COMBINED ORAL CONTRACEPTION: **MANAGING MENSTRUAL MYTHS**

Highlights from the Australian meeting series July 2019

About 150 Australian health professionals with an interest in women's health attended meetings around Australia with Professor Anne MacGregor, a reproductive health physician, who shared her clinical experience with combined oral contraception (COC). Professor MacGregor provided valuable insights into research debunking myths surrounding the need to bleed every month and helping health professionals and women in general make more informed choices about their contraception.

Professor Anne MacGregor
Centre for Reproductive Medicine, St Bartholomew's Hospital
Ambrose King Centre, Royal London Hospital
Centre for Neuroscience, Surgery and Trauma, Blizard Institute, Barts and the London School of Medicine and Dentistry, London UK

FACT OR MYTH?

The 7-day hormone-free interval is important for women's health

From the beginning, developers of COC knew there was no scientific rationale for women on COC to have a mandatory monthly bleed.[1] However they thought COC would be socially more accepted if it closely mimicked the natural course of the menstrual cycle by using natural oestrogen and progesterone for 21 days, and by having a 7-day bleed per month (using the placebo pills). This thinking has endured for 60 years, and has become the standard, despite the lack of scientific evidence supporting this 21/7 COC regimen.

Research indicates that a 21/7 COC regimen can lead to symptoms of oestrogen hormone withdrawal at the beginning and at the end of the 7-day hormone-free interval.[2,3] Also, symptoms associated with menstruation have been shown to be significantly worse during the hormone-free interval compared to during the 21 days of hormone-containing (active) pills.[2]

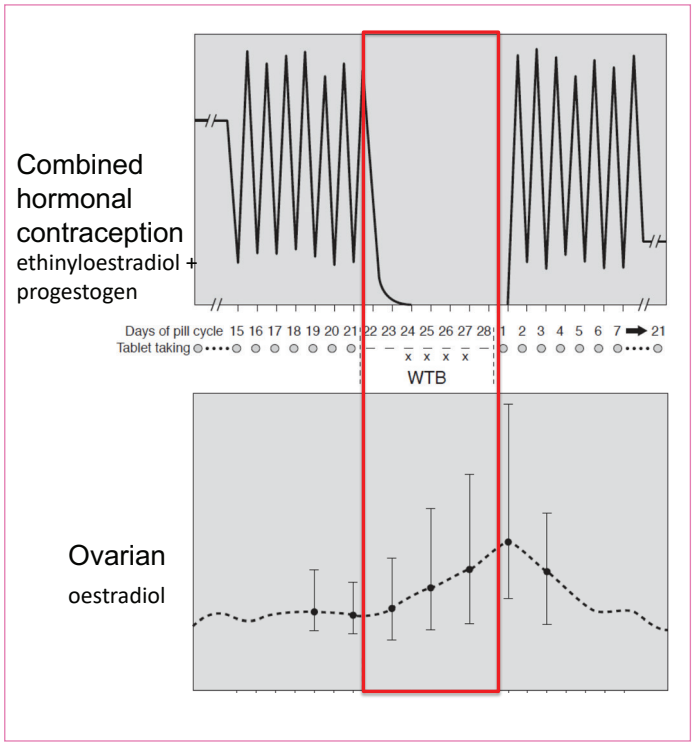
Symptom	Pill taking %	Hormone-free interval %	P value
Headache	53	70	< 0.001
Pelvic pain	21	70	< 0.001
Breast tenderness	19	58	< 0.001
Bloating / swelling	16	38	< 0.001
Use of pain medication	43	69	< 0.001

Ovarian activity and risk of escape ovulation

The 21/7 COC regimen has a 0.3% pregnancy failure rate with optimal use. However, with typical use of COC, the failure rate is 9%.[4] The reason for this is that during the 7-day hormone-free interval a woman's own endogenous oestrogen can be re-activated as early as 3-4 days, allowing oestradiol and follicle-stimulating hormone (FSH) levels to rise thus potentially risking escape ovulation.[5] However if the placebo sugar pills are replaced by low-dose 10 µg ethinylestradiol, endogenous oestradiol and FSH production are suppressed and the risk of escape ovulation and pregnancy is reduced.[5]

The 21/7 COC regimen has a 0.3% pregnancy failure rate with optimal use. However, with typical use of COC, the failure rate is 9%[4]

The pill-free week and escape ovulation[3]



WTB: withdrawal bleeding

FACT OR MYTH?

Women need to have a regular monthly bleed

The average woman in contemporary western society has about 450 periods in a lifetime.[6] This is a lot more than women had before COC was introduced as they were either pregnant or breastfeeding.

Overview of contraceptive methods

Hormonal contraception could include the oral pill, vaginal ring and patch formulations. The COC pill is the most popular form of contraception in Australia and internationally (except for Japan) for women aged 18-45 years.[7] All healthy non-smoking women can start COC after menstruation is established and continue until around age 50.[8] However, there is no reason why women can not stay on COC for as long as necessary. There are other advantages besides contraception to taking COC and many women use COC to manage menstrual conditions.

Compared to 21/7 COC regimens, the extended COC has been proven safe with no difference in metabolic effects or return to fertility. From the evidence, Professor MacGregor maintains that extended COC use improves compliance and contraceptive efficacy and decreases the incidence of menstruation symptoms such as period pain, migraine and other headaches and reduces the risk of escape ovulation and thus unplanned pregnancy.[2,5]

FACT OR MYTH?

The pill increases the chance of cancer

Although the risk of breast cancer for women on COC is increased 20% (or 1 extra breast cancer per 7690 women using COC),[9] the risk of uterine and ovarian cancer is reduced by 50% with COC use.[10] The risks of COC use must be balanced against the beneficial effects of COC especially with extended use of COC as it provides effective contraception, protection against ovarian and endometrial cancers that are diagnosed later than breast cancer[10] and can help women with menstrual cramps or menorrhagia.[3]

FACT OR MYTH?

COC increases venous thromboembolism (VTE) risk

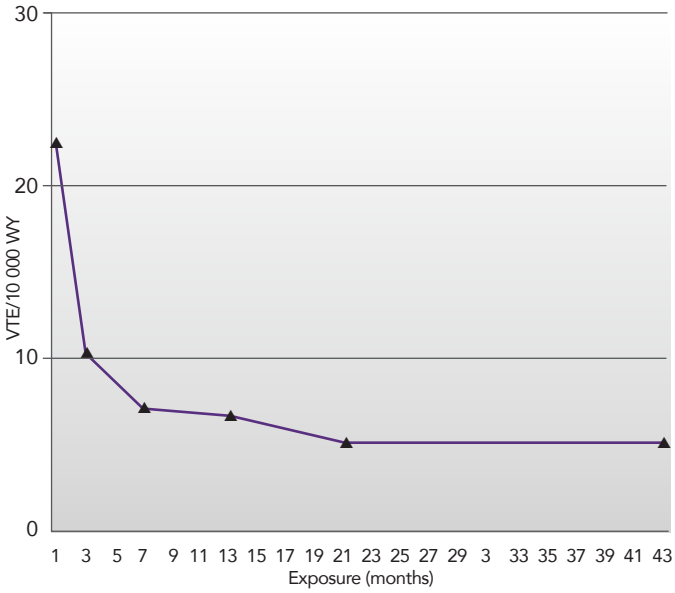
Another risk factor often mentioned with COC use is VTE. VTE risk does go up slightly with COC use.[11] Interestingly, the greatest risk of VTE is actually during pregnancy and even more in the early weeks postpartum. and can be up to 40-fold higher than the risk of VTE while on COC.

	Risk per 100 000 women-years[13]
Women not using COC	40-50
Women using COC	90-100
Pregnant women	290
Postpartum	3000-4000

The risk of VTE associated with COC use is greatest in the initial 3 months of use of the pill, after which there is a rapid decline to a lower but still elevated level of risk.[12]

When women take a break from their COC for longer than a month and then restart, their risk of VTE increases again, but not as much as the first time they started COC.[8] Taking a break from COC can therefore increase the risk of VTE.

Venous thromboembolism risk over time following start of combined oral contraceptive use[12]



VTE: venous thromboembolism WY: woman-years

We believe that it is time to follow the evidence and consign the 7-day contraceptive hormone-free interval to history[1]

Professor MacGregor concluded by stating that individual history taking and risk assessment (i.e. smoking and overweight) are essential to identify women who most benefit from COC. For most healthy women of reproductive age, the benefits of COC will outweigh the risks.[13]

References 1. MacGregor EA, Guillebaud J. BMJ Sex Reprod Health 2018;44:214-20. 2. Sulak PJ,et al. Obstet Gynecol 2000;95:261-6. 3. Guillebaud J, MacGregor A. Edinburgh: Elsevier; 2017. 4. Trussell J. Contraception 2011;83:397-404. 5. Vandever MA, et al. Contraception 2008;77:162-70. 6. Eaton SB, et al. Q Rev Biol 1994; 69:353-67. 7. United Nations, Department of Economic and Social Affairs, Population Division. World Contraceptive Use 2019. (POP/DB/CP/Rev2019). 8. Faculty of Sexual and Reproductive Healthcare (FSRH). Clinical guideline: Combined Hormonal Contraception (January 2019, amended July 2019). 9. Mørch LS, et al.. N Engl J Med 2017;377:2228-39. 10. Vessey M, et al. Contraception 2013;88:678-83. 11. Stegeman BH, et al. BMJ 2013;347:f5298. 12. Heinemann K, et al. J Fam Plann Reprod Health Care 2011;37:132-5. 13. Reid RL, et al. J Fam Plann Reprod Health Care 2010;36:117-22.

Theramex

Theramex Australia Pty Ltd., ABN 37 623 186 845, Nous House Level 34, 60 Margaret St., Sydney NSW 2000, www.theramex.com Tel 1800 288 382
September 2019 SEAS-AU-LVP-001032