



Hormonal contraception and use of antidepressants



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Hormonal contraception and use of antidepressants

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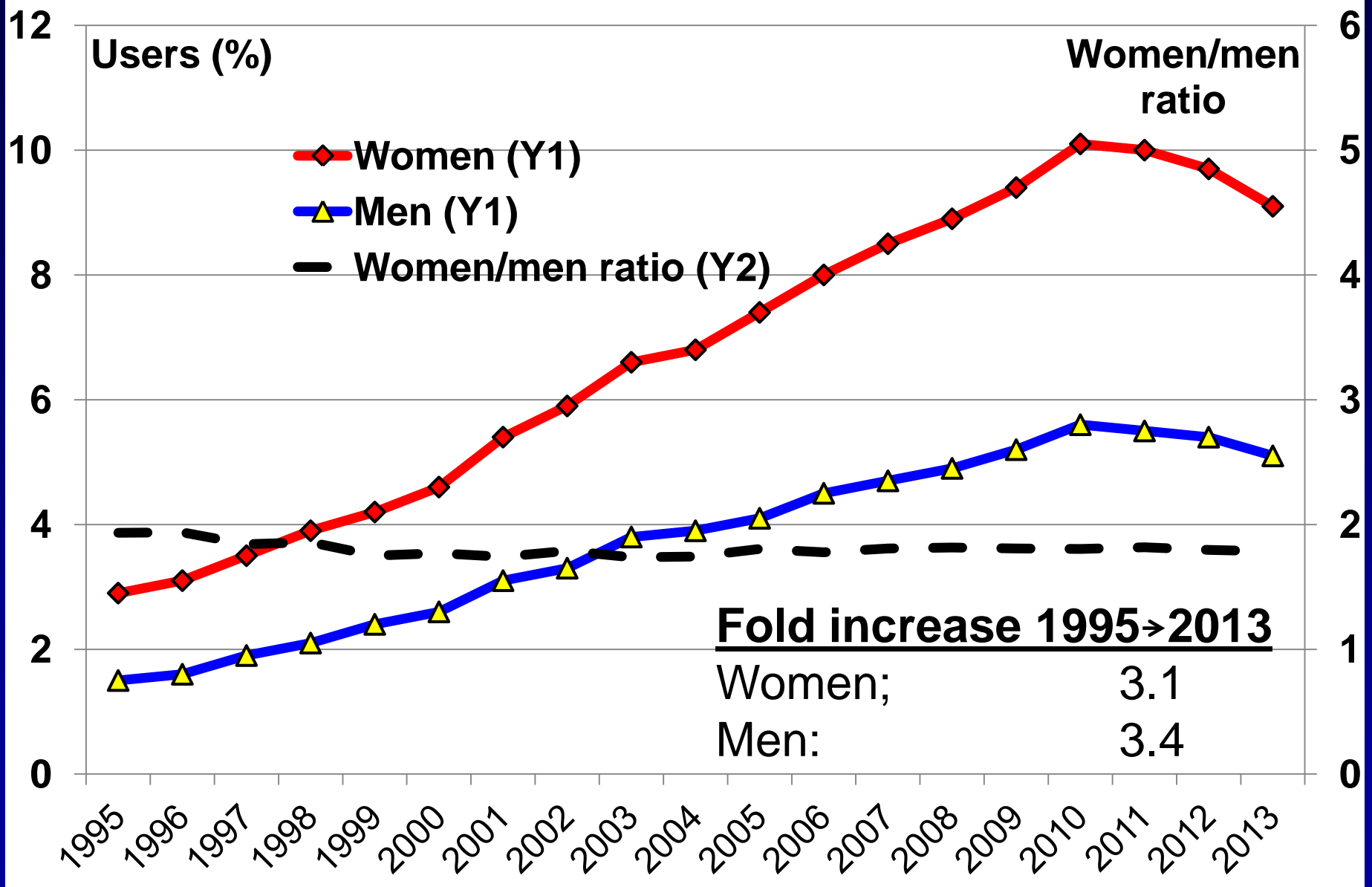
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Hormonal contraception and depression

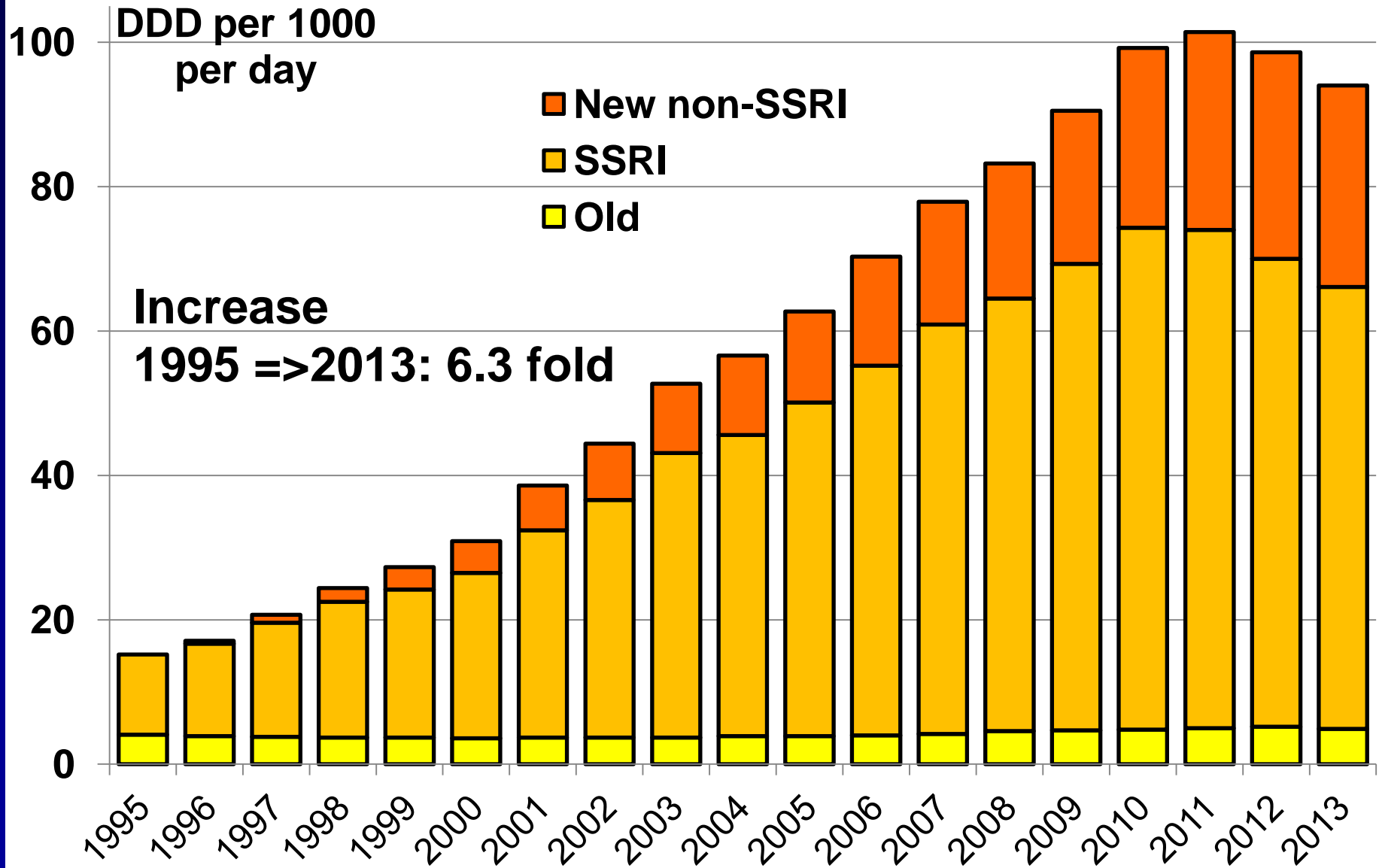
Background

- Female sex hormones have an influence on women's mood
 - Exogenous hormones may likewise have an influence on women's mood
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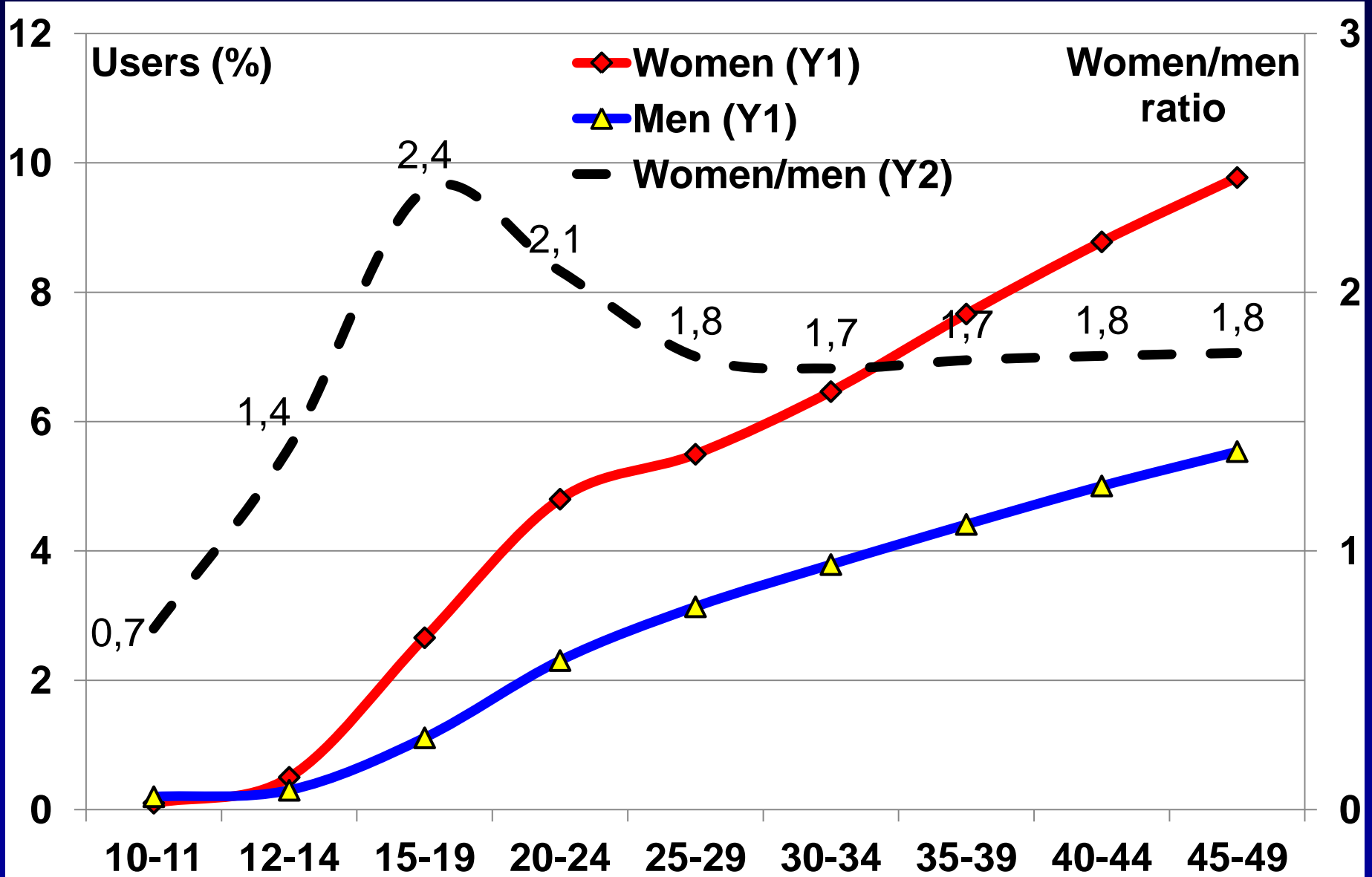
Users of AD in a year



Use of AD in women 1995-2013



Users of AD acc to age 1995-2013



Danish infrastructure

National Psychiatry Registry (>1989)

Depression diagnoses
In- and out patients
Only hospitalised (5%)

Prescription Registry (>1994):

HC use,
Medication against
depression, all other
prescriptions

1995

→ 2013

Cause of Deaths Registry (>1977)

Suicides

Statistics of Denmark

PIN-codes, education
vital status, emigration

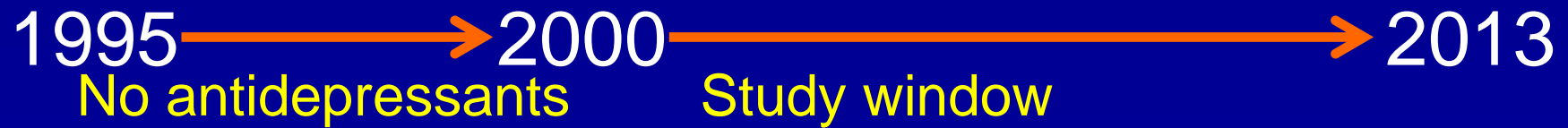
HC & AD: Methods

Included

- All women (& men) in Denmark 1995-2013
- 15-49 years old
- With a Danish PIN

Exclusion/censoring

- Delivering women
- Women with cancer
- Women with previous depression diagnoses



HC & AD: Methods

Included confounders

- Age
- Calendar year
- Education
- Parity: Nulliparous versus parous

Statistical analysis

- Poisson regression analysis
-

HC & AD: Results

Included

- 1.2 mio women 15-49 years included
 - 8.6 mio women years of observation
 - 0.14 mio users of antidepressants
 - Categorisation of hormonal contraceptives:
-

Hormonal contraception

Combined - route

<u>Combined products</u> (estrogen and progestogen)							
Oral							
Non oral							
<u>Progestogen only products</u>							
Oral							
Non oral							

Hormonal contraception

Combined – route – e-dose – e-type

<u>Combined products</u> (estrogen and progestogen)							
Middle 30-40 µg							
Low 20 µg							
Natural estrogen							
Non-oral							
<u>Progestogen only products</u>							
Oral							
Non-oral							

Hormonal contraception

Combined – route – e-dose – e/p-type

EE dose	NETA Norethisterone	LNG Levonorgestrel	NGM Norgestimate	DGS Desogestrel	GSD Gestodene	DRSP Drospirenone	CPA Cyproteroneacetate
<u>Combined products</u>							
Middle							
Low							
Nat e							
N-oral							
<u>Progestogen only products</u>							
Oral							
N-Oral							

Hormonal contraception - generations

Combined – route – e-dose – e/p type

EE dose	NETA Norethisterone	LNG Levonorgestrel	NGM Norgestimate	DGS Desogestrel	GSD Gestodene	DRSP Drospirenone	CPA Cyproteroneacetate
<u>Combined products</u>							
Middle	1st		2nd gen		3rd gen		4th gen
Low							
Nat o/e							
N-oral							
<u>Progestogen only products</u>							
Oral							
N-oral							

Hormonal contraception

Combined – route – e-dose – e/p type

EE dose	NETA Norethisterone	LNG Levonorgestrel	NGM Norgestimate	DGS Desogestrel	GSD Gestodene	DRSP Drospirenone	CPA Cyproteroneacetate
<u>Combined products</u>							
Middle	1st	2nd gen		3rd gen		4th gen	
Low							
Nat oe		E2V-DNG			E2 NOMAC		
N-oral			Patch	Vaginal ring			
<u>Progestogen only products</u>							
Oral	POP			Desogestrel		DRSP	
N-oral		IUS		Implant		Depot	

Hormonal contraception & use of antidepressants

Nulliparous, 15-34 years old

Low risk <1.5		Med. Risk 1.5-1.9			High risk ≥2		No data	
EE dose	NETA Norethisterone	LNG Levonorgestrel	NGM Norgestimate	DGS Desogestrel	GSD Gestodene	DRSP Drospirenone	CPA Cyproteroneacetate	
Combined products								
Middle 30-40 ug	1.1 1.0-1.3	1.41 1.36-1.46	1.36 1.32-1.41	1.51 1.46-1.58	1.38 1.35-1.41	1.55 1.51-1.59	1.7 1.62-1.74	
Low 20 µg EE				1.32 1.29-1.35	1.33 1.30-1.36	1.52 1.44-1.61		
Nat E2	2.1 1.7-2.6		E2V-dienogest		4.6 1.1-18.3		E2 NOMAC	
Non oral	Patch → 2.3 2.0-2.6		1.9 1.8-2.0		← Vaginal Ring			
Progestogene only products								
Oral	1.7 1.5-1.8		Cerazette → 1.8 1.7-2.0				MPA depot	
Non oral	← LNG-IUS		2.1 1.9-2.3		2.9 2.7-3.1		← Implant	
							3.0 2.7-3.3	

Hormonal contraception use of antidepressants

Nulliparous, 15-19 years old

Low risk <1.5		Med. Risk 1.5-1.9			High risk ≥2		No data
EE dose	NETA Norethisterone	LNG Levonorgestrel	NGM Norgestimate	DGS Desogestrel	GSD Gestodene	DRSP Drospirenone	CPA Cyproteroneacetate
Combined products							
Middle 30-40 ug	1.6 1.3-2.0	2.0 1.8-2.1	2.2 2.1-2.3	2.6 2.4-2.8	2.2 2.1-2.3	2.2 2.1-2.3	2.3 2.1-2.4
Low 20 µg EE				1.9 1.9-2.0	1.9 1.9-2.0	2.1 1.9-2.2	
Nat E2	2.2 1.5-3.2	E2V-dienogest			10.5 1.5-75	E2 NOMAC	
Non oral	Patch → 3.9 3.2-4.6		3.5 3.2-3.8	← Vaginal Ring			
Progestogene only products							
Oral	2.3 1.9-2.9	Cerazette → 2.7 2.3-3.1			MPA depot		
Non oral	← LNG-IUS	4.3 3.5-5.4	4.3 3.9-4.7	← Implant	5.0 4.4-5.6		

Hormonal contraception and use of antidepressants

Conclusion

Product type	Age:	15-34	15-19
All HC on average		2	3
Combined OC		1½	2
All other HC products		2-3	3-5
