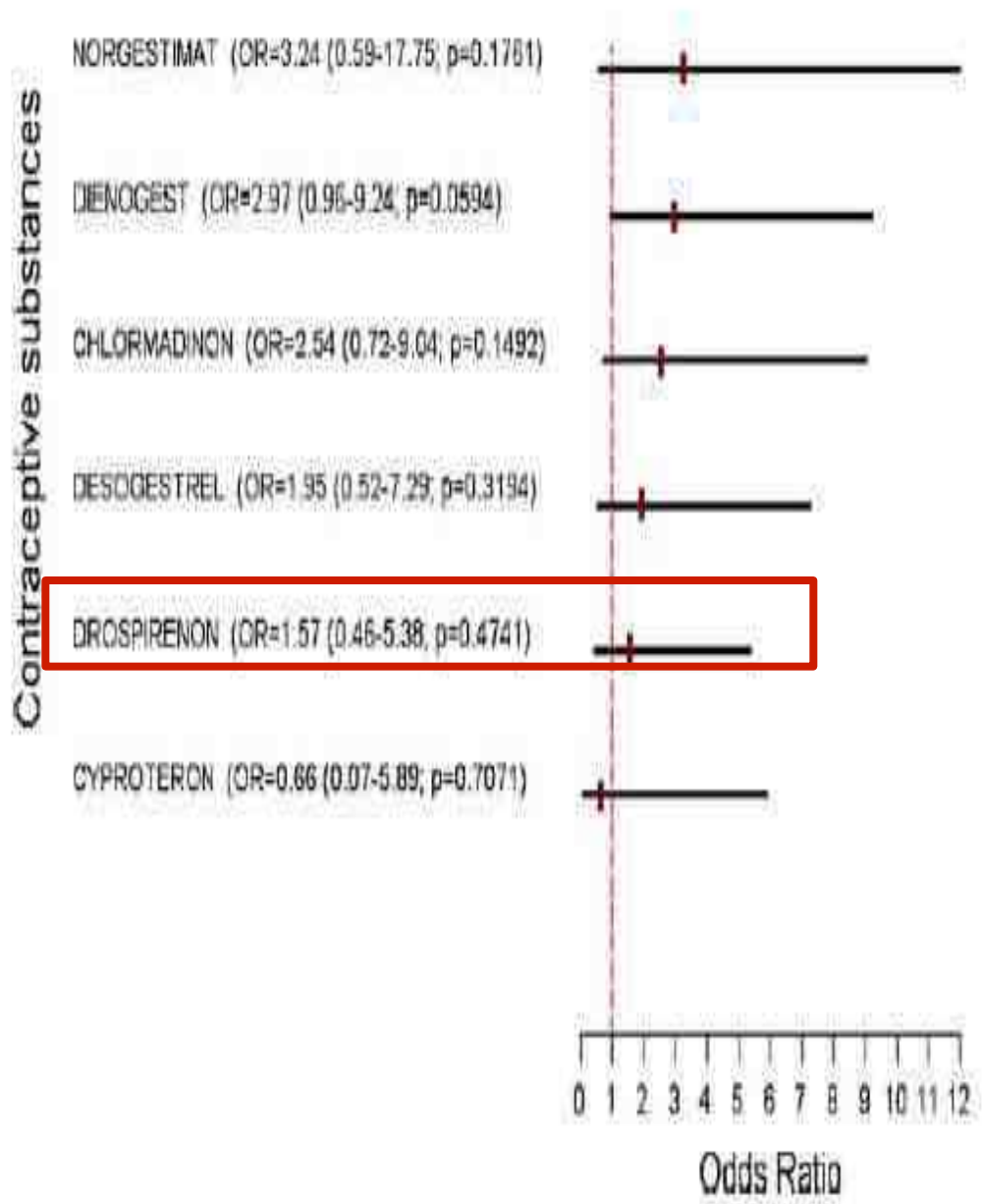


Fig. 3 Association between contraceptive use with incidence of thrombosis in patients treated in German gynecological practices: logistic regression analyses (levonorgestrel is the reference group)



Use of combined oral contraceptives and risk of venous thromboembolism: nested case-control studies using the QResearch and CPRD databases

2015

Yana Vinogradova, Carol Coupland, Julia Hippisley-Cox

İngiltere 15-49 yaş arası 2001-2013 arasında ilk kez VTE tanısı alan 42 034 kadın

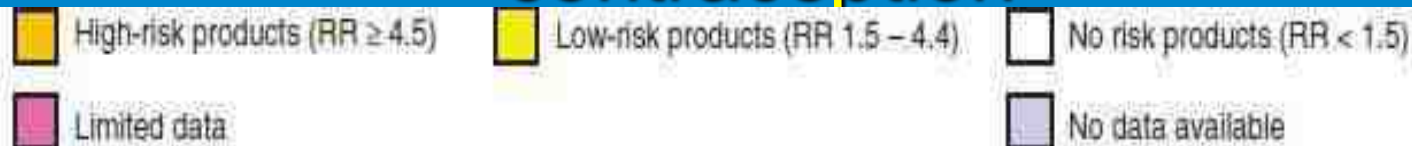
Table 6 | Numbers needed to harm and excess cases per 10 000 patients for different combined oral contraceptives prescribed over one year

Use in previous year	Numbers needed to harm over 1 year (95% CI)		Extra cases per 10 000 treated per year (95% CI)	
	All ages (15-49 years)*	Age 25-49 yearst	All ages (15-49 years)*	Age 25-49 yearst
Norethisterone	1529 (1159 to 2086)	1169 (874 to 1620)	7 (5 to 9)	9 (6 to 11)
Levonorgestrel	1739 (1506 to 2028)	1452 (1237 to 1723)	6 (5 to 7)	7 (6 to 8)
Norgestimate	1561 (1223 to 2044)	1428 (1077 to 1966)	6 (5 to 8)	7 (5 to 9)
Desogestrel	729 (597 to 899)	594 (478 to 747)	14 (11 to 17)	17 (13 to 21)
Gestodene	905 (697 to 1198)	752 (570 to 1016)	11 (8 to 14)	13 (10 to 18)
Drospirenone	766 (604 to 986)	572 (438 to 758)	13 (10 to 17)	17 (13 to 23)
Cyproterone	731 (582 to 932)	606 (465 to 804)	14 (11 to 17)	17 (12 to 22)

*Based on combined adjusted odds ratios in table 2.

†Based on combined adjusted odds ratios in table 4.

Venous thromboembolism and hormonal contraception



Estrogen dose (μg)	Norethisterone	Levonorgestrel	Norgestimate	Desogestrel or etonogestrel	Gestodene	Drospirenone	Cyproterone acetate
<i>Combined hormonal contraception</i>							
50	6						
30–40	3	3	3	6	6	6	6
20				5		6	
E2	E2V DNG 4.5			E2 NOMAC			
Non-oral			Patch 7	Vaginal ring 6			
<i>Progestin only contraception</i>							
Oral	1			Desogestrel 1		Drospirenone	
Non-oral	Depot 2	LNG-IUS 1		Implant 1.4			

Figure 2. The relative risk of venous thromboembolism in current users of different types of hormonal contraception according to estrogen dose, progestin type and route of administration. Nonusers reference group.

DNG: Dienogest; E2: Estradiol (natural estrogen); E2V: Estradiolvalerate; LNG-IUS: Levonorgestrel intrauterine system; NOMAC: Nomegestrol acetate; RR: Relative risk;

Box 1. High-Risk Factors for Venous Thromboembolism in Users of Combined Oral Contraceptives* ←

- Smoking and age 35 years or older
- Less than 21 days postpartum or 21–42 days postpartum with other risk factors
- Major surgery with prolonged immobilization
- History of deep vein thrombosis or pulmonary embolism
- Hereditary thrombophilia (including antiphospholipid syndrome)
- Inflammatory bowel disease with active or extensive disease, surgery, immobilization, corticosteroid use, vitamin deficiencies, or fluid depletion
- Systemic lupus erythematosus with positive (or unknown) antiphospholipid antibodies

*Oral contraceptive use in women with these conditions is classified as U.S. Medical Eligibility Criteria Category 3 (theoretical or proven risks usually outweigh the advantages of using the method) or Category 4 (condition that represents an unacceptable health risk if the contraceptive method is used).

Data from U.S. Medical Eligibility Criteria for Contraceptive Use, 2010. Centers for Disease Control and Prevention (CDC). *MMWR Recomm Rep* 2010;59(RR-4):1–86 [[PubMed](#)] [[Full Text](#)] *and Update*

Drospirenone-containing oral contraceptive pills and the risk of arterial thrombosis: a systematic review 2013

Table 4. Rates of arterial thrombosis in comparative studies examining the thrombotic effects of drospirenone-containing oral contraceptive pills

Study	DRSP <i>n</i> *	Comparator <i>n</i>	DRSP users		Comparator		Effect measure	Point estimate	95% CI
			IR†	95% CI	IR†	95% CI			
Drospirenone versus levonorgestrel-containing OCP users									
FDA 2011 (all users) ¹¹	142 166	198 839	10.8	NR	16.4	NR	HR	0.81	0.45–1.44
FDA 2011 (new users) ¹¹	109 070	137 311	25.5	NR	22.8	NR	HR	1.64	0.79–3.40
Gronich 2011 ²³	73 629	21 546‡	58§	NR	123§	NR	RR	0.87	0.56–1.33
LASS 2011 ¹⁰	NR	NR	13	5, 28	38	24, 58	HR	0.4	0.2–0.9
Drospirenone-containing OCP versus other OCP users									
FDA 2011 (all users) ¹¹	142 166	586 278	10.8	NR	14.4	NR	HR	0.99	0.58–1.69
FDA 2011 (new users) ¹¹	109 070	383 151	25.5	NR	17.6	NR	HR	2.01	1.06–3.81
LASS 2011 ¹⁰	NR	NR	13	5, 28	32	22, 45	HR	0.4	0.2–0.8
Drospirenone-containing OCP versus non-users of OCPs									
Lidegaard 2012 (stroke) ²⁹	NR	NR	18.1	NR	24.2	NR	Relative Risk	1.64	1.24–2.18
Lidegaard 2012 (MI) ^{29¶}	NR	NR	6.3	NR	13.2	NR	Relative Risk	1.65	1.03–2.63

CI, confidence interval; Comparator *n*, sample size of the comparison group, those unexposed to drospirenone-containing OCPs; DRSP, drospirenone; DRSP *n*, sample size of the group of patients on drospirenone-containing OCPs; FDA, Food and Drug Administration; HR, hazard ratio; IR, incidence rate; LASS, Long-term Active Surveillance Study; MI, myocardial infarction; NR, not reported. OCP, oral contraceptive pill; RR, rate ratio.

*Patients were given OCPs containing drospirenone and ethinyl estradiol (EE) in combination.

†Incidence rate per 100 000 women-years.

‡Comparator group includes women taking levonorgestrel/EE and norgestrel/EE.

§Crude incidence rate.

||Data reported are for OCPs containing 30–40 µg of EE; for 20 µg of EE, the IR_{DRSP} is 8.7 and the relative risk is 0.88 (95% CI 0.22–3.53).

¶Data reported are for OCPs containing 30–40 µg of EE; for 20 µg of EE, the IR_{DRSP} is 0 and the relative risk is 0 (95% CI 0.00–12.99).

Hormonal contraception, thrombotic stroke and myocardial infarction

High-risk products (RR ≥ 4.5)
 Low-risk products (RR 1.5 – 4.4)
 No risk products (RR < 1.5)
 No data available

Estrogen dose (μg)	Norethisterone	Levonorgestrel	Norgestimat	Desogestrel or etonogestrel	Gestodene	Drospirenone	Cyproterone acetate
<i>Combined hormonal contraception</i>							
50	3*						
30 – 40	2.2*	1.7*	1.5*	2.2*	1.8*	1.6*	1.4
20				1.5*	1.7*	0.9	
E2	E2V DNG			E2 NDMAC			
Non-oral			Patch 3.2	Vaginal ring 2.5*			
<i>Progestin only contraception</i>							
Oral	1.4			Desogestrel 1.4		Drospirenone	
Non-oral	Depot 1	LNG-IUS 1		Implant 1			

Figure 3. The relative risk of thrombotic stroke in current users of different types of hormonal contraception according to estrogen dose, progestin type and route of administration. Nonusers reference group.

*Indicates a significantly increased risk.

DNG: Dienogest, E2: Estradiol (natural estrogen); E2V: Estradiolvalerate; NOMAC: Noregestrol acetate; RR: Relative risk.

Çok düşük doz OK:20 mg EE (Kar-zarar analizi)

- Kontraseptiv etkinliği aynı mı ?
 - **Evet**
- Siklüs kontrolünde etkin mi ?
 - **Evet**
- Östrojenik yan etkiler daha az mı ?
 - **Evet Ama kompliyans oranları düşük dozlu OK ile aynı**
- Kardiovasküler yan etkiler daha az sıklıkla görülüyor ?
 - **Muhtemelen aynı (VTE riski aynı ?, MI riski az, stroke riski daha az)**
- Non-kontraseptiv yararlı etkileri aynı mı?
 - **Benzer**

Kombine Oral Kontresptifler KOK

● 30mcg ve altı östrojen içerenler 50 yaşa kadar kullanılabilir:

- ***Sağlıklı***
- Sigara içmeyen
- Normal kilo
- Hipertansiyon olmayan
- Kendisinde ve Birinci derece akrabalarında venöz tromboemboli hikayesi yok
- Kardiovasküler hastalığı yok
- Diabeti olmayan

Kombine Oral Kontraseptifler

Kimler kullanmamalıdır?

- 35 yaş üstü, günde 20 den fazla sigara içenler
- Obezite
- Nörolojik bulgu veren migren
- Emziren anneler (ilk 6 ay)
- Meme Ca hikayesi veya şüpheli meme lezyonlarının varlığı
- Tromboflebit ve tromboembolik olay öyküsü (mevcut, geçirilmiş)

Oral Contraception

Ginger Evans, MD^{a,*}, Eliza L. Sutton, MD^b

Box 2

Proven benefits and unproven/disproven noncontraceptive effects of COCs

Proven Benefits

Acne

- All COCs are effective.¹²
- New antiandrogenic progestins (eg, drospirenone) are superior in some trials.^{12–14}

PCOS

- COCs are effective for associated menstrual disorders, acne, and hirsutism.¹⁵

Primary dysmenorrhea^{16–18}

Secondary dysmenorrhea from endometriosis^{15,19,20}

PMDD²¹

- Only drospirenone-containing COCs have demonstrated a benefit
- Trials of other COCs have not shown a benefit over placebo

Menorrhagia^{22,23}

Reduction in risk of endometrial, ovarian, and colon cancer²⁴

Unproven or disproven effects of COCs

PMS^{25,26}

Leiomyoma growth²²

Functional ovarian cysts (treatment)²⁷

Bone mineral density²⁸

Abbreviations: PCOS, polycystic ovary syndrome; PMDD, premenstrual dysphoric disorder; PMS, premenstrual syndrome.

Controversies in endometriosis and adenomyosis

Istanbul, Turkey
26-28 February 2016

European Society of Human Reproduction and Embryology



ESHRE Campus Symposium



organised by **ESHRE**
Special Interest Group
Endometriosis / Endometrium
In association with the Turkish
Society of Endometriosis and
Adenomyosis

Course description

This course on endometriosis and adenomyosis provides an opportunity to discuss the most appropriate approach to its diagnosis and management. Lectures will also present current options for treatment of pain and infertility associated with endometriosis.

[Read more >](#)

Programme



[View the programme](#)

Venue



Shangri-La Bosphorus Hotel
Sinanpasa Mah, Hayrettin Iskelesi
Sok, No.1, Besiktas
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Travel and accommodation



to be confirmed

Registration



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