

# An update on oral contraception

M Nasri 13/5/2024

# Types of contraception



Abstinence  
Condoms male/female  
Caps and diaphragm  
Combined oral contraceptive (COCs)  
Implant  
Injectable  
Intrauterine device (IUD)  
Intrauterine system (IUS)  
Patch  
Progesterone only pills (POPs)  
Spermicides  
Sterilisation male/female  
Vaginal ring  
Withdrawal

1. 1. NICE CKS Contraception Assessment: [Available contraceptive methods in the UK | Background information | Contraception - assessment | CKS | NICE](#) (Accessed April 2024)

# Combined Oral Contraceptive Pills (COCs)

- Menstrual bleeding is usually regular, lighter, and less painful
- Non invasive
- Easy to get hold of online
- Non contraceptive benefits include reduced risk of ovarian and /endometrial cancer



Contraception: Combined Hormonal Methods Available at: Scenario: Combined oral contraceptive | Management | Contraception - combined hormonal methods | CKS | NICE Accessed April 2024)

# Combined Oral Contraceptive Pills (COCs)

## Side effects

- Some women experience adverse effects when they start COCs
- The COC does not protect against sexually transmitted infections (STIs); people at risk of STIs are advised to use condoms in addition to the COC
- They are less effective than long-acting reversible methods of contraception (progestogen-only implants or injectables, copper intrauterine devices, levonorgestrel intrauterine system and the combined vaginal ring)

Contraception: Combined Hormonal Methods Available at: Scenario: Combined oral contraceptive | Management | Contraception - combined hormonal methods | CKS | NICE Accessed April 2024)

# Progesterone Only Pills (POPs)



POPs currently available in the UK contain:

- Drospirenone 4mg (Slynd®)
- Norethisterone 350 µg (Noriday®),
- Levonorgestrel 30 µg (Norgeston®)
- Desogestrel 75 µg (Cerazette®, Cerelle®, Zelleta® + other branded generic products).

Please refer to the individual Summary of Product Characteristics for more information

# What issues should I consider and discuss when a woman requests contraception<sup>1</sup>?

Discuss her needs and personal circumstances, including:

- Her preferred method of contraception.
- Her future plans for having children.
- Her personal beliefs and views about contraception.
- The attitudes of her partner and family towards contraception.

Provide information on all contraceptive methods, including [long-acting reversible contraception](#) (LARC) methods, to help her make an informed choice.

- The information should be presented using language and formats that can be easily understood and accessed by the woman, and should at least include:
  - The relative efficacy of the methods.
  - How the methods work.
  - Common adverse effects.
  - Possible drug interactions.
  - Health risks and benefits of the methods.
  - Information on return to fertility after discontinuing the methods.

1. NICE CKS Contraception Assessment: [Scenario: Assessment for contraception | Management | Contraception - assessment | CKS | NICE](#) (Accessed April 2024)

# Contraception Counselling

Is this an  
appropriate  
method for the  
woman?

1. NICE CKS Contraception Assessment: [Scenario: Assessment for contraception | Management | Contraception - assessment | CKS | NICE](#) (Accessed April 2024)



# Is the Contraceptive method suitable for the woman? UKMEC<sup>1</sup>

## UKMEC SUMMARY TABLE HORMONAL AND INTRAUTERINE CONTRACEPTION

Cu-IUD = Copper-bearing intrauterine device; LNG-IUS = Levonorgestrel-releasing intrauterine system; IMP = Progestogen-only implant; DMPA = Progestogen-only injectable: depot medroxyprogesterone acetate; POP = Progestogen-only pill; CHC = Combined hormonal contraception

CONDITION	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC
I = Initiation, C = Continuation						
PERSONAL CHARACTERISTICS AND REPRODUCTIVE HISTORY						
Pregnancy	NA	NA	NA	NA	NA	NA
Age	Menarche to <20=2, ≥20=1	Menarche to <20=2, ≥20=1	After menarche =1	Menarche to <18=2, 18-45=1, >45=2	After menarche =1	Menarche to <40=1, ≥40=2
Parity						
a) Nulliparous	1	1	1	1	1	1
b) Parous	1	1	1	1	1	1
Breastfeeding						
a) 0 to <6 weeks postpartum	See below		1	2	1	4
b) ≥6 weeks to <6 months (primarily breastfeeding)			1	1	1	2
c) ≥6 months postpartum			1	1	1	1
Postpartum (in non-breastfeeding women)						
a) 0 to <3 weeks						
(i) With other risk factors for VTE	See below		1	2	1	4
(ii) Without other risk factors			1	2	1	3
b) 3 to <6 weeks						
(i) With other risk factors for VTE	See below		1	2	1	3
(ii) Without other risk factors			1	1	1	2
c) ≥6 weeks			1	1	1	1

UKMEC	Definition of category
Category 1	A condition for which there is no restriction for the use of the method
Category 2	A condition where the advantages of using the method generally outweigh the theoretical or proven risks
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Category 4	A condition which represents an unacceptable health risk if the method is used

1. UKMEC April 2016 Summary Sheet (Amended September 2019) [UKMEC April 2016 Summary Sheet \(Amended September 2019\) - Faculty of Sexual and Reproductive Healthcare \(fsrh.org\)](#) (Accessed April 2024)



# UKMEC

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# POP Criteria for exclusion

- Non competent under 16s
- Lack of capacity to consent
- Risk of pregnancy
- Allergy
- Acute porphyria.
- Aged 55 and over
- Cardiovascular Disease: Current or past history of ischemic heart disease, vascular disease, stroke, or transient ischemic attack (first attack only) if taking the method when the event occurred.
- Cancers: Current or past history of breast cancer. Malignant liver tumour (hepatocellular carcinoma).
- Gastro-intestinal conditions: Severe (decompensated) cirrhosis. Benign liver tumour (hepatocellular adenoma). Any bariatric or other surgery resulting in malabsorption.

# POP Criteria for exclusion

## Medicines

Individuals using enzyme-inducing drugs/herbal products or within 4 weeks of stopping them.

Individuals taking any interacting medicines (other than enzyme inducers) including medicines or herbal products purchased

## Resources:

British National Formulary (BNF) [www.bnf.org](http://www.bnf.org)

Individual product SmPCs <http://www.medicines.org.uk>



## Case 1: Stacey

- Stacey is 16 years old.
- Her BMI is 36, she has a regular boyfriend and has no medical history.
- She wants to have a pill.
- Can she have the progesterone only pill?

Case study is fictitious, based on typical woman presenting at speaker's contraceptive clinics.<sup>12</sup>

# Management

- Hand out PIL
- Discuss LARC
- Explain mode of action, side effects, and benefits of the medicine
- Advise on action on vomiting and diarrhoea
- Advise on missed pill advice
- Advise on risks of the medication, including failure rates and serious side effects and the actions to be taken
- Advise of risk of pregnancy and EP
- Condoms, safe sex, STDs
- Signpost to local services/sexual health services
- Advise the individual to seek advice from a pharmacist, doctor, or other prescriber before starting any new medications or herbal products, including those purchased OTC

PIL - Patient Information Leaflet, LARC – Long-Acting Reversible Contraceptive, EP – Ectopic Pregnancy, STD – Sexually Transmitted Diseases OTC – Over the counter

Supply of a progestogen only contraceptive pill (POP) by Community Pharmacists in England working in a pharmacy registered to provide the NHS Pharmacy Contraception Service NHS England: <https://www.england.nhs.uk/wp-content/uploads/2023/01/PRN00750-pgd-supply-pop-by-community-pharmacists-in-england-v2.0.pdf> (Accessed April 2024)

A background image showing a variety of colorful pills and capsules, including red, white, yellow, green, and blue ones, scattered on a light surface. The pills are out of focus, creating a bokeh effect.

## Desogestrel (DSG) containing pills

Desogestrel (DSG) pills may have potential benefits over traditional POPs

- Ovulation is inhibited in up to 97% of cycles
- 12-hour window for missed pills.
- Management of dysmenorrhoea

## Case 2: Betty

- Betty is 35 years old and would like a repeat of her COC.
- She smokes 20 cigarettes a day and is not keen to discuss giving up.
- Which pill can she have? POP or COC?

COC - Combined oral contraceptive pill, POP Progesterone-only pill

Case study is fictitious, based on typical woman presenting at speaker's contraceptive clinics.



## UKMEC SUMMARY TABLE HORMONAL AND INTRAUTERINE CONTRACEPTION

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PERSONAL CHARACTERISTICS AND REPRODUCTIVE HISTORY						
Pregnancy	NA	NA	NA	NA	NA	NA
Age	Menarche to <20=2, ≥20=1	Menarche to <20=2, ≥20=1	After menarche =1	Menarche to <18=2, 18-45=1, >45=2	After menarche =1	Menarche to <40=1, ≥40=2
Smoking						
a) Age <35 years	1	1	1	1	1	2
b) Age ≥35 years						
(i) <15 cigarettes/day	1	1	1	1	1	3
(ii) ≥15 cigarettes/day	1	1	1	1	1	4
(iii) Stopped smoking <1 year	1	1	1	1	1	3
(iv) Stopped smoking ≥1 year	1	1	1	1	1	2
Obesity						

## Case 3: Alisha

- Alisha is 26 and is getting married and would like to avoid falling pregnant for the next two years.
- She has migraine with aura.
- She prefers a pill to any type of LARC for the time being. Which pill can she have?

LARC - Long-acting reversible contraceptive

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CONDITION	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC	
	I = Initiation, C = Continuation						
	3	1	3	1			
NEUROLOGICAL CONDITIONS							
Headaches							
a) Non-migrainous (mild or severe)	1	1	1	1	1	I 1	C 2
b) Migraine without aura, at any age	1	2	2	2	I 1	C 2	I 2 C 3
c) Migraine with aura, at any age	1	2	2	2	2	4	
d) History (≥5 years ago) of migraine with aura, any age	1	2	2	2	2	3	

## Alisha (Continued)

- She has not had sex since the first day of her regular period and wants to start as soon as possible.
- She will be getting married abroad and wonders how much supply you can give her?

Case study is fictitious, based on typical woman presenting at speaker's contraceptive clinics.

# Combined oral pills

## Criteria for exclusion- in addition to POP

- Individuals aged 50 years and over.
- Significant or prolonged immobility.

### Cardiovascular disease

- Individuals who have had a gap (of any duration) in their COC cycle.
- Individuals aged 35 years and over that smoke or stopped smoking less than one year ago (this includes vaping and the use of e-cigarettes).
- Body Mass Index (BMI) equal to or greater than 35kg/m<sup>2</sup>.
- BP>140/90mmHg or controlled hypertension.
- Multiple risk factors for cardiovascular disease (CVD) (such as smoking (including vaping/use of e-cigarettes), diabetes, hypertension, obesity, and dyslipidaemias).
- Current or past history of venous thromboembolism

<https://www.england.nhs.uk/wp-content/uploads/2023/01/Patient-group-direction-supply-of-a-combined-oral-hormonal-contraceptive-by-community-pharmacists-in-England-w.pdf>

# Criteria for exclusion- in addition to POP

## Cardiovascular disease

- Individuals aged 35 years and over that smoke or stopped smoking less than one year ago (this includes vaping and the use of e-cigarettes).
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# Cardiac

- Complicated valvular or congenital heart disease, e.g., pulmonary hypertension, history of subacute bacterial endocarditis.
- First degree relative (with DVT <45 years of age)
- Known thrombogenic mutations, e.g., factor V Leiden, prothrombin mutation, protein S, protein C and antithrombin deficiencies.
- Cardiomyopathy with impaired cardiac function.
- Atrial fibrillation.
- Current or past history of ischaemic heart disease, vascular disease, stroke, or transient ischaemic attack.

# Neurological Conditions & Cancer

- Current or past history of migraine with neurological symptoms including aura at any age.
- Migraine without aura, first attack when on method of contraception containing an estrogen.

## Cancers

- Past or current history of breast cancer.
- Carrier of known gene mutations associated with breast cancer, e.g., BRCA1 or 2
- Malignant liver tumour (hepatocellular carcinoma).

<https://www.england.nhs.uk/wp-content/uploads/2023/01/Patient-group-direction-supply-of-a-combined-oral-hormonal-contraceptive-by-community-pharmacists-in-England-w.pdf>

# Gastro-intestinal Conditions

- Severe (decompensated) cirrhosis
- Gall bladder disease
- Any bariatric or other surgery resulting in malabsorption
- Cholestasis (related to past combined hormonal contraceptive use)
- Benign liver tumour (hepatocellular adenoma)

<https://www.england.nhs.uk/wp-content/uploads/2023/01/Patient-group-direction-supply-of-a-combined-oral-hormonal-contraceptive-by-community-pharmacists-in-England-w.pdf>

## Other Conditions

- Imminent planned major surgery (COC should be stopped at least 4 weeks prior to planned major surgery or expected period of limited mobility)
- Diabetes with end organ disease (retinopathy, nephropathy, neuropathy)
- Positive anti-phospholipid antibodies (with or without systemic lupus erythematosus)
- Organ transplant, with complications.
- Known severe renal impairment or acute renal failure
- Acute porphyria

# Medicines

- Individuals using enzyme-inducing drugs/herbal products or within 4 weeks of stopping them.
- Individuals taking any interacting medicines (other than enzyme inducers) including medicines or herbal products purchased
- British National Formulary (BNF) [www.bnf.org](http://www.bnf.org)
- Individual product Summary of Product Characteristics ([www.medicines.org.uk](http://www.medicines.org.uk))

<https://www.england.nhs.uk/wp-content/uploads/2023/01/Patient-group-direction-supply-of-a-combined-oral-hormonal-contraceptive-by-community-pharmacists-in-England-w.pdf>



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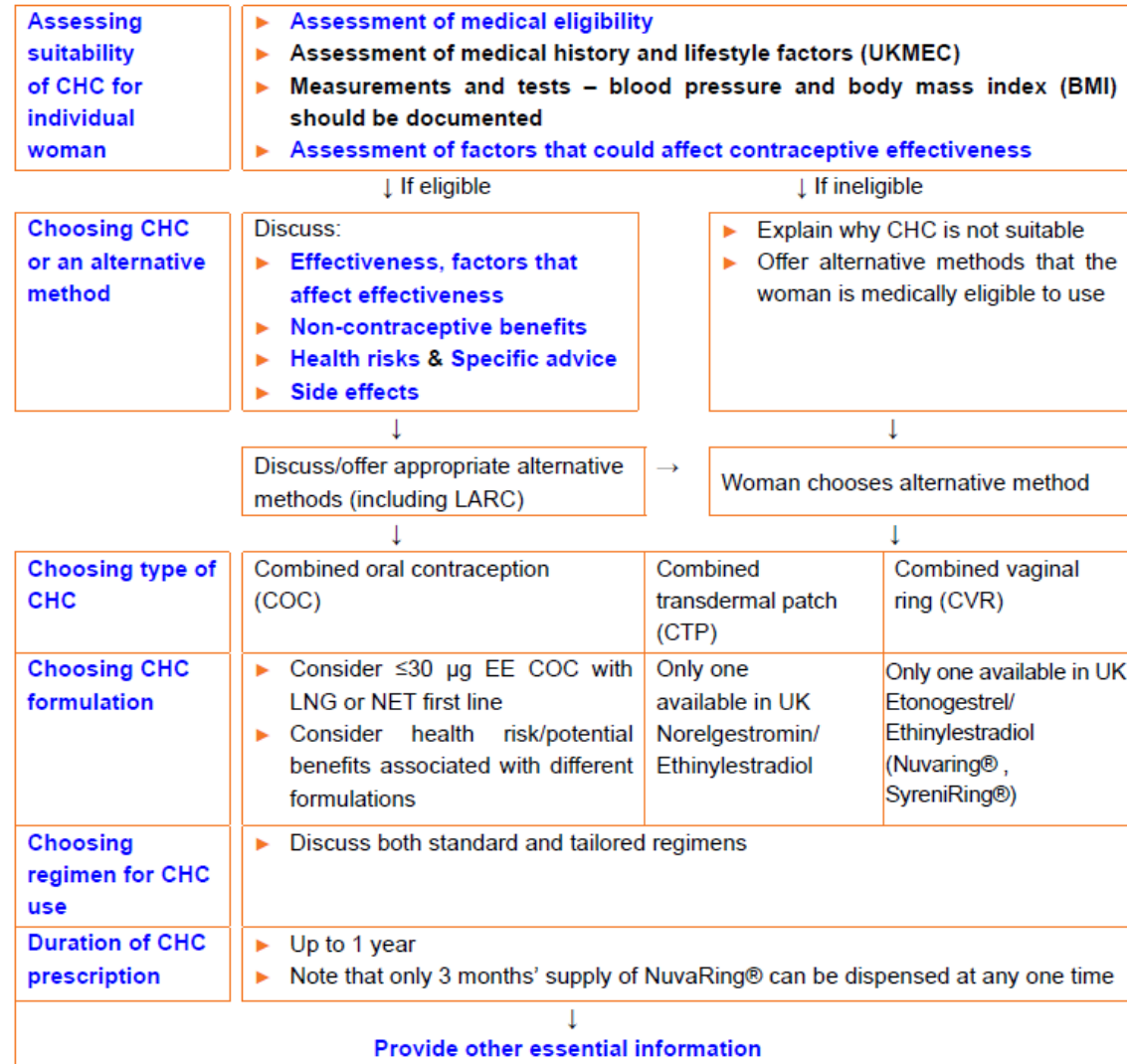


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CONDITION	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC
I = Initiation, C = Continuation						
<b>PERSONAL CHARACTERISTICS AND REPRODUCTIVE HISTORY</b>						
<b>Pregnancy</b>	NA	NA	NA	NA	NA	NA
<b>Age</b>	Menarche to <20=2, ≥20=1	Menarche to <20=2, ≥20=1	After menarche =1	Menarche to <18=2, 18-45=1, >45=2	After menarche =1	Menarche to <40=1, ≥40=2
<b>Parity</b>						
a) Nulliparous	1	1	1	1	1	1
b) Parous	1	1	1	1	1	1
<b>Breastfeeding</b>						
a) 0 to <6 weeks postpartum	See below		1	2	1	4
b) ≥6 weeks to <6 months (primarily breastfeeding)			1	1	1	2
c) ≥6 months postpartum			1	1	1	1
<b>Postpartum (in non-breastfeeding women)</b>						
a) 0 to <3 weeks						
(i) With other risk factors for VTE	See below		1	2	1	4
(ii) Without other risk factors			1	2	1	3
b) 3 to <6 weeks						
(i) With other risk factors for VTE	See below		1	2	1	3
(ii) Without other risk factors			1	1	1	2
c) ≥6 weeks			1	1	1	1

# Suggested content of an initial combined hormonal contraception consultation



CHC, combined hormonal contraception; COC, combined oral contraception; EE, ethinylestradiol; LARC, long-acting reversible contraception; LNG, levonorgestrel; NET, norethisterone; UKMEC, United Kingdom Medical Eligibility Criteria.

FSRH Clinical Guideline: Combined Hormonal Contraceptives (01/2019, amended 10/23) Available at: [FSRH Clinical Guideline: Combined Hormonal Contraception \(January 2019, Amended October 2023\)](#) - Faculty of Sexual and Reproductive Healthcare (Accessed April 2024)

## Case 4: Cynthia

- Cynthia is 49 has been on the COC for 2 years. She really likes her method. She has come for a repeat and is also requesting sumatriptan.
- On further questioning you discover that last week she developed a sudden persistent headache which is unusual for her.
- Her neurologist has diagnosed this as migraine and advised her to start sumatriptan.
- How would you manage her?

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CONDITION	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC
	I = Initiation, C = Continuation					
	3	1	3	1		
<b>NEUROLOGICAL CONDITIONS</b>						
<b>Headaches</b>						
a) Non-migrainous (mild or severe)	1	1	1	1	1	I C 1 2
b) Migraine without aura, at any age	1	2	2	2	I C 1 2	I C 2 3
c) Migraine with aura, at any age	1	2	2	2	2	4
d) History (≥5 years ago) of migraine with aura, any age	1	2	2	2	2	3

## Case 5: Anna

- Anna has HIV infection and would like to start the pill.
- Her daughter is a medical student and has searched and has told her she can have any method.
- What do you need to know about her HIV treatment that affects your decision.

UKMEC SUMMARY TABLE HORMONAL AND INTRAUTERINE CONTRACEPTION						
CONDITION	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC
	I = Initiation, C = Continuation					

HIV INFECTION								
HIV infection								
a) High risk of HIV infection	1		1		1		1	
b) HIV infected								
(i) CD4 count $\geq 200$ cells/mm <sup>3</sup>	2		2		1		1	
(ii) CD4 count $< 200$ cells/mm <sup>3</sup>	I	C	I	C	1	1	1	1
	3	2	3	2				
c) Taking antiretroviral (ARV) drugs	Certain ARV drugs have the potential to affect the bioavailability of steroid hormones in hormonal contraception.  For up-to-date information on the potential drug interactions between hormonal contraception and ARV drugs, please refer to the online HIV drugs interaction checker ( <a href="http://www.hiv-druginteractions.org/Interactions.aspx">www.hiv-druginteractions.org/Interactions.aspx</a> ).							

## Case 6: Kate

- Kate is 33 and smokes e-cigarettes. She has come for a repeat COC.
- Her BMI is 34 and she is being investigated for pre-diabetes.
- How would you manage her case?



UKMEC SUMMARY TABLE HORMONAL AND INTRAUTERINE CONTRACEPTION							
CONDITION	Cu-IUD	LNG-IUS	IMP	DMPA	POP	CHC	
	I = Initiation, C = Continuation						
History of bariatric surgery							
a) With BMI <30 kg/m <sup>2</sup>	1	1	1	1	1	1	
b) With BMI ≥30–34 kg/m <sup>2</sup>	1	1	1	1	1	2	
c) With BMI ≥35 kg/m <sup>2</sup>	1	1	1	1	1	3	
Organ transplant							
a) Complicated: graft failure (acute or chronic), rejection, cardiac allograft vasculopathy	I	C	I	C	2	2	2
	3	2	3	2			
b) Uncomplicated	2		2		2	2	2
CARDIOVASCULAR DISEASE (CVD)							
Multiple risk factors for CVD (such as smoking, diabetes, hypertension, obesity and dyslipidaemias)	1	2	2	3	2	3	

## Case 6: Penny

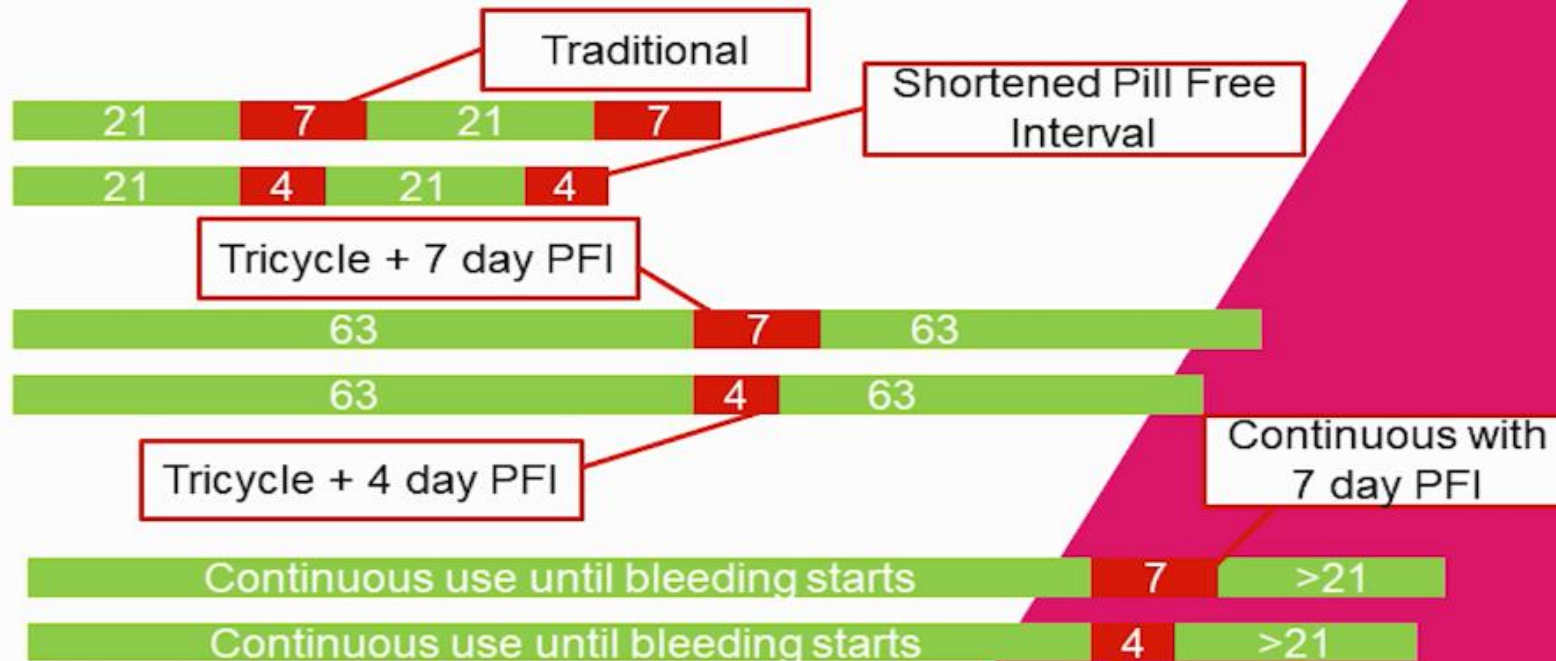
- Penny is an established user of COC.
- She is planning to participate in a swimming tournament. She is worried she may forget to restart after the PFI and wishes not to bleed
- Can she take this pill every day or should she change to a POP?

Case study is fictitious, based on typical woman presenting at speaker's contraceptive clinics.

**Table 1: Standard and tailored regimens for use of combined hormonal contraception (CHC)**

Type of regimen	Period of CHC use	HFI
<b>Standard use</b>	21 days (21 active pills or 1 ring, or 3 patches)	7 days
<b>Tailored use</b>		
<b>Shortened hormone-free interval (HFI)</b>	21 days (21 active pills or 1 ring, or 3 patches)	4 days
<b>Extended use (tricycling)</b>	9 weeks (3 x 21 active pills or 3 rings, or 9 patches used consecutively)	4 or 7 days
<b>Flexible extended use</b>	Continuous use ( $\geq 21$ days) of active pills, patches or rings until breakthrough bleeding occurs for 3–4 days	4 days
<b>Continuous use</b>	Continuous use of active pills, patches or rings	None

## How can the COCP be taken?



# Tailored Regimens: Key Messages

- CHC is an option for contraception if taken as an extended or continuous course
- A woman using CHC does not need a monthly withdrawal bleed to be healthy
- There is no build-up of menstrual blood inside a woman who uses CHC without a break; extended CHC use keeps the lining of the womb thin
- A monthly bleed on CHC is not a reassurance that the woman is not pregnant
- By using extended or continuous courses the frequency of withdrawal bleeds and symptoms can be reduced
- Ovaries can be activated during the traditional 7-day hormone free interval therefore fewer or shorter breaks could mean less risk of pregnancy
- Irregular bleeding or spotting can occur in the first few months of a CHC particularly with extended or continuous courses but it generally improves with time and is not indicative of a problem
- Extended or continuous course does not affect the return of a woman's fertility when she stops CHC

# COC & Low Mood

- Some women may experience negative mood changes when first taking COC
- Inconsistent trends in the incidence of mood change between COC formulations
- Mood changes common and often related to external events
- It is possible that formulation containing an anti-androgenic rather than androgenic progesterone could have a more beneficial effect on mood
- Continuous use of COC may be of benefit to mood
- No clear evidence that COC causes depression

## **Box 2. Women using combined hormonal contraception: key indications for medical review**

### ***Key symptoms that should prompt women to seek urgent medical review***

- ▶ Calf pain, swelling and/or redness
- ▶ Chest pain and/or breathlessness and/or coughing up blood
- ▶ Loss of motor or sensory function

### ***Key symptoms that should prompt women to seek medical review***

- ▶ Breast lump, unilateral nipple discharge, new nipple inversion, change in breast skin
- ▶ New onset migraine
- ▶ New onset sensory or motor symptoms in the hour preceding onset of migraine
- ▶ Persistent unscheduled vaginal bleeding

### ***New medical diagnoses that should prompt women to seek advice from their contraceptive provider (and review of the suitability of CHC)***

- ▶ High blood pressure
- ▶ High body mass index ( $>35 \text{ kg/m}^2$ )
- ▶ Migraine or migraine with aura
- ▶ Deep vein thrombosis or pulmonary embolism
- ▶ Blood clotting abnormality
- ▶ Antiphospholipid antibodies
- ▶ Angina, heart attack, stroke or peripheral vascular disease
- ▶ Atrial fibrillation
- ▶ Cardiomyopathy
- ▶ Breast cancer or breast cancer gene mutation
- ▶ Liver tumour
- ▶ Symptomatic gallstones