

***SFOG-veckan 2015***  
***Jönköping***

# **Contraception- positive side effects**

## **Menstrual blood loss & menstrual disorders**



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# **Conflict of interests**

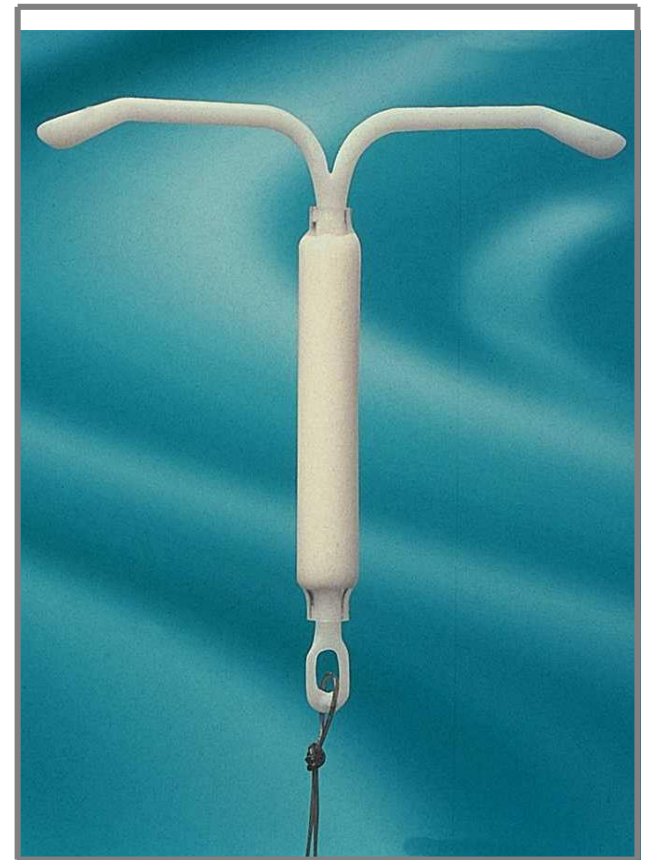
**None**

# Modern contraceptives effectively prevent pregnancy!



Method	Pearl index-perfect use	Pearl index- typical use
No method	85	85
LNG-IUS	0.2	0.2
Combined hormonal contraception	0.3	9
Female sterilisation	0.5	0.5

# Modern contraceptives ALSO provide numerous other health benefits for women!

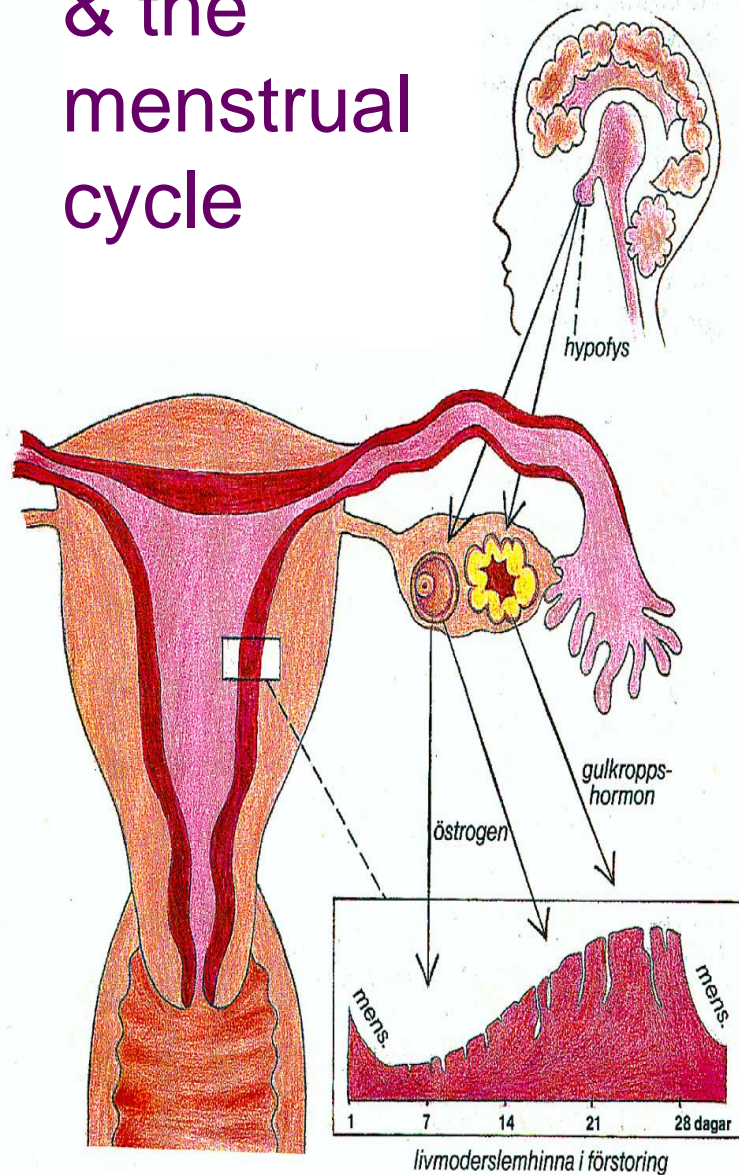


# Combined Hormonal Contraception (CHC)

## Potential health benefits

- $\approx$  100% effective with correct use
- Reduces risk of endometrial cancer and ovarian cancer
- Reduces/eliminates ovulation pain & ovarian cysts
- **Reduces or eliminates dysmenorrhea**
- **Reduces menstrual bleeding, less anemia**
- Reduction in acne/hirsutism
- Reduces risk of extrauterine pregnancy
- Reduced risk for endometriosis and salpingitis?
- Better future fertility

# Menstruation & the menstrual cycle



# Menstruation

Women menstruate  
from the menarche ( $\approx 12/13$ yr)  
to the menopause ( $\approx 51$  yr)

13 menses/year  
 $\approx 500$  menstrual periods  
4-5 days/mens

In total 2535 days  
or

$\approx$  **SEVEN YEARS  
OF MENSTRUATION!!!**

# Menstrual disorders

- Dysmenorrhea
- Heavy Menstrual Bleeding  
- Menorrhagia

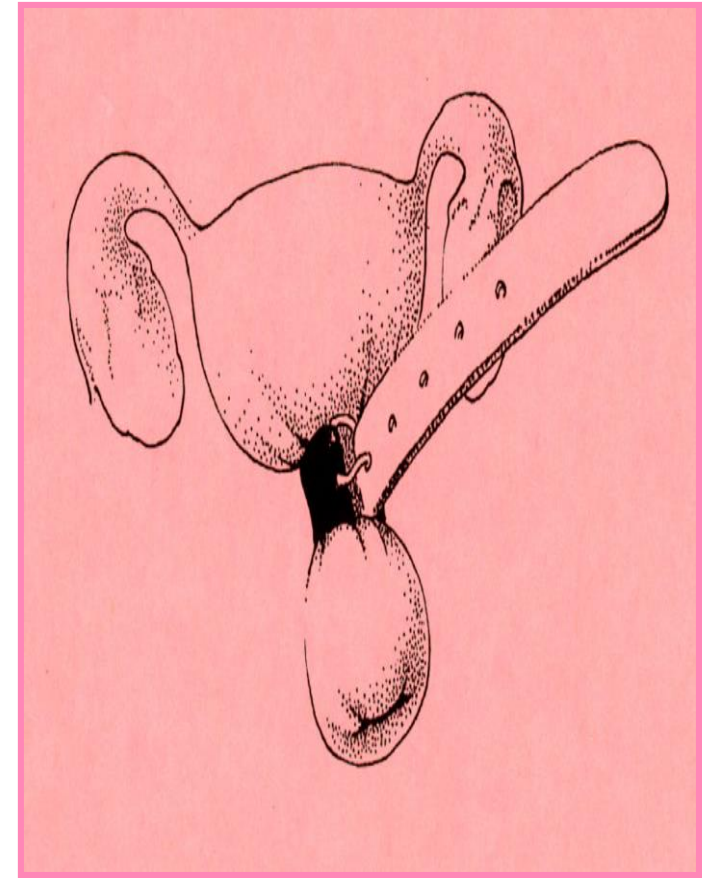
# Menstrual disorders

- 2.5 million women in the USA affected annually
- Costs US industry 8% of total wage bill
- Texas instruments reported a 25% reduction in productivity among female employees during the paramenstruum



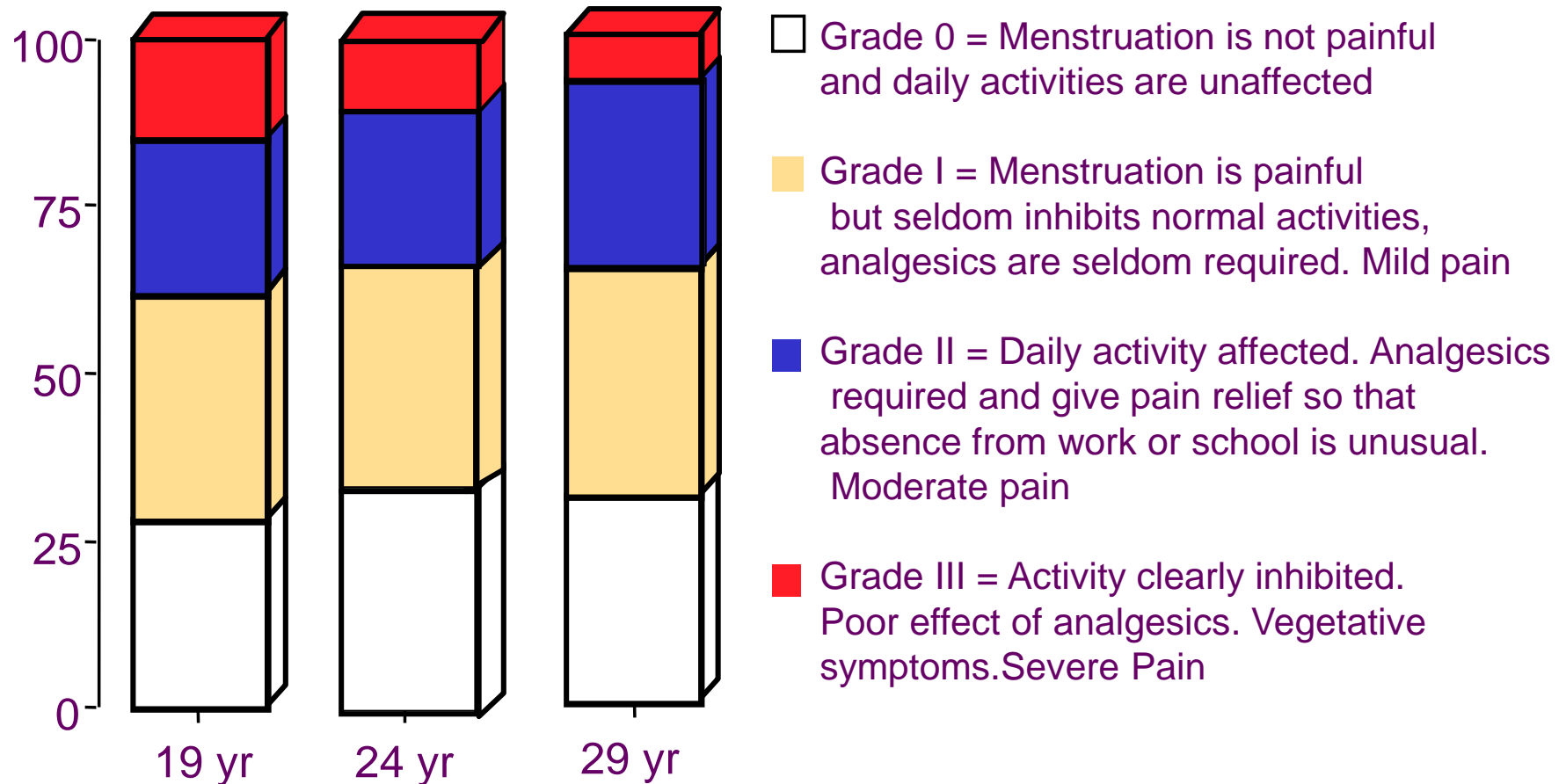
# Dysmenorrhea

- Commonest form of menstrual disorder<sup>1,2</sup>
- Prevalence: 50-90% of women<sup>1-3</sup>
- 15% severe dysmenorrhea<sup>3</sup>
- 600 million lost hours and 2 billion in lost productivity annually<sup>1,2</sup>



1. Coco AS. Am Fam Physician 1999;60:489.
2. Davis AR & Westhoff CL. J Pediatr Adolesc Gynecol 2001;14:1
3. Andersch B & Milsom I. Am J Obstet Gynecol 1982;144:655

# Dysmenorrhea ranked in order of prevalence and severity in the same women at 19, 24 and 29 years of age



The severity of dysmenorrhea was assessed by the verbal multidimensional scoring system described by Andersch & Milsom. Am J Obstet Gynecol 1982;144:655-660

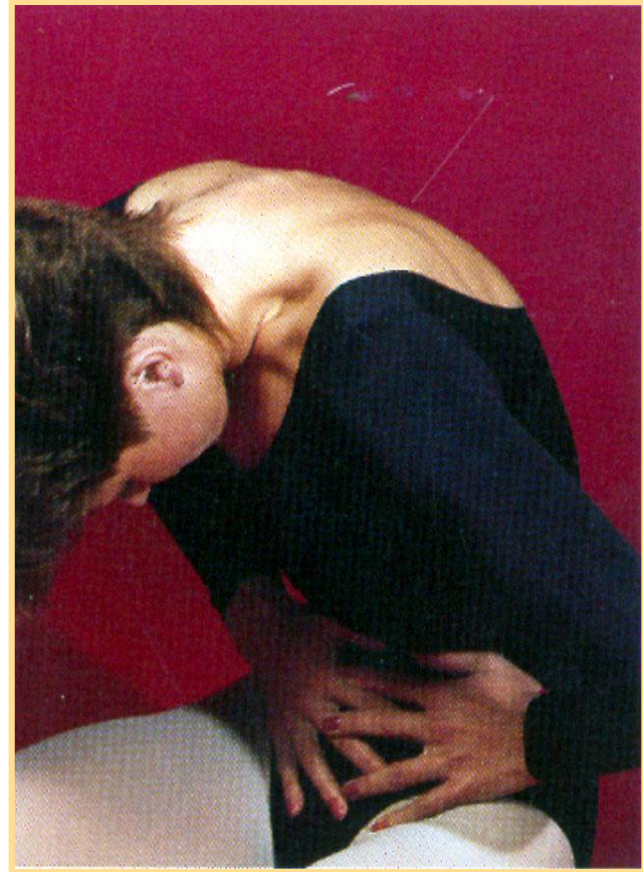
# Absenteeism due to dysmenorrhea

## FREQUENCY

- Every menstruation 8%
- Every other mens. 6%
- Sometimes 37%
- Never 49%

## DURATION

- 1/2 -1 day 90%
- > 2 days 10%



# Menorrhagia



Heavy menstrual bleeding or menorrhagia, (MBL > 80 ml), ovulatory cycle

Risk for iron deficiency anaemia

*Thesis*

CLINICAL AND EXPERIMENTAL  
STUDIES ON MENSTRUAL  
BLOOD LOSS

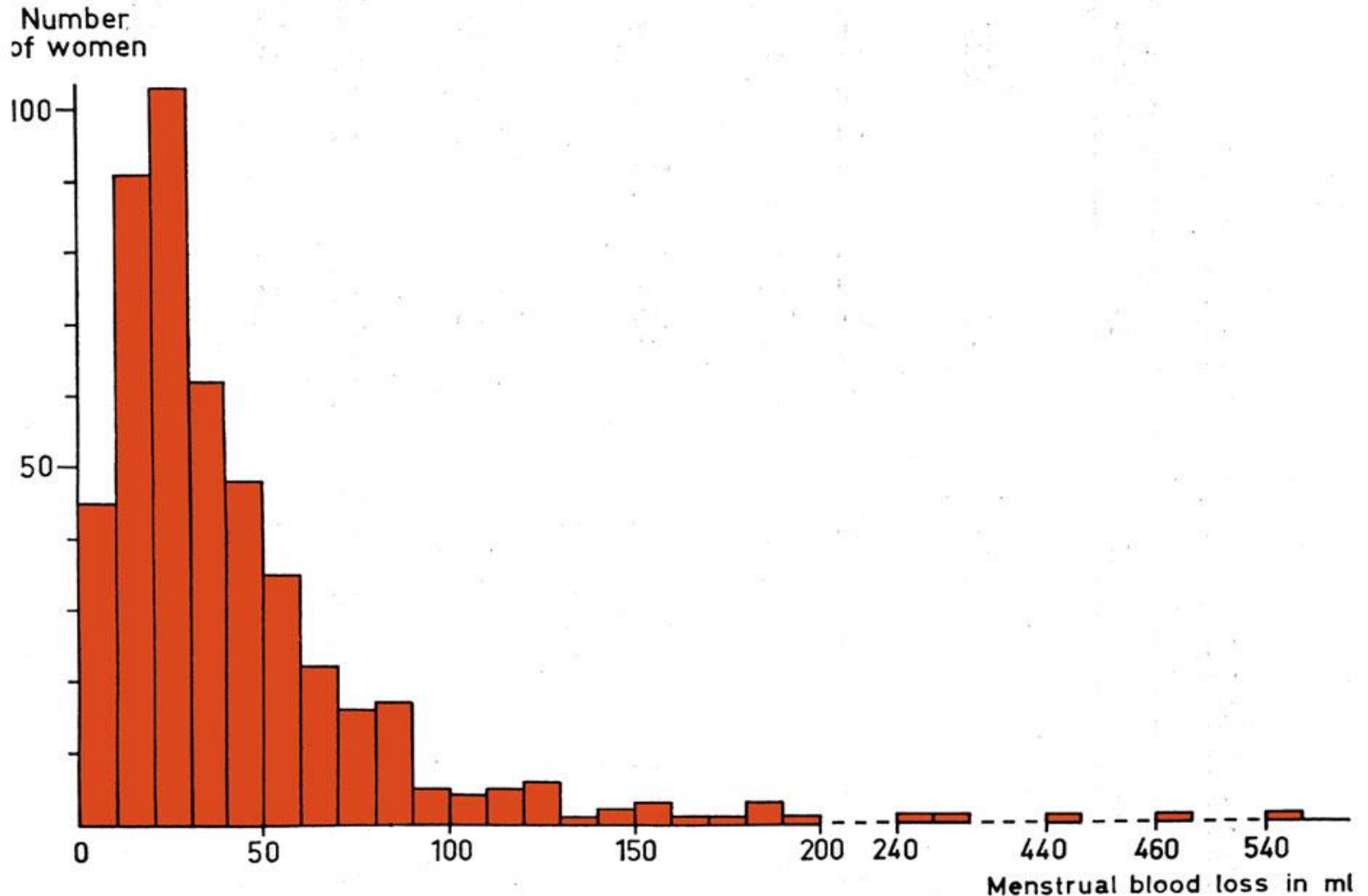
BY

GÖRAN RYBO

1966

# MENSTRUAL BLOOD LOSS - A Population study

*Hallberg L, Högdahl AM, Nilsson L, Rybo G Acta Obstet Gynecol Scand 45:25-56, 1966*



# Heavy menstrual bleeding, menorrhagia

- Approximately 10-15% of fertile women suffer from heavy menstrual bleeding or menorrhagia, defined as a menstrual blood loss (MBL) of > 80 ml) ovulatory cycle<sup>1</sup>
- Risk for iron deficiency anaemia<sup>1</sup>
- Reason for millions of hysterectomies annually<sup>2</sup>
- Hormonal contraceptive methods, eg OC's and Mirena<sup>®</sup> reduce menstrual blood loss<sup>3-4</sup>

1. Hallberg L, Högdahl AM, Nilsson L, Rybo G. *Acta Obstet Gynecol Scand* 45:25-56, 1966

2. Reid & Mukri. *BMJ* 330 938-9, 2005

3. Larsson et al. *Contraception* 1996;46:327-334

4. Andersson K, Rybo G. *Br J Obstet Gynecol* 97:691-694, 1990

# Hysterectomy and heavy menstrual bleeding

- **Approximately 40% of women in the USA undergo hysterectomy (main cause: bleeding disturbances)**
- **95 000 hysterectomies were performed in Korea (population 45 million) in 2006**
- **≈ 43 000 hysterectomies annually are performed in Australia (population 19.9 million)**

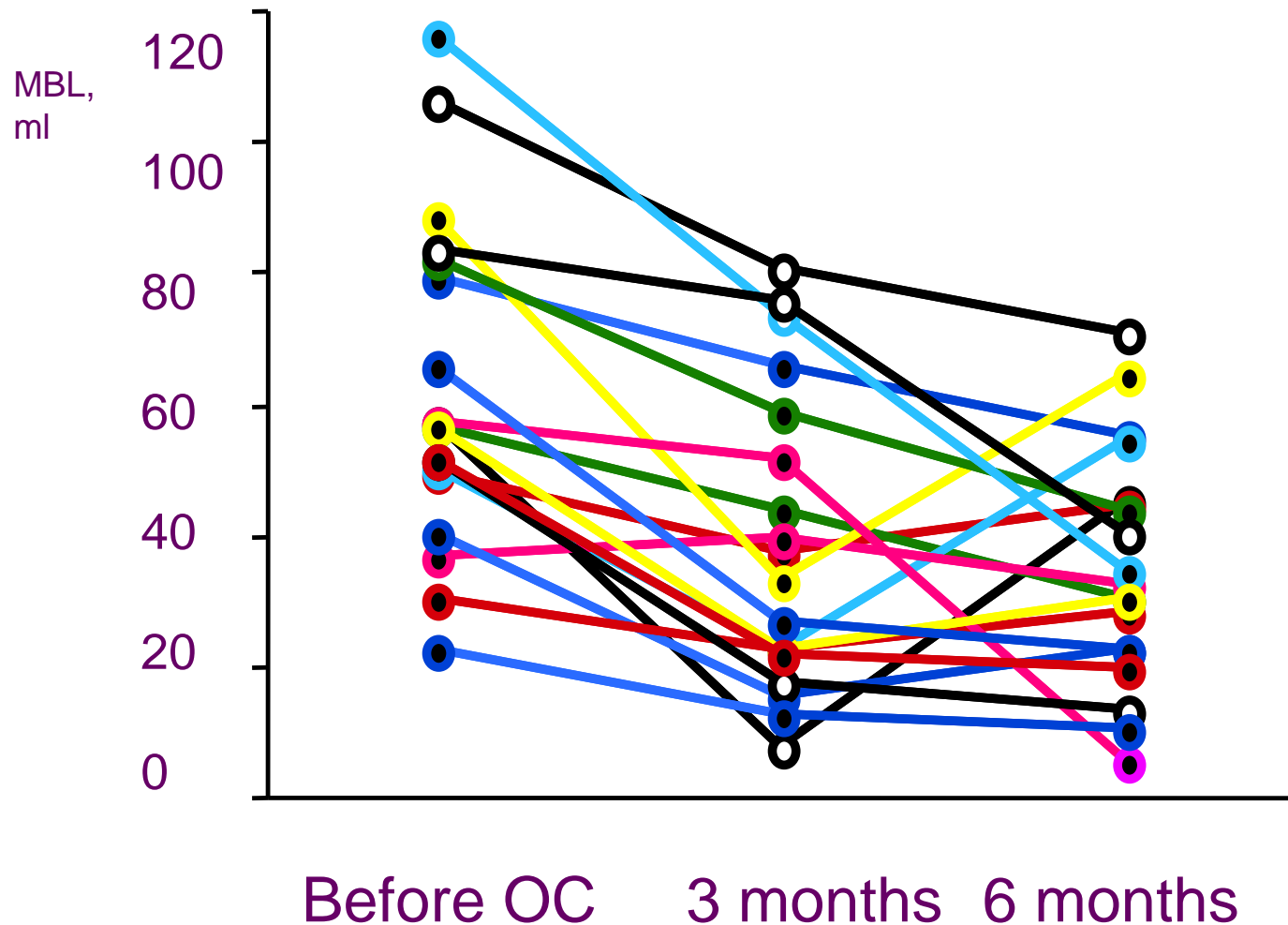


# Contraception and menstrual bleeding

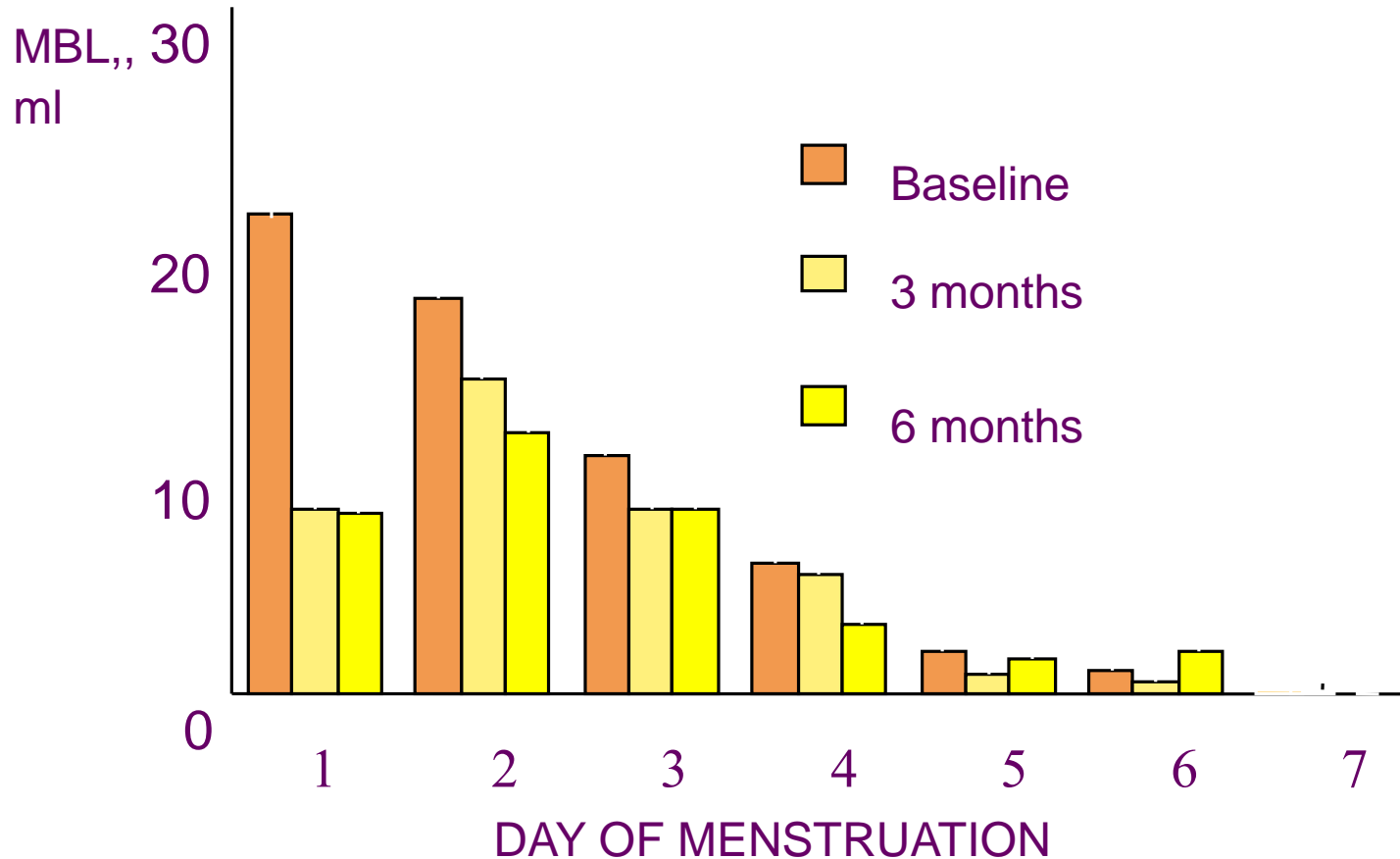
Hormonal methods decrease or in some cases eliminate menstrual bleeding

Copper IUD's increase menstrual blood loss

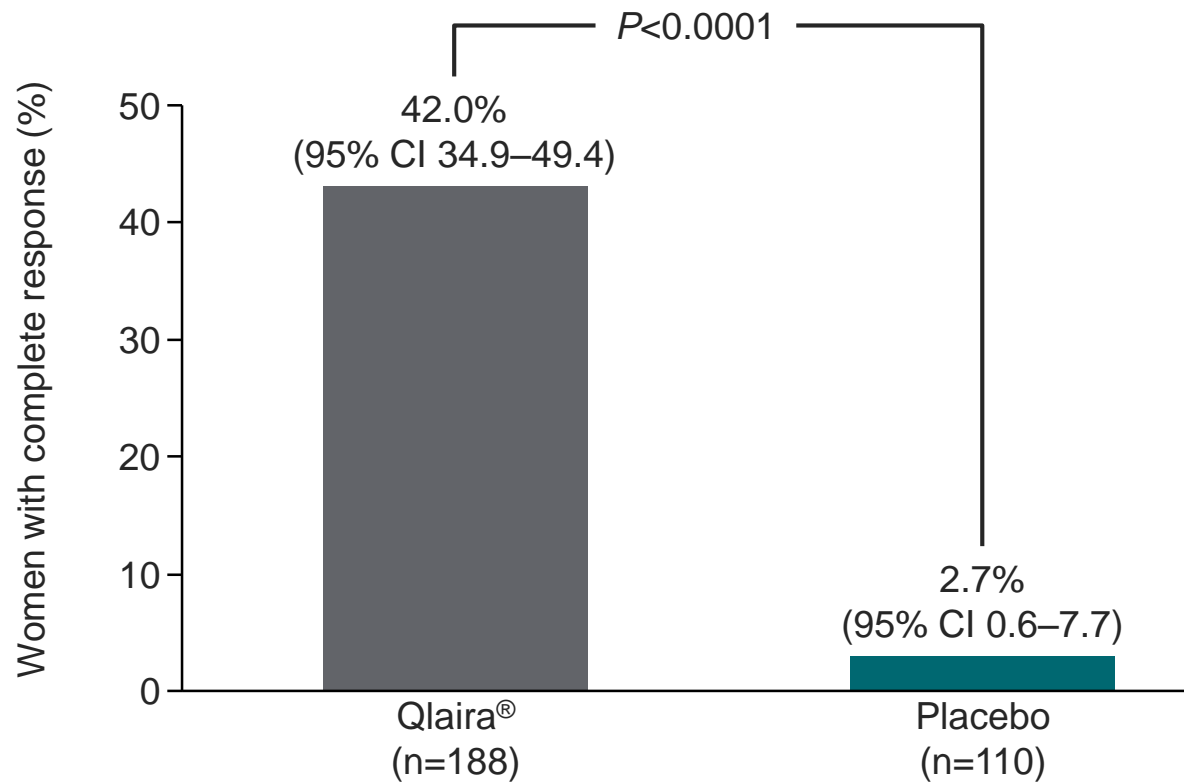
# Individual values of menstrual blood loss (MBL) before, 3 and 6 months after commencing OC (30µg EE + 0.15 mg DG)



# Daily MBL before, and 3 and 6 months after commencing OC ( 30 $\mu$ g EE + 0,15mg DG )



# Qlaira® HMB Trials Data

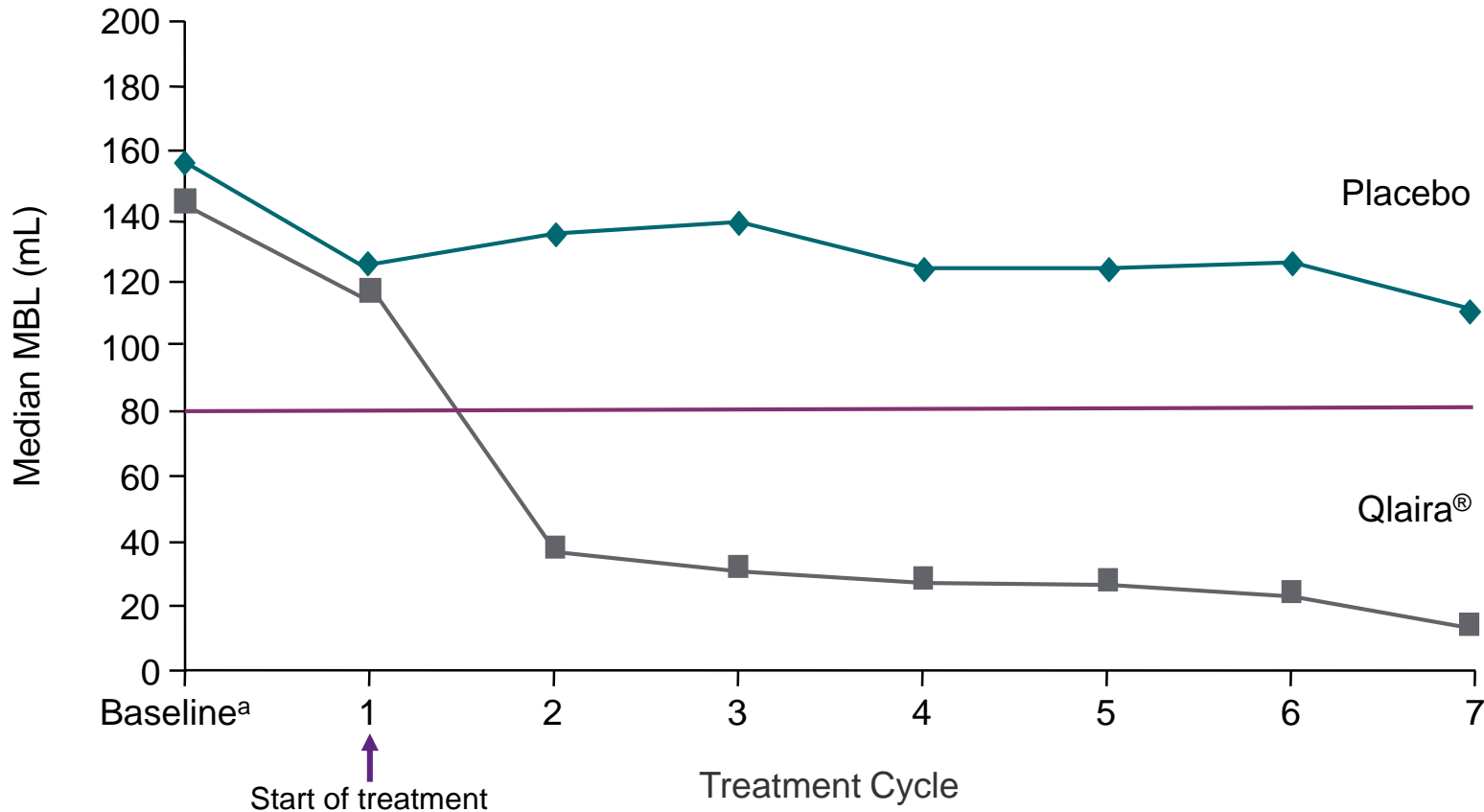


Intention-to-treat population excluding missing data patients. Proportion of women meeting the response criteria for the 90-day efficacy period vs. the 90-day run-in period.

CI: Confidence interval; HMB: Heavy menstrual bleeding.



# Median MBL Per Treatment Cycle Pooled Qlaira® HMB Trials Data



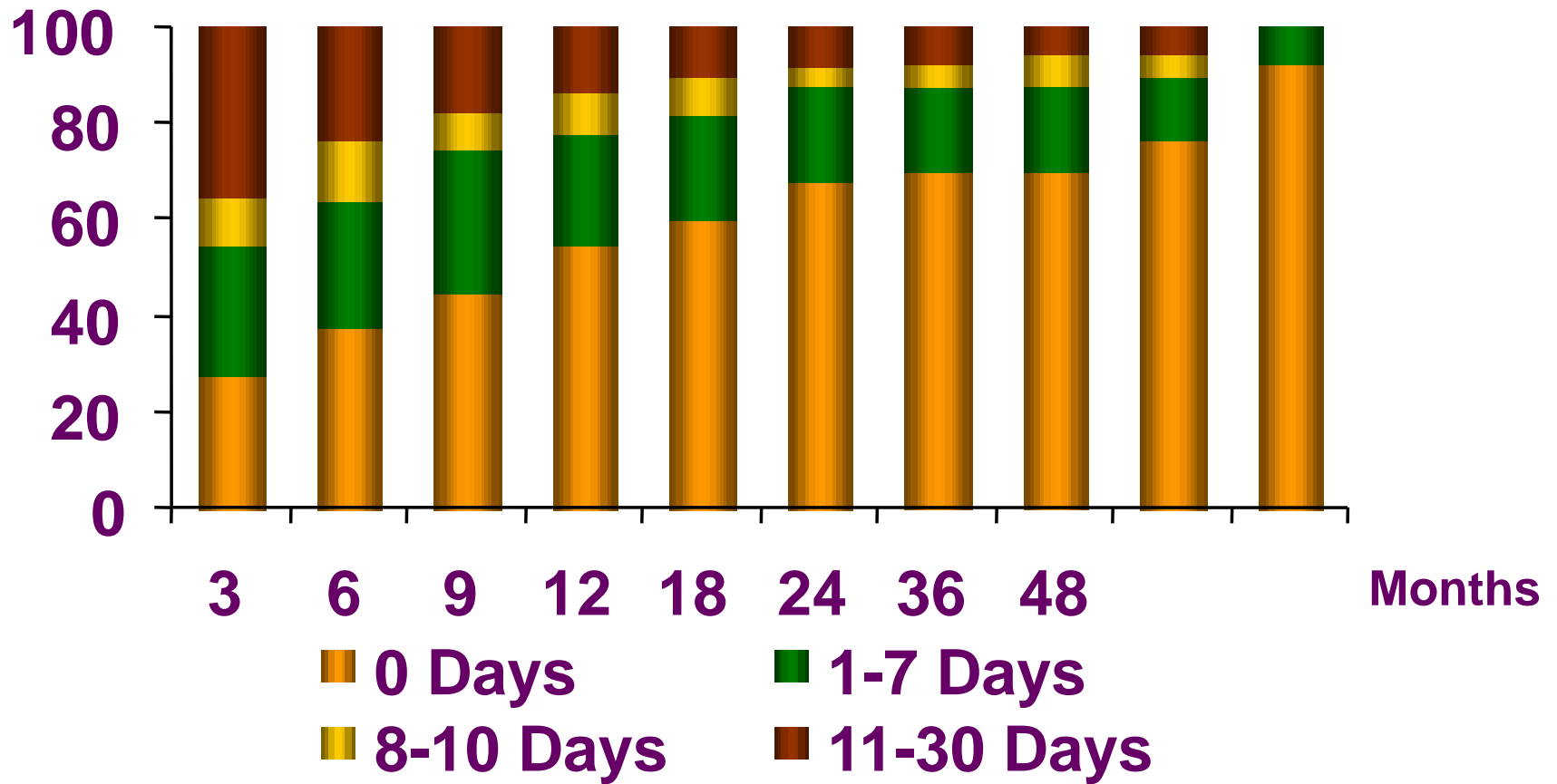
Intention-to-treat population excluding missing data patients.

aBaseline comprised MBL for 90 days. For comparative purposes, baseline was divided by 90/28.

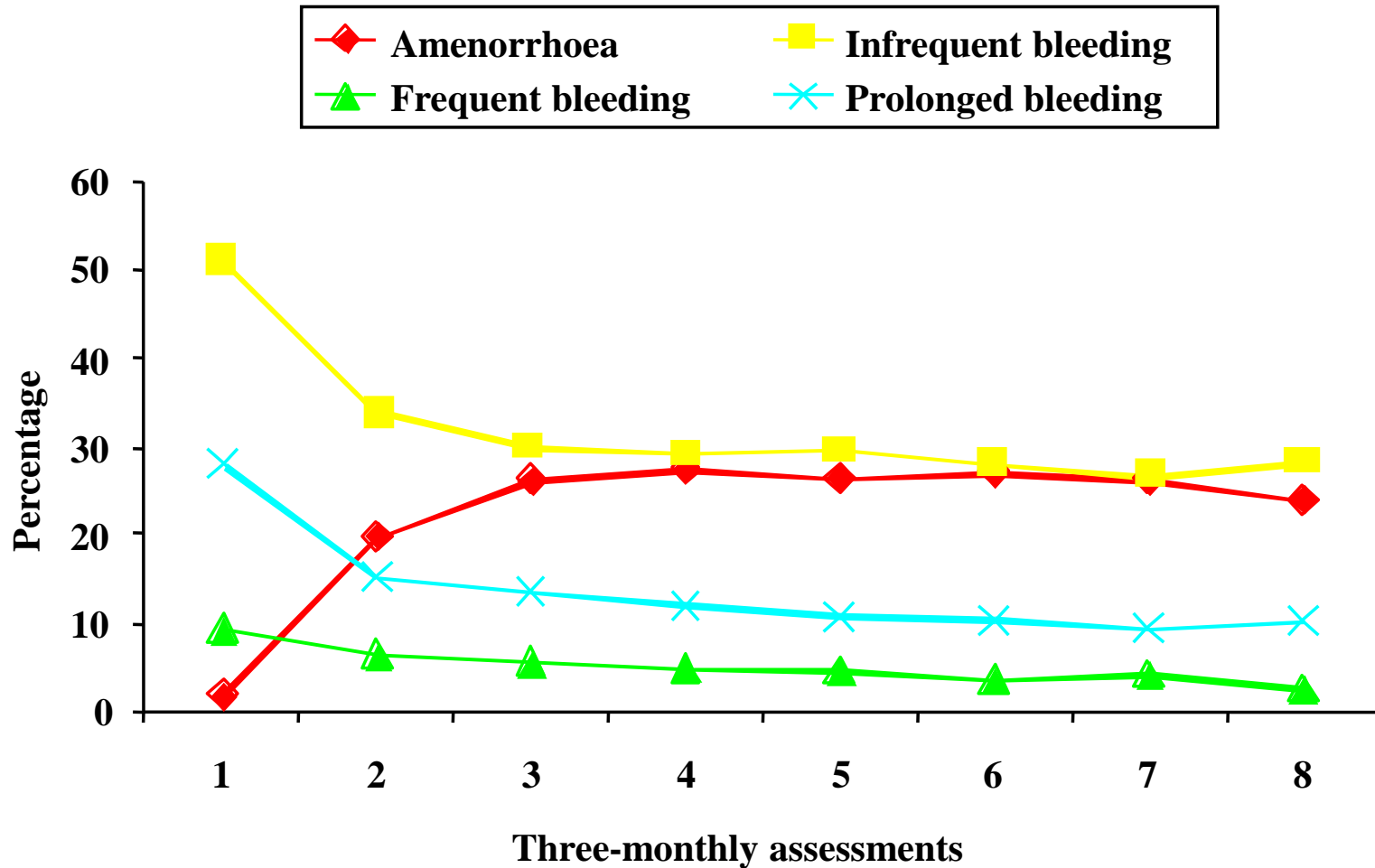
$P < 0.0001$  for reduction in MBL between 90-day run-in and 90-day efficacy periods.

HMB: Heavy menstrual bleeding; MBL: Menstrual blood loss.

# Depo-Provera<sup>®</sup>: Bleeding Profile

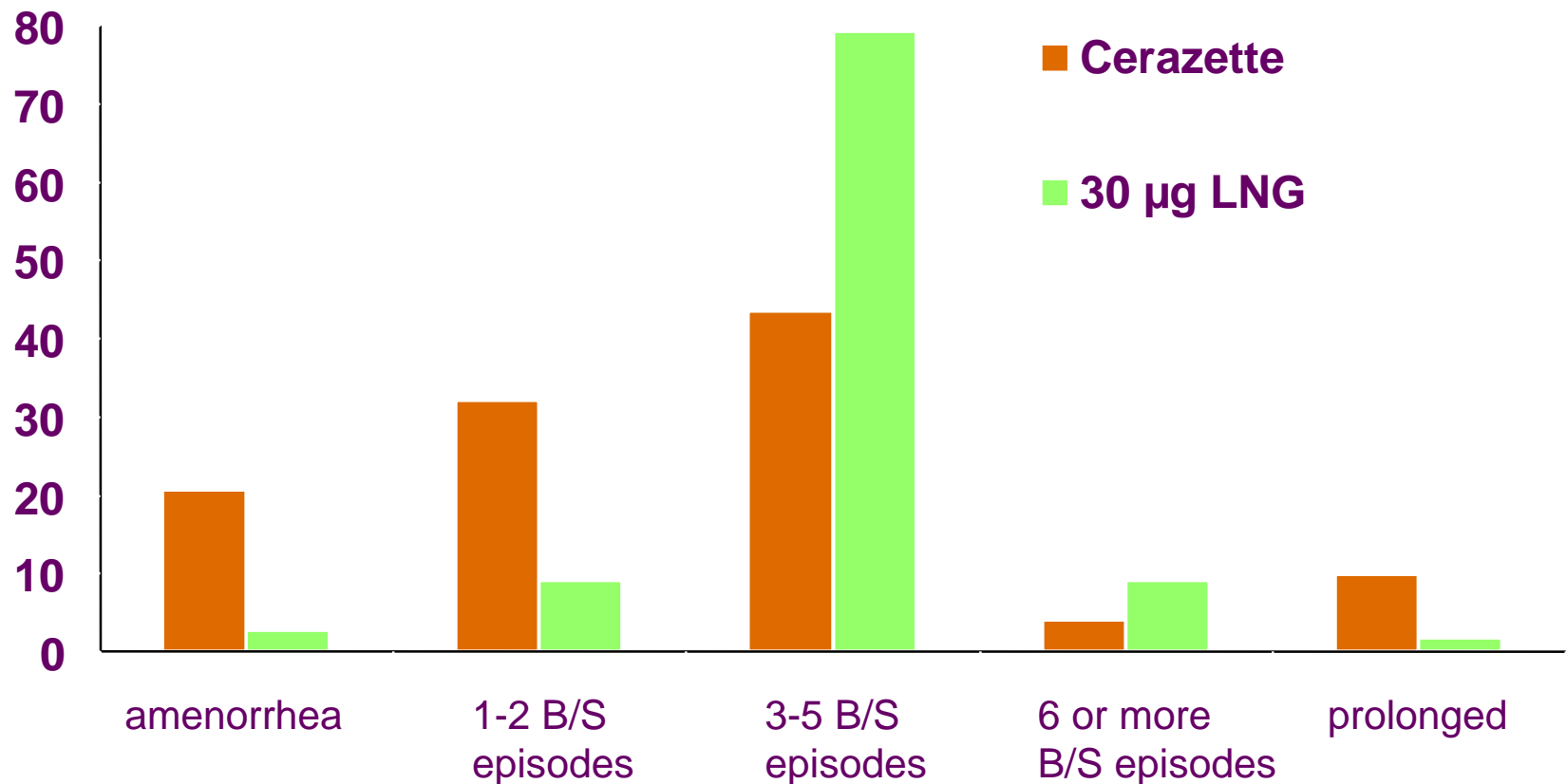


# Bleeding pattern with Implanon®

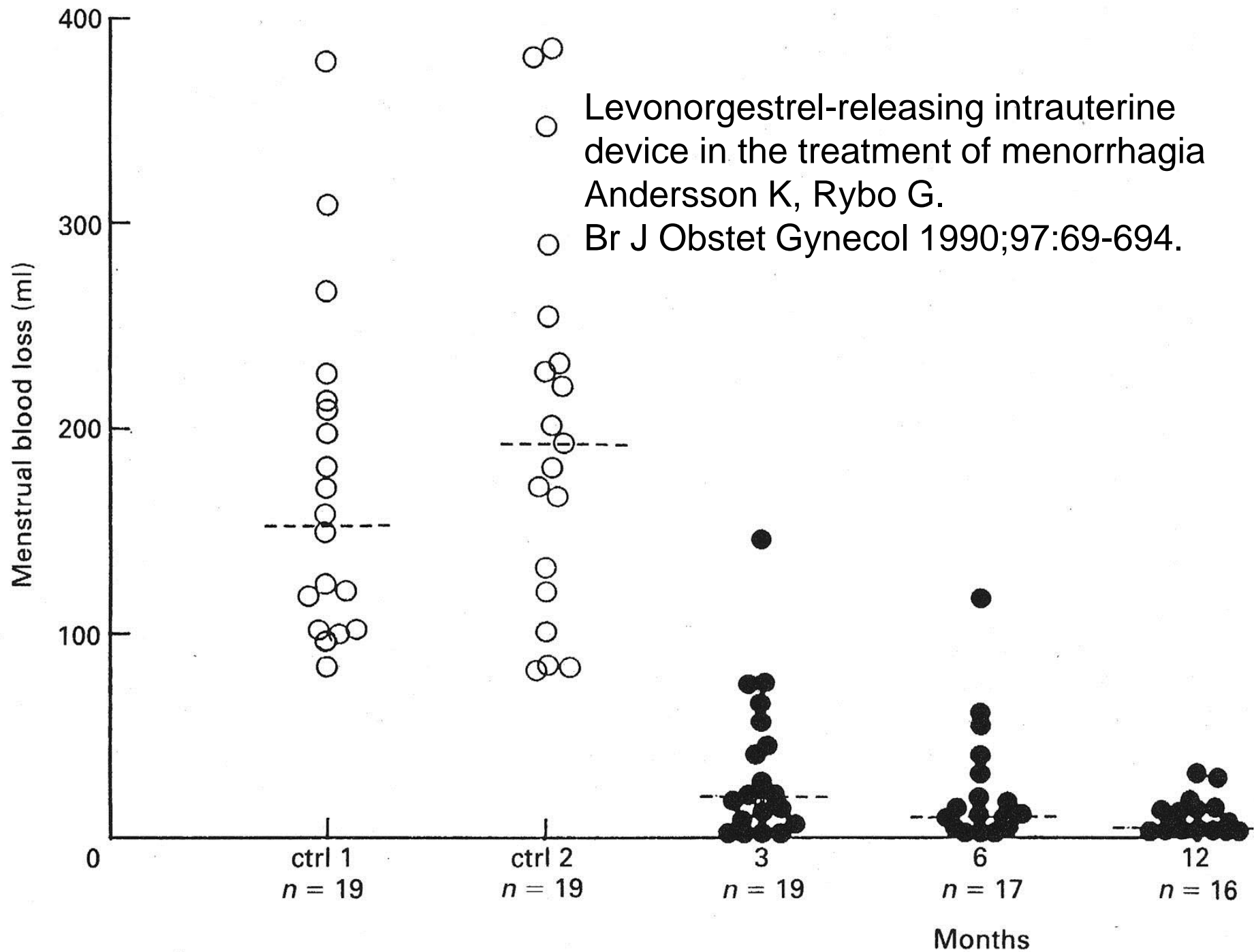


# Bleeding pattern- Cerazette

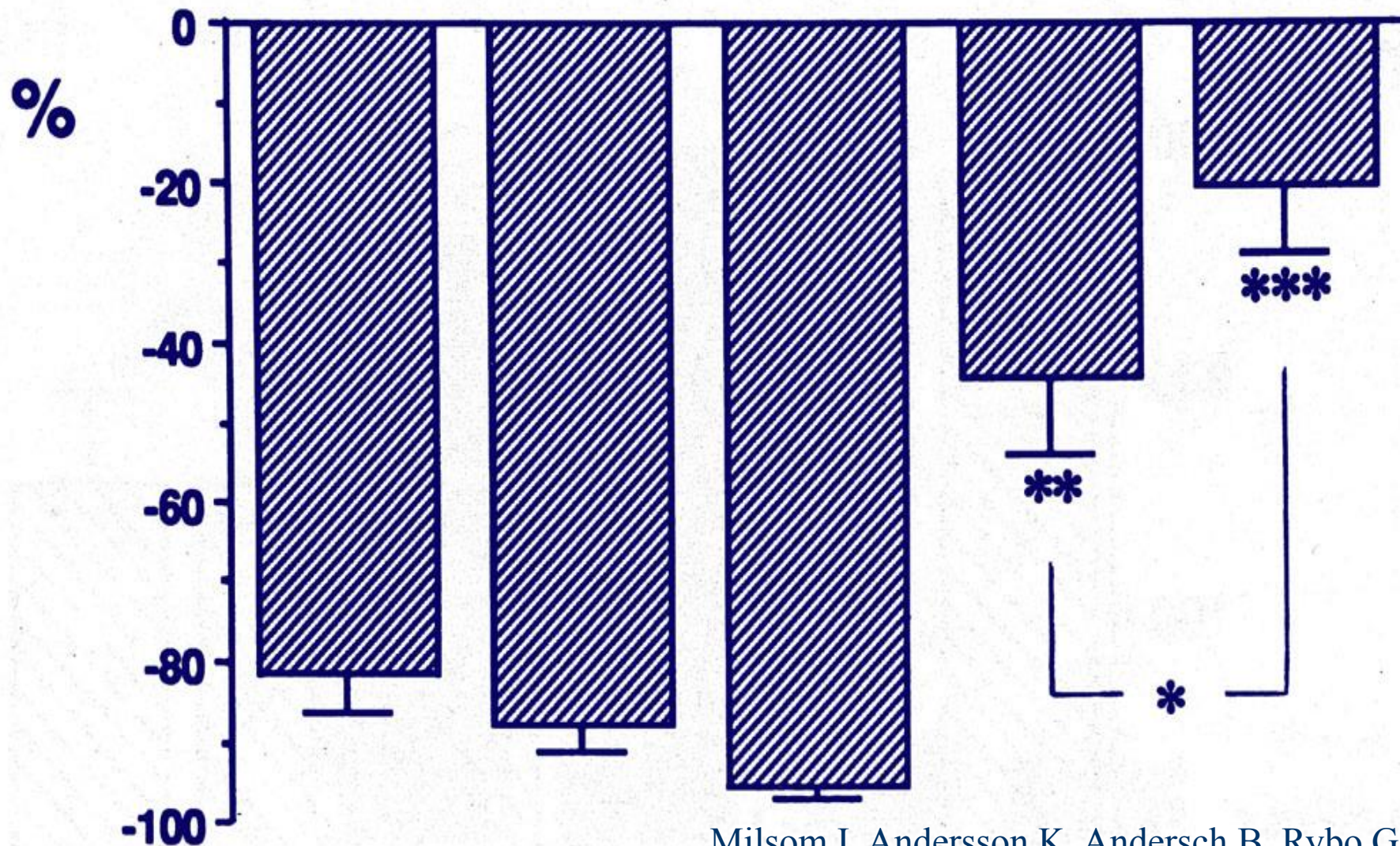
271-360 days after commencement of medication







**LNG-3      LNG-6      LNG-12      TA      FLURB**



Milsom I, Andersson K, Andersch B, Rybo G.  
Am J Obstet Gynecol 164:879-883,1991.

# Treatment of dysmenorrhea

Most hormonal forms of  
contraception alleviate  
dysmenorrhea

COC's, patches &  
vaginal rings

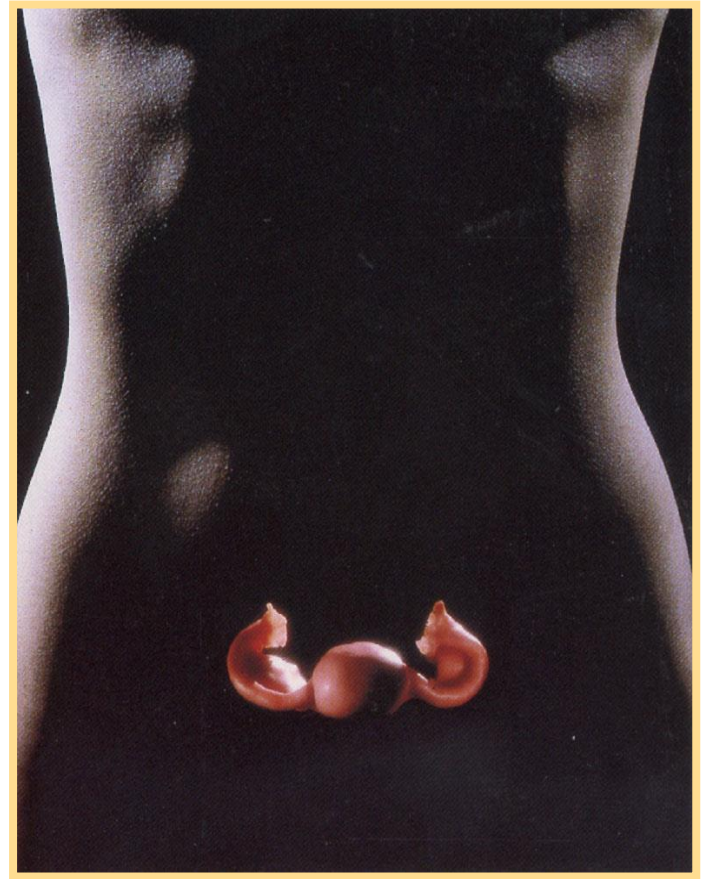
POP's

Implants

Injectables

Medicated IUD's

The opinion regarding COCs  
has however been contested  
in a Cochrane review





ORIGINAL ARTICLE Gynaecology

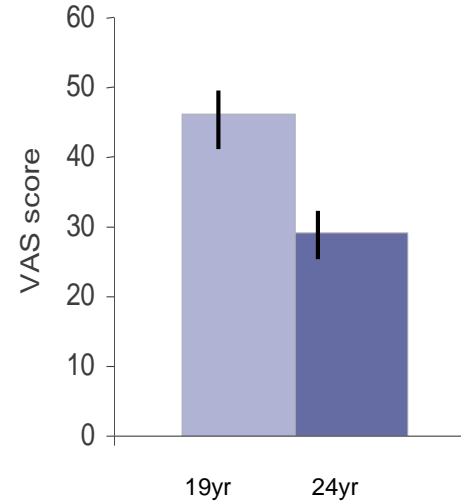
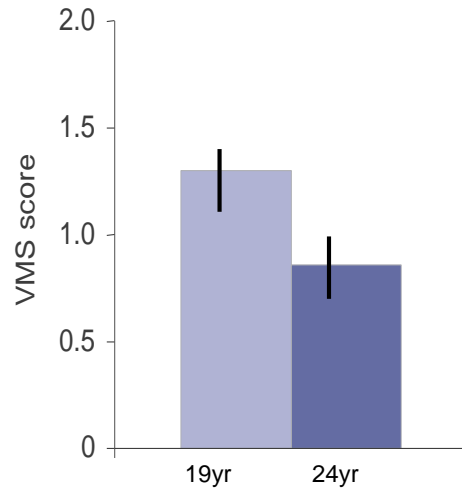
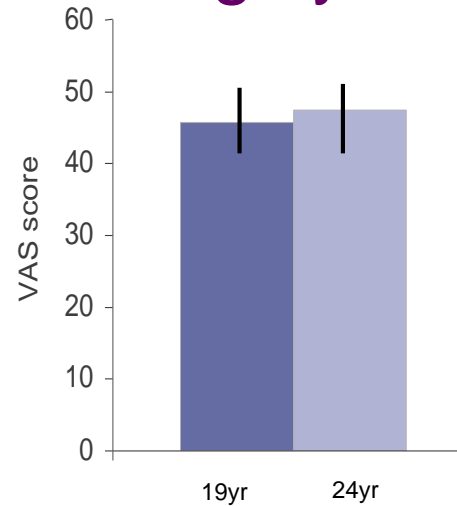
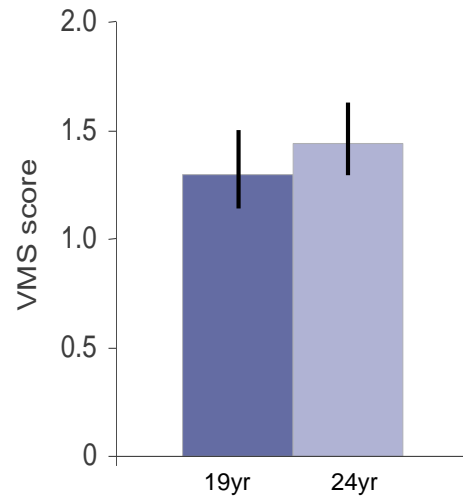
human  
reproduction

# The effect of combined oral contraceptives and age on dysmenorrhoea: an epidemiological study

Ingela Lindh\*, Agneta Andersson Ellstrom, and Ian Milsom

Department of Obstetrics and Gynecology, Institute of Clinical Sciences, Sahlgrenska Academy at Gothenburg University, Gothenburg SE-416 85, Sweden

# Visual Analogue Scale (VAS) and Verbal multidimensional scoring system (VMS)



■ COC    ■ No COC

# A longitudinal analysis of variance to find predictors of dysmenorrhea

## COC use

( $p < 0.0001$ )

( $p < 0.0001$ )

VMS -0.3

VAS -9 mm

## Age

( $p < 0.01$ )

VMS -0.1/5yr

VAS -5 mm/5yr

( $p < 0.0001$ )

## Childbirth

VMS -0.1 NS

VAS -7

mm/child ( $p < 0.01$ )

## Smoking

NS

## BMI

NS

# Treatment of Dysmenorrhea- OC's

Women with dysmenorrhea who also require contraception can be recommended the combined oral contraceptive pill (OC). OC's provide effective pain relief for 70-80% of women with primary dysmenorrhea.<sup>1,2</sup>

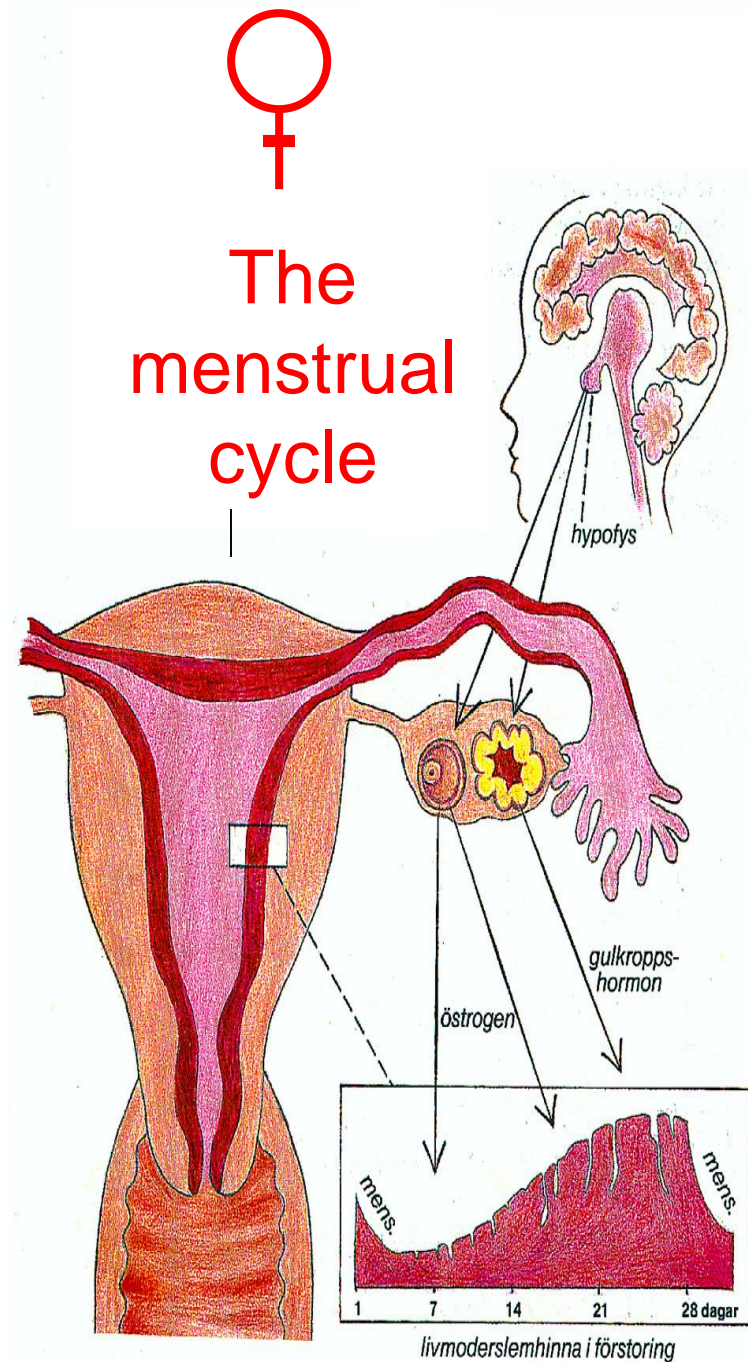
Women who experience a reduction of dysmenorrhea as a result of OC are EIGHT times more likely to be consistent users of OC.<sup>3</sup>



1. Milsom I & Andersch B. Gynecol Obstet Invest 17:284-292,1984
2. Sundell et al. Brit J Obstet Gynecol 97:588-594, 1990
3. Robinson et al. Am J Obstet Gynecol 166;578-583,1992

# Menstruation

*The first question that should be asked is whether or not the modern woman needs to have menstruation and monthly bleeding at all*





# Should the modern woman accept having menstruation ?

*“monthly menstruation has been socialised and mythologised into being the unquestionable natural, normal and beneficial state for women”*

*“menses should be optional and convenient”*

*Thomas & Ellertson. Lancet 2000;355:922–24*

**Contraceptive methods are now available that may induce amenorrhea or less frequent menstruation thus reducing the occurrence of cycle related symptoms:**

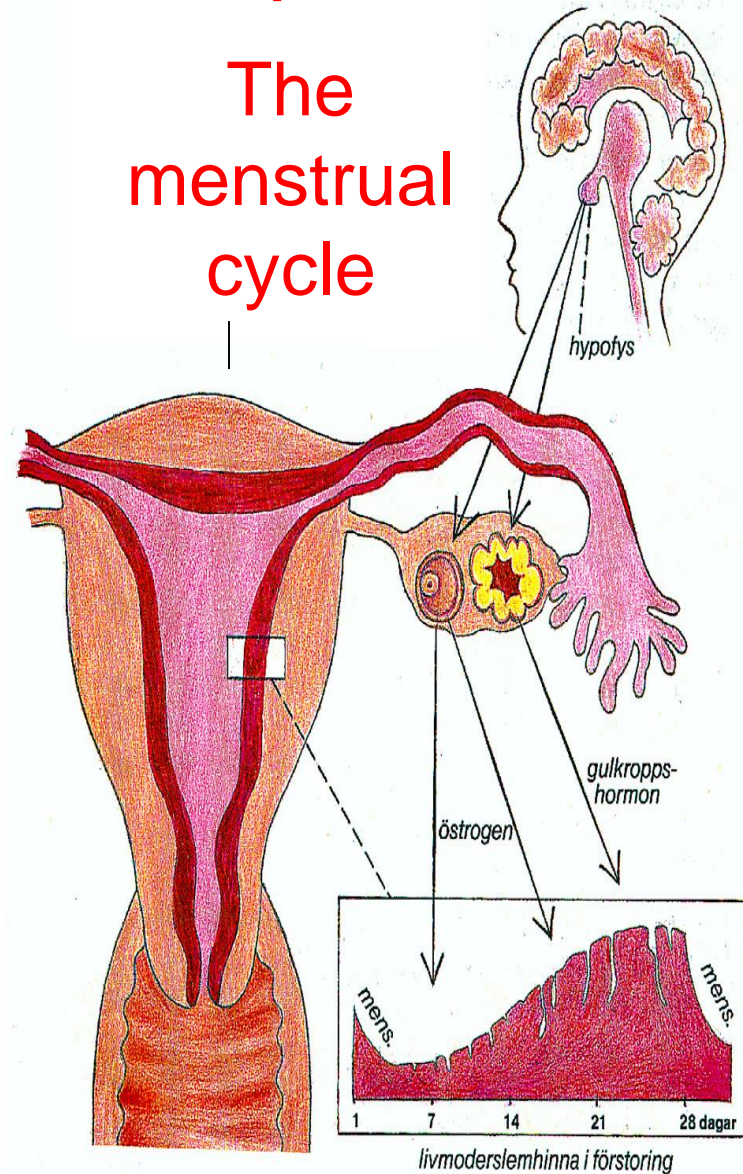
**Mirena®**

**Induces amenorrhea in 20-40% of users**

*Andersson et al. Contraception 1994;49:56–72*

**Long cycle use of CHC's reduces the number of menstrual periods**

## The menstrual cycle



Seven years of  
menstruation!

Are there any  
disadvantages for the  
woman if she has  
induced  
amenorrhea??

No!

