Combined Hormonal Contraception (CHC)

Sal Roberts

CHC

- Combined oral contraceptive pill (COC)
- Combined transdermal patch (CTP)
- Combined vaginal ring (CVR)

CHC – How Do They Work?

- Inhibits ovulation (main method of action)
- Causes alterations in cervical mucus
- Suppresses endometrial growth

CHC - Combined oral contraceptive (COC) pills

- contain different amounts of estrogen and types of progestogen (synthetic progesterone)
- dose of the main estrogen, ethinyl estradiol varies from 20-35 mcg
- three types of combined pills:

1. Monophasic

most common - 21 identical once daily tablets then7 (or 4) pill free interval (PFI) where withdrawal bleed occurs

2. Phasic pills

different hormone strengths taken in an order mimicking the hormonal fluctuations of a 'normal cycle‘ with a withdrawal bleed during the PFI

3. Every day (ED) pills

number of active pills taken once daily and placebo pills that are taken instead of having a PFI

Can have a tailored regime!

CHC – Which Pills to choose????

2nd Generation safest

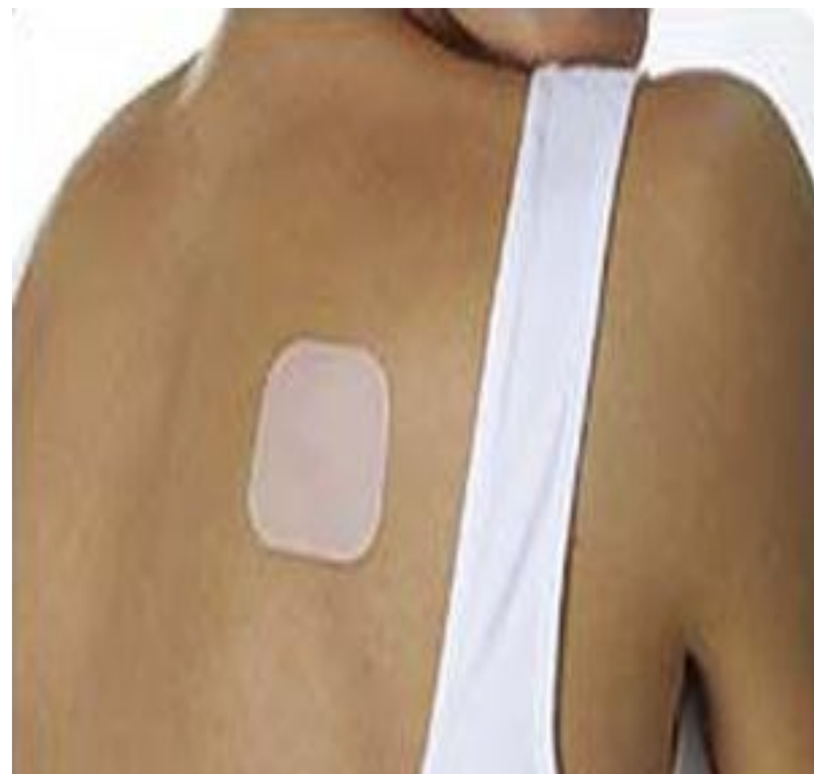
- levonogestrel (Microgynon 30)
- Norethisterone (ovysmen, loestrin 30/20, norimin)
- Mestranol/Norethisterone (Norinyl-1)

3rd and 4th Generation

- Norgestimate (Cilest)
- Desogestrel (Mercilon/Marvelon)
- Gestodene (Femodene)
- Drospirenone (Yasmin)
- Nomegestrol (Zoely)
- Dienogest (Qlaira)

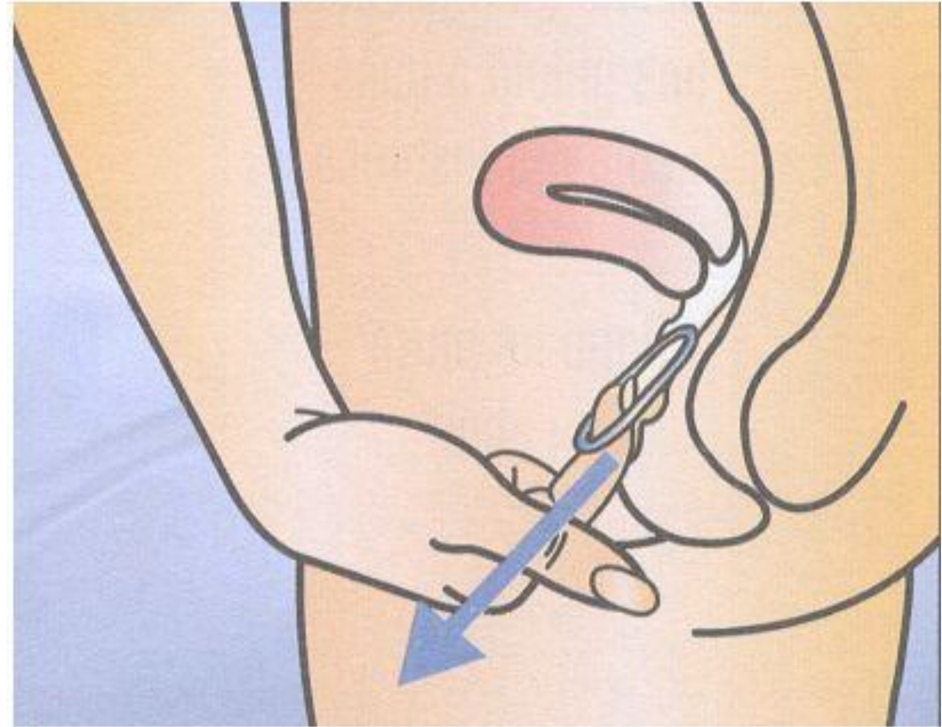
CHC – Combined Transdermal Patch

- 4.5 by 4.5 cm (20 cm^2)
- 3 layer matrix patch contains the hormones between two polyester films
- releases 33.9 mcg ethinyl estradiol and 203 mcg norelgestromin per day for 7 days
- applied weekly on the same day for 3 weeks
- to the buttock, abdomen, torso or upper-arm (not on the breast or the face), to clean, dry skin
- followed by 1 patch free week



CHC – Vaginal Ring

- 54 mm in diameter, 4 mm thick
- releases 15 mcg ethinyl estradiol and 120 mcg etonogestrel daily
- stored in a pharmaceutical fridge
- has only a four months active life following dispensing
- single cycle contraceptive
- inserted into the vagina for 3 weeks of continuous vaginal use then removed and discarded
- 7 day ring free interval when withdrawal bleed usually occurs



CHC - Benefits

- regulates menstruation and decrease blood loss
- reduced incidence of benign ovarian cysts and functional ovarian tumours (reduction related to duration of use)
- reduction in hirsutism, acne and seborrhoea (CHC raises sex hormone binding globulin (SHBG) levels and suppress ovarian androgen production)
- risk of ovarian and endometrial cancer is halved with CHC use and this continues for at least 15 years after and Colorectal cancer (RR 0.82)
- RCOG recommends the COC pill as the “drug of choice” for treating symptoms of endometriosis

CHC – Risks!!

- VTE – smoking, obesity (BMI 30-35 x 2; >35 x 4)
- Ischaemic Stroke - migraines

CHC – Risks!!!

Venous thromboembolism (VTE)

	Risk of VTE per 10,000 healthy women over one year
Non contraceptive users and not pregnant	2
CHC containing ethinylestradiol plus levonorgestrel, norgestimate or norethisterone	5-7
CHC containing etonogestrel (ring) or norelgestromin (patch)	6-12
CHC containing ethinylestradiol plus gestodene, desogestrel or drospirenone	9-12

VTE risk associated with pregnancy and the postpartum period (29 per 10, 000 woman-years and 300–400 per 10,000 woman-years, respectively)

CHC – Risks!!

Ischaemic Stroke:

- very small increase in the absolute risk of ischaemic stroke with CHC use
- risk is further increased with hypertension (RR 3) and smoking (RR 1.5)

UKMEC	Hypertension & Smoking
UKMEC 3	• Adequately controlled hypertension • Systolic BP 140-159 mmHg or diastolic BP 90-94 mmHg • Smokes <15 per day + Age >35 years • Stopped smoking <1 year + Age >35 years
UKMEC 4	• Systolic BP >160 mmHg or diastolic BP >95 mmHg • Vascular disease • Smokes >15 per day + Age >35 years

CHC – Risks!!

Migraine:

- Migraine with aura is also an independent risk factor for ischaemic stroke

UKMEC	**Risk of Ischaemic Stroke**
UKMEC 3	•Past history of migraine ≥ 5 yrs ago with aura •Migraine without aura develops while using the CHC •History of cardiovascular accident
UKMEC 4	Migraine with aura

CHC – Risks!!

Migraine with Aura Definition:

- an aura may be a visual, sensory, speech and/or motor disturbance. An aura usually precedes the headache, lasts for up to 60 minutes and resolves before the headache starts. 99% of auras are visual disturbances such as: loss of sight (e.g. haemianopia, amaurosis, tunnel vision), and/or fortification spectra (bright scintillating angulated light enlarging from a bright centre on one side to form a C-shape surrounding area of lost vision). An aura is **not** simply flashing lights.
- unilateral sensory aura is experienced by 31% of aura sufferers, in the form of paresthesia of the face, tongue, arm and sometimes the leg. 18% experience speech disturbance and 6% motor disturbance

CHC – Other Risks!!

UKMEC 3:

- Breastfeeding ≥ 6 weeks to < 6 months
- Post partum <21 days (not breast feeding)
- Gall bladder disease - symptomatic, medically treated or current
- History of past CHC related cholestasis
- Concurrent treatment with enzyme – inducing drugs
- Ritonavir-boosted protease inhibitors

UKMEC 3/4:

- Diabetic with nephropathy/retinopathy/neuropathy
- Other vascular disease or diabetes of >20 years duration
- Acute or flare of viral hepatitis

CHC – Other Risks!!

UKMEC 4:

- Breast feeding < 6 weeks post partum
- Active viral hepatitis
- Severe decompensated cirrhosis
- Liver adenoma
- Hepatoma
- Secondary Raynauds with lupus anticoagulent
- SLE with positive or unknown anti-phospholipid antibodies

CHC – Possible Risks???

Risk of Breast Cancer:

- should be advised that **if** there is an increased risk of breast cancer it is likely to be very small and to return to background risk ten years after stopping

UKMEC	**Risk of Breast Cancer**
UKMEC 3	•In remission and no recurrence of breast cancer in the last five years •Carrier of gene mutation associated with breast cancer e.g. BRCA 1 •Undiagnosed breast mass (initiation)
UKMEC 4	Current or personal history of breast cancer within the last 5 years

CHC – Possible Risks???

Cervical Cancer:

- associated with an increased risk of squamous carcinoma of the cervix, starting after 5 years of use
- risk returns to baseline after 10 years cessation of COC
- combined pill is not causative - HPV

CHC – Side Effects

Hormone-related:

- Breast tenderness/enlargement
- Bloating
- Nausea
- Increased non-infective vaginal discharge
- Headache
- Chloasma (skin pigmentation) - this may persist for a long time after the method is stopped
- Acne
- Greasy skin/hair
- Hirsuitism
- Depression
- Loss of libido
- Vaginal dryness

Break-through Bleeding:

common at start

may also occur if the method is not being used correctly

always try and exclude other causes of irregular bleeding:

- Disease (chlamydia/cervical disease)
- Drug interactions (enzyme inducers)
- Disorders of pregnancy (miscarriage)
- Diarrhoea and vomiting
- Disturbance of absorption (massive gut resection)
- Dose (low dose pills more likely to give break-through bleeding)
- Duration of use (more common in first few months of use)

CHC – Side Effects

Specific to CTP:

- Skin reaction to the adhesive/material of the patch
- Skin discoloration around the patch site

Specific to CVR:

- Vaginitis
- Awareness of CVR during intercourse
- Foreign body sensation
- Ring expulsion

CHC – 1st Visit Suitability?

Full personal and family history must be taken with direct questioning regarding:

- risk of pregnancy – incidences of unprotected sex, date of last menstrual period and whether it was normal
- nature of periods – duration, frequency, amount of bleeding, history of anaemia related to menses, intermenstrual or post-coital bleeding – consider the need for investigations of abnormal bleeding before starting CHC
- previous contraception use – has a CHC method been successfully used before?
- history of previous pregnancies and deliveries, most recent pregnancy – if still breastfeeding CHC may not be appropriate until breastfeeding has ceased
- cervical screening history

CHC – 1st Visit Suitability?

Assess risk of sexually transmitted infections (STIs):

- establish sexual preference
- when was last unprotected sexual intercourse (UPSI)
- number of partners in preceding 12 months and new partners in the last three months
- risk of blood borne virus infection (any partners drug users, bisexual or travellers from high risk countries)
- recent STI screening history
- past history of a STI
- history of commercial sex work or non-consensual sex

CHC – 1st Visit Suitability?

Medical History

- past and current medical history
- medication – prescription/non-prescription and herbal/complementary remedies, consider drug interactions
- Allergies

Specific Medical Conditions

Personal or family history of:

- Venous thromboembolism (VTE)
- Breast cancer
- Cardiovascular disease – myocardial infarction (MI), stroke etc.
- Known thrombophilia
- Obesity

Personal history of:

- Diabetes
- Liver disease
- Migraines with aura
- Hypertension

Job/lifestyle – high altitude/immobility

CHC – 1st Visit Suitability?

Smoking

- how much a women smokes
- discuss smoking cessation programme
- if a woman is aged >35 years and smoking then CHC is not suitable

KNOWLEDGE OF UKMEC ESSENTIAL!!!!

CHC – What Examinations?

- BP and BMI should be documented for all women prior to first prescription of CHC

Blood Pressure

- systolic >140-159mmHg or diastolic >90-94mmHg (UKMEC 3)
- systolic ≥ 160mmHg or diastolic ≥ 95mmHg (UKMEC 4)

Body Mass Index

- BMI >30 - 34 kg/m^2 (UKMEC 2)
- BMI >35 kg/m^2 (UKMEC 3)

COC - Teach how to use

Missed Pills:

- A missed pill is a pill that is completely omitted (i.e. More than 24 hours have passed since the pill was due (48 hours since the last pill was taken))

If one pill has been missed:

- The missed pill should be taken as soon as it is remembered
- The remaining pills should be continued at the usual time

- Give leaflet to back up!!

COC – How to use

If two or more pills have been missed (more than 48 hours late):

- The most recent missed pill should be taken as soon as possible
- The remaining pills should be continued at the usual time
- Condoms should be used or sex avoided until seven consecutive active pills have been taken

If pills are missed in the first week (Pills 1-7)	If pills are missed in the second week (Pills 8-14)	If pills are missed in the third week (Pills 15-21)
EC should be considered if unprotected sex occurred in the pill-free interval or in first week of pill-taking	No indication for EC if the pills in the preceding 7 days have been taken consistently and correctly (assuming the pills thereafter are taken correctly and additional contraceptive precautions are used).	OMIT THE PILL-FREE INTERVAL by finishing the pills in the current pack (or discarding any placebo tablets) and starting a new pack the next day.

CTP – How to use

Detached Patch for > 48hrs+ =

- apply a new patch
- additional contraceptive precautions for seven days
- consider the need for emergency contraception if patch was detached in week one and unprotected sexual intercourse occurred in patch free interval or week one
- change new patch day accordingly

Delayed patch for 48hrs+ =

- apply new patch
- additional protection for seven days
- consider emergency contraception if unprotected sexual intercourse occurred in patch free interval
- change new patch day accordingly

CVR – How to use

- inserted in the vagina and retained for 3 weeks
- does not need to be positioned precisely
- can come out for a few hours for sex
- removal is followed by a 7 day ring free interval, after which a new CVR is inserted

If more than 48hrs late inserting new ring then:

- additional contraceptive cover required for seven days
- consider emergency contraception if ring removed in week one and unprotected sexual intercourse occurred in ring free interval or week one

CHC – Starting Regimes

Method	When To Start	Additional Protection Needed
No sexual intercourse/barrier contraception used	Day 1-5 of menstrual cycle At any other time if it is reasonably certain she is not pregnant	No Yes - 7 days
Women who are amenorrhoeic	Any time, if certain not pregnant	Yes - 7 days
From another CHC	Start on day after last active COC, CTP, CVR	No
From traditional POP	Can be started immediately if the previous method was used consistently and correctly	Yes, 7 days
From Desogestrel POP - Cerazette ®	Can be started up to next day after last pill	No
From Injectable	Can be started any time before the repeat injection is due	No
Switching from SDI	Can be started any time up to when implant is due for removal	No

CHC – Starting Regimes

Method	When To Start	Additional Protection Needed
From IUD	Up to day 5 of menstrual cycle	No
	At any other time in the menstrual cycle	Yes - 7 days
From IUS	Start immediately	Yes - 7 days
Postnatal (not breast feeding)	Start on day 21 postpartum if no additional risk factors for VTE	No
	After day 21 postpartum if menstrual cycles have returned, start CHC as for other women having menstrual cycles	No, if starting up to day 5 Yes, 7 days if starting after day 5
	After day 21 postpartum if menstrual cycles have not returned, start as amenorrhoeic women	Yes - 7 days
Following miscarriage or 1st or 2nd trimester abortion	Up to and including day 5	No
	At any other time if it is reasonably certain she is not pregnant	Yes - 7 days

CHC – Interactions and Issues

Antibiotics (other than liver enzymes inducing) do **NOT** interact with CHC

Liver Enzyme- Inducing Drugs:

- Antiepileptics – phenytoin, carbamazepine
- Antiretrovirals – ritonavir-boosted protease inhibitors
- Rifampicin, rifabutin
- Topiramate (if daily dose >200 mg)
- Herbal – St. John's Wort
- Primidone

LEID's alter CHC efficacy

- Need to change or in short term use condoms + increasing the dose to at least 50 mcg (maximum 70 mcg EE) and advising women to shorten (four days)/omit their PFI
- Additional contraceptive protection is advised while taking the liver-enzyme inducing drug and for 28 days after this drug is stopped

CHC - Interactions and Issues

Other Drugs:

- **Lamotrigine -** serum levels of lamotrigine are reduced by CHC and levels increase in the pill- free week. Due to the risk of drug interactions, the use of lamotrigine with CHC is a UK MEC Category 3
- **Anti obesity drugs** may induce diarrhoea and vomiting which may reduce the efficacy of CHC

Vomiting and Diarrhoea:

- if vomiting occurs up to two hours after taking the COC then next pill should be taken as soon as possible
- persistent and severe diarrhoea for more than 24 hours consider need for additional precautions/emergency contraception
- if vomiting and diarrhoea during last seven tablets, the PFI should be omitted
- CTP and CVR is unaffected by vomiting or diarrhoea

CHC – Follow up

- Follow up at 3/12 then 6/12 or sooner if any problems

Need to know:

- use of method – any missed pills, pregnancy risk, CTP detachment, CVR expulsion, late reinsertion, etc
- any changes since last visit, such as: started new medication, new partner, change or onset of migraine
- smoking history
- side effect enquiry
- cervical screening (if due)
- STI advice if appropriate
- measurement and documentation of BP
- change in weight, measurement and documentation of BMI should occur annually
- opportunity for woman to ask questions
- new supply of contraception to be given (can give 6/12 to 1yrs supply when settled on method)

CHC – STOP!!!

- sudden severe chest pain
- sudden breathlessness (or cough with blood-stained sputum)
- unexplained swelling or severe pain in calf of one leg
- severe abdominal pain
- unusual, severe or prolonged headache, especially if first time or getting progressively worse
- sudden partial or complete loss of vision
- bad fainting attack or collapse
- first unexplained epileptic seizure
- weakness or numbness affecting one side/part of the body
- hepatitis, jaundice, liver enlargement
- BP >160/95 (BP >140/90 needs close monitoring +/- change of contraceptive method)
- prolonged immobility
- onset of a UKMEC 3 or 4 criterion eg. smoking over age 35, BMI >35, DVT
- age 50

CHC

IF IN DOUBT CONTACT SUFFOLK SEXUAL HEALTH CLINIC AT:

THE ORWELL CLINIC

IPSWICH

0300 123 3650