

Contraception and peri-menopause

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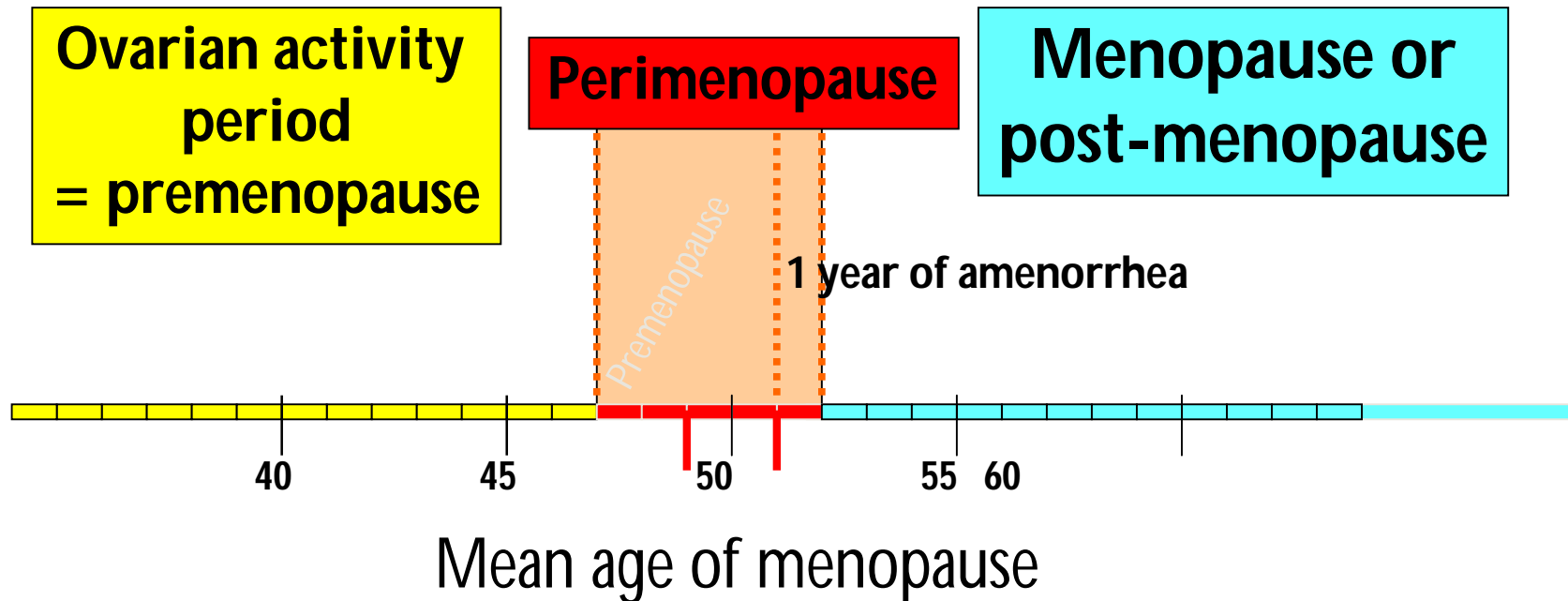
Definition of peri-menopause

Menopausal transition

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Interval in which a woman's body makes a natural shift from more-or-less regular cycles of ovulation and menstruation toward permanent infertility, or menopause

Menopause: progressive transition

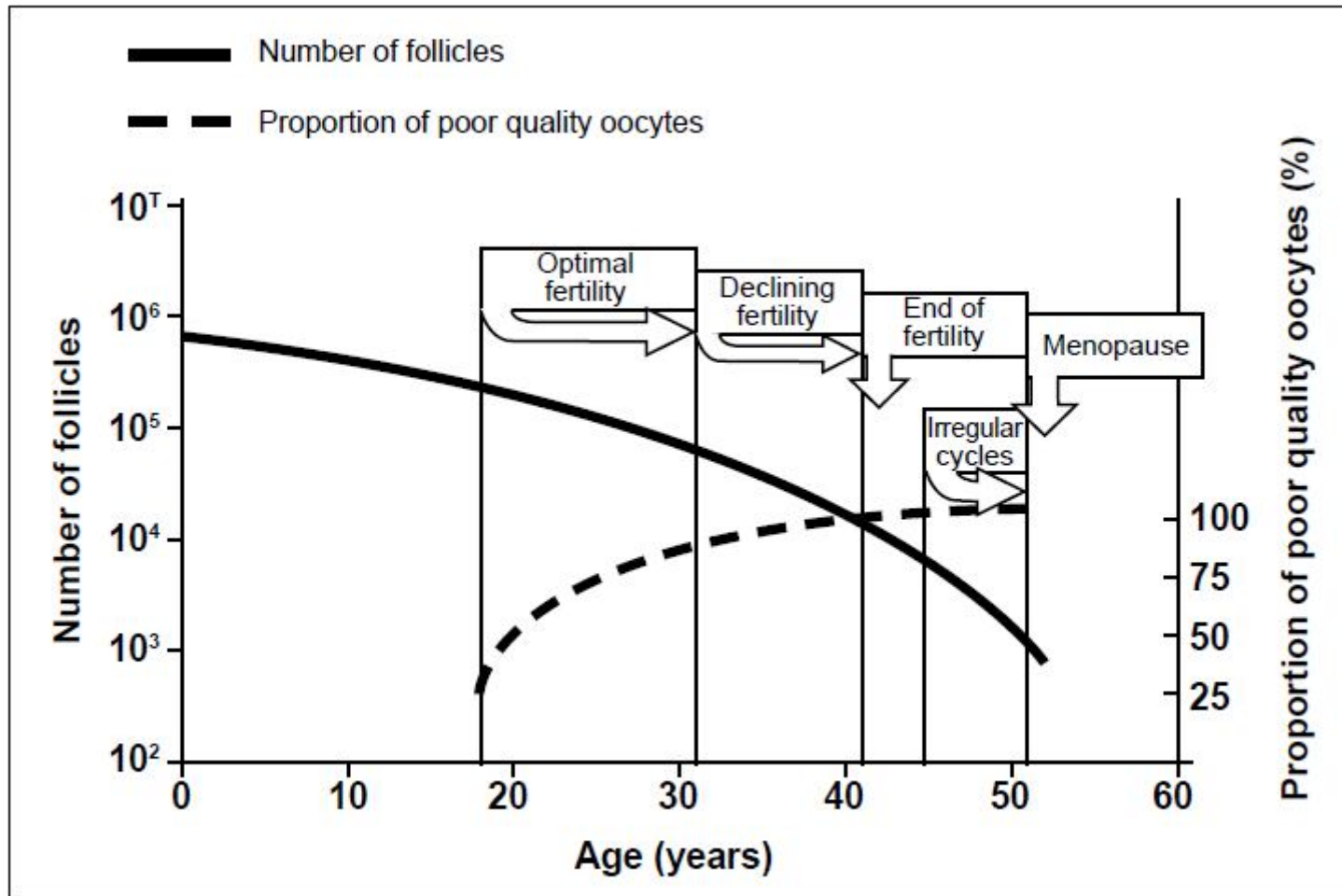


Symptoms of perimenopause

- Cycle perturbation (menstrual irregularities)
- Luteal Insufficiency)

Fertility and peri-menopause

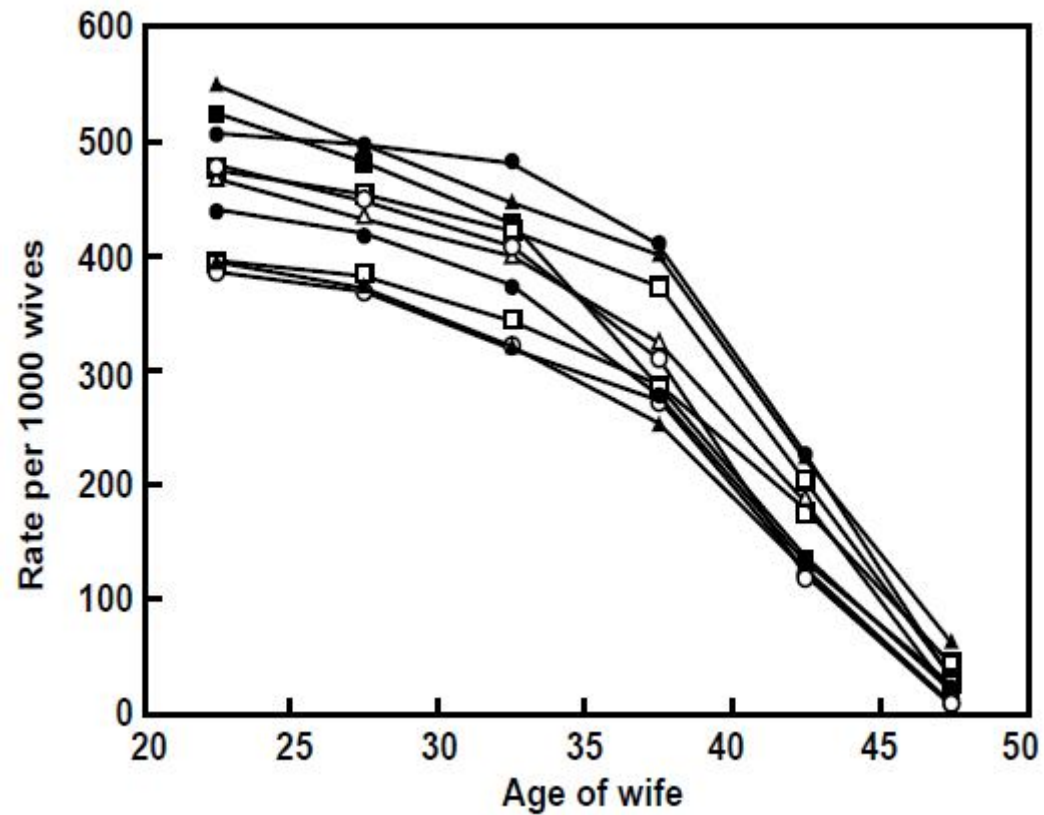
- Progressive loss of follicular population
 - 6 to 7 10^6 at 20 week's gestation
 - 1 to 2 10^6 at birth
 - 300 to 500.000 at puberty
 - a few hundred at the MNP
- The reproductive potential is variable even with apparently normal menstrual cycles



Graph was drawn after Hansen et al. and de Bruin et al.

Broekmans FJ, Soules MR, Fauser BC. Ovarian aging: mechanisms and clinical consequences. *Endocr Rev* 2009;30:465–93.12 Copyright 2009, The Endocrine Society. Reproduced with permission.

Natural fertility by age



Menken J, Trussell J, Larsen U. Age and infertility. *Science* 1986; 233(4771):1389-1394.4 Reprinted with permission from AAAS.

Fertility and peri-menopause

- Evaluation

- US: antral follicles count and ovarian volume
- Basal FSH: cut off of 10 IU/ml, ≥ 15 IU/ml
- Inhibin-B < 45 pg/ml
- AMH: cut off 0.2 ng/ml

Risks of an Unplanned Pregnancy in Perimenopause

- Risk on unwanted pregnancies
- Pregnancy and health risk
- Miscarriage risk 50%

Birth Control at Midlife

- Protection to prevent pregnancy
- Protection to prevent STD

Birth Control methods

- Barriers: Condom, spermicide, IUD, sterilization, vasectomy, hysterectomy
- CHC: ☹️ co-morbidities
- Progestins



Essure

- Advantages:
 - Effective outpatient procedure
 - Requiring only oral anaesthesia
 - Ideal procedure for women with co-morbidities (obesity, cardiorespiratory disease, complex abdominal issues)
- Disadvantages:
 - Expensive, not reimbursed
 - Expertise
 - Not effective immediately

Contraception methods and age in UK

% Current use of contraception	Age (years)				
	16-19	20-24	30-34	40-44	45-49
Pill	54	54	46	10	13
Condom	65	50	32	21	11
Withdrawal	3	7	8	6	4
IUD	0	4	6	9	11
IUS	2	0	3	3	4
Diaphragm	0	0	1	0	1
Rhythm method	3	0	2	4	5
Female sterilization	0	3	2	18	19
Vasectomy	0	1	10	28	30

Gebbie and Hartmann, Menopause Intl 2010

Sexually active women using contraception in Belgium (%)

		Oui	Non
	15-19 ans	83,5	16,5
	20-24 ans	86,4	13,6
	25-29 ans	82,9	17,1
	30-34 ans	71,9	28,1
	35-39 ans	74,0	26,0
	40-44 ans	69,1	30,9
	45-49 ans	63,4	36,6

Abortion in Belgium

âge catégorie	nombre						%					
	2004	2005	2006	2007	2008	2009	2004	2005	2006	2007	2008	2009
10-14	88	84	83	107	105	79	0,55	0,50	0,47	0,59	0,56	0,419
15-19	2188	2301	2531	2601	2588	2595	13,66	13,78	14,35	14,42	13,92	13,75
20-24	4002	4139	4310	4423	4629	4808	24,98	24,79	24,43	24,53	24,89	25,48
25-29	3628	3873	4084	4156	4346	4376	22,65	23,20	23,15	23,05	23,37	23,19
30-34	3131	3093	3191	3369	3445	3612	19,54	18,53	18,09	18,68	18,53	19,14
35-39	2094	2248	2463	2375	2516	2389	13,07	13,47	13,96	13,17	13,53	12,66
40-44	836	882	901	915	901	928	5,22	5,28	5,11	5,07	4,85	4,918
45-49	53	74	74	87	64	82	0,33	0,44	0,42	0,48	0,34	0,435
50-54	1	0	3	0	1	1	0,01	0,00	0,02	0,00	0,01	0,005
total	16021	16694	17640	18033	18595	18870	100,00	100,00	100,00	100,00	100,00	100,00
pas de réponse	3	2	0	0	0	0						
total gén.	16024	16696	17640	18033	18595	18870						

Emergency contraception

- Embarrassing to ask for it
- All methods can be used as in younger women (IUD, LNG, UA)

IUD

- Advantages: safe and efficient
- Disadvantages: Weak tolerance
 - Abnormal uterine cavity (myomas)
 - No effect on DUB
 - No effect on vasomotor symptoms

LNG-IUD: advantages

- Contraception + DUB control
- Can be combined with estrogens in case of vasomotor symptoms
- Can be maintained when MNP occurs: as part of a hormone replacement therapy regimen

LNG-IUS: disadvantages

Some women experienced hormonal side effects

- Breast pain
- Fluid retention
- Acne
- Mood swings

CHC

- Advantages: stable hormonal situation
- Disadvantages
 - 2^d generation: lipidic profile and glucidic tolerance
 - 3^d and 4th: coagulation factors

Non contraceptive benefits of CHC in older women

Non-contraceptive benefits of combined hormonal contraception for older women

- Reduces heavy, painful or irregular menstrual bleeding
 - Prevents formation of functional ovarian cysts
 - Can be used as a treatment for endometriosis
 - Lowers the risk of hysterectomy and other operative gynaecological procedures
 - Can help symptoms of premenstrual syndrome in some women
 - Will treat hot flushes and night sweats in women with early menopause
 - Maintains bone density in women with early menopause
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Gebbie and Hartmann, Menopause Intl 2010

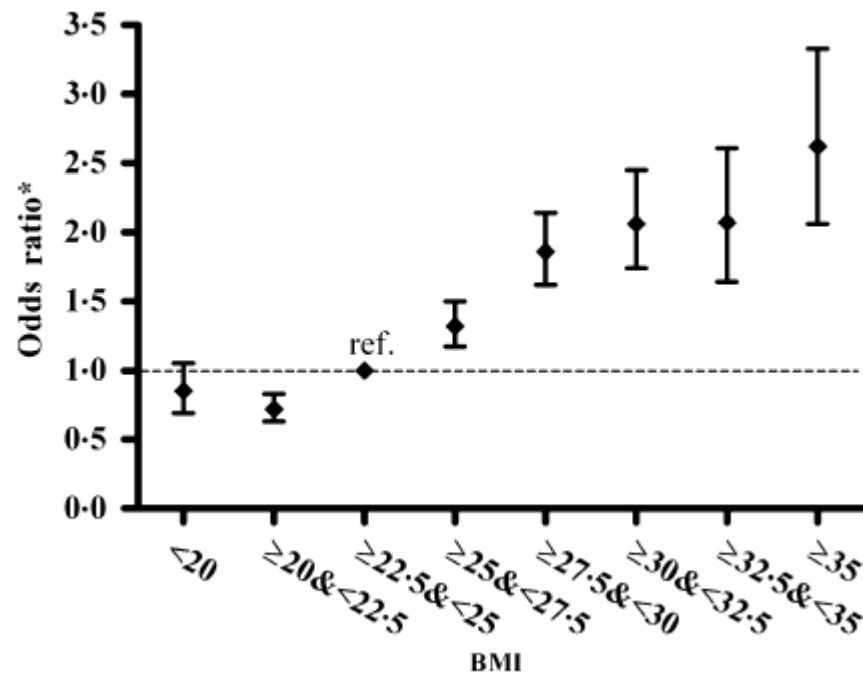
CHC: no restriction of use or advantages > risks

- History of gravidic hypertension and normal tension
- Overweight: $30 < \text{BMI} < 34$
- Familial history of VTE > age of 45
- Varicosity, superficial phlebitis
- Valvular disease without complication

CHC: more risks than benefits

- Treated Hypertension
- Mild Hypertension: 140-149/90-99
- Smoking: < 15 cigarettes
- Dyslipidemia
- Obesity: BMI \geq 35
- Gallbladder disease needing treatment

VTE and BMI

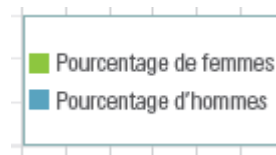
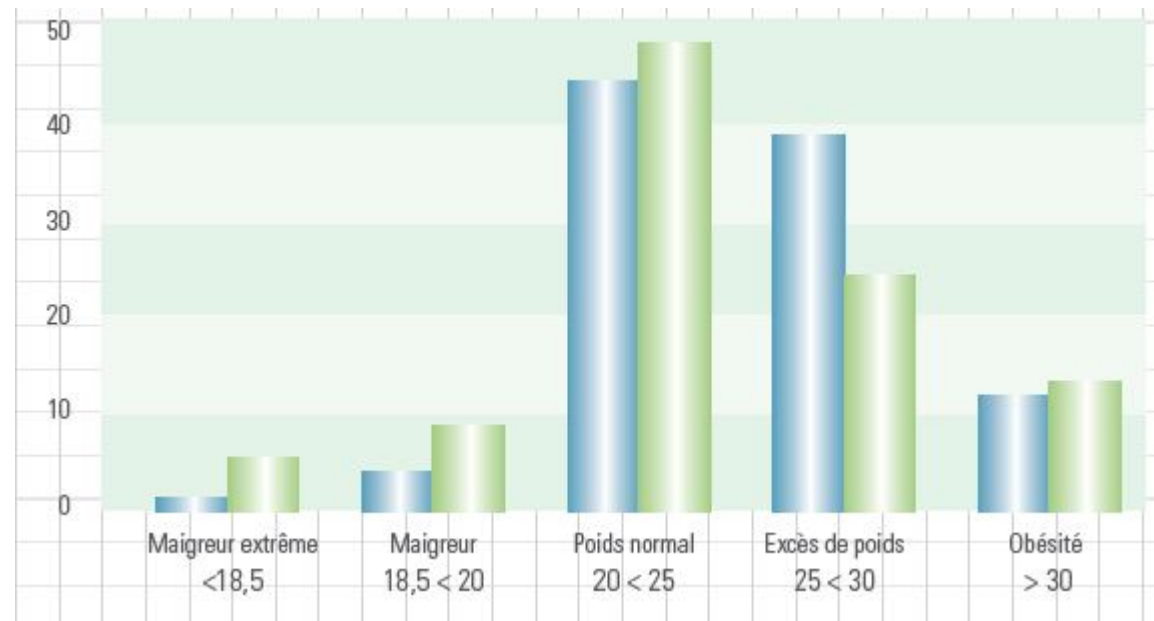


BMI (kg/m ²)	OC use	Patients	Control subjects	OR*	95% CI
<25	No	51	167	1	
≥25 & <30	No	27	34	2.52	1.38-4.57
≥30	No	28	30	3.04	1.66-5.57
<25	Yes	260	233	4.15	2.85-6.03
≥25 & <30	Yes	178	55	11.63	7.46-18.14
≥30	Yes	132	19	23.78	13.35-42.34

OR, odds ratio; CI, confidence interval.

Pomp Br J Haematol 2007;139:289-96

BMI in Belgium



CHC: contra-indicated

- Smoking: > 15 cigarettes
- Previous VTE, ongoing VTE, thrombotic mutation
- Familial history of VTE < age of 45
- Migraine with aura
- Diabetes with complications
- Association of risk factors: HTA – Diabetes
- Breast cancer

VTE and age

Table 2 | Absolute risk of venous thrombosis associated with oral contraceptive use by age category

Age category	Incidence of venous thrombosis in non-users of oral contraceptives (I_0) per 10 000 person-years*	Relative risk (95% CI) of oral contraceptive use†	Incidence of venous thrombosis in oral contraceptive users (I_1) per 10 000 person-years‡
<30 years	1.2	3.1 (2.2 to 4.6)	3.7
30-40 years	2.0	5.0 (3.8 to 6.5)	10.0
40-50 years	2.3	5.8 (4.6 to 7.3)	13.3

* I_0 is based on incidences published by Naess et al.³⁰

†Non-users of oral contraceptives are used as the reference category.

‡ $I_1 = I_0 \times$ relative risk.

Van Hylckama Vlieg et al, BMJ 2009

VTE and genetic mutation

BMI (kg/m ²)	FVL	Patients	Control		
			subjects	OR ⁺	95% CI
<25	No	1077	1631	1	
≥25 & <30	No	1289	1244	1.72	1.54–1.93
≥30	No	643	423	2.48	2.13–2.88
<25	Yes	217	69	4.18	3.12–5.61
≥25 & <30	Yes	250	58	5.77	4.20–7.93
≥30	Yes	124	18	7.86	4.70–13.15
FII 20210A					
<25	No	1225	1803	1	
≥25 & <30	No	1455	1351	1.72	1.54–1.91
≥30	No	735	477	2.45	2.12–2.82
<25	Yes	70	18	4.39	2.56–7.51
≥25 & <30	Yes	84	20	4.51	2.64–7.72
≥30	Yes	32	4	6.58	2.31–18.69

OR, odds ratio; CI, confidence interval.

Pomp Br J Haematol 2007;139:289-96

CHC: contra-indicated

- Hypertension $> 160/100$
- Hypertension + vascular disease
- Stroke, MI, angor, valvular disease with complications

CHC with estradiol

- Could have an improved cardiovascular profile
- Clinically significant reduction in CV risk should be proven
- Almost same bleeding profile as 20 μ EE
- Missing pills more complicate to manage with Qlaira[®]

Progestins

Macro progestins oral
Implants
Micro progestins

Progestins: advantages

- Highly effective in older women
- Useful in women with pre-existing medical conditions (cv disease) with contra-indication for estrogens

Progestins: disadvantages

- Menstrual disturbance: anxiety concerning pathology
- Amenorrhea: confusion about diagnosis of MNP

Macro progestins

Anti-estrogenic effect

- PMS, breast pain
- Bloating
- Menorrhagia, endometrial hyperplasia

No metabolic perturbation



ILLUSTRATION: SHUTTERSTOCK

