AUSTRALASIAN MENOPAUSE SOCIETY
EMPOWERING MENOPAUSAL WOMEN

Information Sheet

Contraception

Key points

- Contraception is required for 12 months after the final menstrual period (FMP) if the FMP occurs after the age of 50. If the FMP occurs before the age of 50, 24 months of contraception is required.
- Oestrogen - based methods are not recommended over the age of 50 due to cardiovascular risks.
- The Levonorgestrel IUD (Mirena®) provides effective management of heavy menstrual bleeding as well as contraception and can also be used as part of an MHT regimen
- Women in a new relationship should be advised about the use of condoms to prevent sexually transmitted infections.
- Women should be informed about the availability of the Emergency Contraceptive Pill without a prescription at pharmacies.

Fertility declines with age and available data suggest that spontaneous conception for women over age 50 is very rare (1). Pregnancy at the age of 45-49 results in a live birth rate of less than 2 per 1000, while over the age of 50 it is less than 1 per 2000. Despite the low risk in this age group, women should be counselled about the possibility of unintended pregnancy and advised about appropriate contraception.

Contraception is required for 12 months after the final menstrual period (FMP) if the FMP occurs after the age of 50 (2). If the FMP occurs before the age of 50, 24 months contraception is required.

Amenorrhea is common in perimenopausal women using progesterone-only contraception making it difficult to determine the date of her FMP. In this situation, for women age 50 or older, a single FSH measurement ≥30ml U/L will indicate that contraception will be required for a further 12 months, and can then be ceased. If the FSH is ≤30mIU/L, contraception should be continued for the next 12 months and FSH to be repeated to check if ≥30 at that time (3).

The choice of contraception is determined by several factors including the woman's age, medical eligibility criteria (4), comorbid medical conditions, affordability, and personal

choice. Oestrogen-containing methods are not recommended for women over the age of 50. Women of any age with contraindications to oestrogen, such as a history of breast cancer, thromboembolic disorders, complex migraines and heavy smokers should be offered non-hormonal or progestogen-only methods.

1. LONG-ACTING REVERSIBLE CONTRACEPTIVE METHODS (LARC)

(a) Levonorgestrel Intrauterine System (hormonal IUS)

(i) The **Mirena IUD®** is inserted into the uterus. It releases levonorgestrel (LNG) 52mg over 5 years (with extended use for contraception up to 10 years if inserted after age 45) (3). It works primarily by thinning the endometrium and thickening of the cervical mucus. It is a highly effective form of contraception (>99% efficacy) (4) and suitable for women with contraindications to oestrogen–containing methods.

Women should be warned of possible spotting and bleeding for the first few months. Some women experience progestogen side effects such as acne and mood changes.

The Mirena IUD is an excellent option for women around the perimenopause particularly if they are experiencing irregular heavy periods. It also provides endometrial protection for women using MHT; use should not be extended beyond 5 years at any age for this indication.

(ii) The **Kyleena IUD®** is similar to the Mirena® but releases a smaller dose of LNG (19.5mg) over 5 years. The IUD device itself is smaller than the Mirena and is most suitable for nulliparous women who don't mind having a regular lighter period. Importantly it does NOT provide adequate endometrial protection for women on MHT and is not suitable for women experiencing heavy menstrual bleeding around the time of menopause.

In New Zealand, **Jaydess®** is the lower dose IUS, releasing 13.5mg of levonorgestrel over its use in 3 years.

(b) The Contraceptive Implant

The **Implanon NXT®** is available in Australia and is a 4cm single rod inserted under the skin of the inner non-dominant arm under local anaesthetic. It releases the progestogen etonorgestrel over a three-year period but can be removed earlier if required. It inhibits ovulation, thickens the cervical mucus and thins the endometrium. The Implanon is available on PBS in Australia.

In New Zealand the **Jadelle®** implant is fully funded. It consists of 2 small flexible silicon rods, each containing levonorgestrel 75mg.

The contraceptive implants provide highly >99% effective (5) and are cost-effective. Side effects can include irregular bleeding along with common progestogenic side effects (6). Contraceptive implants should not be used for endometrial protection in an MHT regimen.

(c) Copper-bearing IUD

The copper IUD is >99% effective. It is toxic to sperm and can prevent implantation of the fertilized egg. In Australia, three types of Copper IUD are available, **Load375®** and **Copper TT380 Short®** which last for 5 years and **Copper TT380 Standard®,** which is effective for 10 years. As there are no hormones, it is suitable for women concerned about hormone side effects or those with contraindications to hormonal methods. The Copper IUD can cause heavier, longer and more painful periods. In Australia Copper IUDs are not PBS listed with a higher upfront cost that the hormonal IUDs. In New Zealand, Copper IUDs are subsidised and less expensive than the hormonal IUD.

2. MEDIUM ACTING CONTRACEPTION

(a) Depomedroxyprogesterone acetate (DMPA) injections

DMPA injections (**Depo-Provera®** and **Depo-Ralovera®)** are progestogen-only injections administered every 3 months into the gluteal or deltoid muscle. It prevents ovulation and is 99.8% (5) effective when used correctly. Most women are amenorrhoeic so it may be helpful for women with heavy menstrual bleeding. As it also suppresses oestrogen production, long term use may result in low bone density or osteoporosis (7). For this reason, it is also less preferred in women over age 45 (7, 8).

(b) The Vaginal Ring

The vaginal ring (**NuvaRing®**) is a soft silastic ring containing ethinyl oestradiol and etonorgestrel. It is inserted by the woman herself and left in place for 3 weeks, then removed for a week before a new ring is inserted. Women must remember to remove and replace the ring for it to be effective.

The vaginal ring works in a similar principle to the oral contraceptive pill but obviates the need for daily tablet taking. In perfect use the risk of pregnancy is <1% per year (5). The vaginal rings can be used 'back-to-back' for 3 months at a time, to prevent withdrawal bleeding. It can also provide better regulation of the menstrual cycle for women who experience breakthrough bleeding with combined oral contraceptive pill (COCP).

The vaginal ring has the same contraindications as COCP (see below). It is not PBS listed so the cost may be a deterrent for some women.

3. SHORT ACTING CONTRACEPTION

(a) The Combined Oral Contraceptive Pill (COCP)

The COCP contains both oestrogen and progestogen hormones. It works primarily by inhibiting ovulation but also thickens cervical mucus and thins the endometrium with >99% efficacy with perfect use (93% in typical use) (5). Active hormone pills can be taken continuously for up to 12 months to reduce menstrual blood loss. There is some data that suggest a reduction in the risk of ovarian and endometrial cancer with COCP use.

The COCP should not be used in women with contraindications to oestrogen (e.g. women with a history of breast cancer, VTE, migraine with aura and smokers over the age of 35 year). The COCP is associated with an increased risk of VTE by approximately 2-fold (8) (although the absolute risk for most women is very low). The COCP is not recommended for women over the age of 50 because of increased cardiovascular risk. For women with additional risk factors such an elevated BMI, a history of diabetes or hypertension, consideration should be given to cease the use of COCP at an earlier age.

(b) The progestogen-only pill (POP) or "minipill"

The progestogen-only pill contains a small dose of progestogen and primarily works by thickening cervical mucus. It can be used by women with contraindications to the use of oestrogen who prefer an oral method. There is no increased risk of thromboembolic events.

Most POPs must be taken within a three-hour time frame each day for it to be effective, although the newer Drospirenone-containing Mini-Pill (**Slinda®)** has a 24-hour window (10).

In New Zealand, **Cerazette®** is the only POP available and has a 12-hour window of use.

Similar to contraceptive implants, POPs should not be used for endometrial protection in an MHT regimen.

4. COITALLY DEPENDENT BARRIER METHODS

The barrier methods require 'action' with every act of sexual intercourse, which results in lower effectiveness in typical use than other contraceptive methods. Condoms, both male and female (now also referred to "external" and "internal" condoms respectively), are the only method of contraception that can prevent STIs.

(a) Contraceptive Diaphragm

The diaphragm **Caya®** is a barrier method which the woman inserts herself, to cover the cervix to prevent sperm reaching the uterus. It must be left in place for a minimum of 6 hours after intercourse to allow sperm to be killed off by the vaginal acidity. The single size diaphragm has a lifespan of two years; the manufacturer recommends the use of a lactic acid buffer gel with the diaphragm (note that spermicide is not available in Australia).

The diaphragm may be associated with urethal irritation and a risk of urinary tract infection (10). Some women find it difficult to insert and there is a risk of incorrect placement.

(b) Male Condom

The male condom is a fine latex or polyurethane sheath, worn on the erect penis. It can be used with a water-based lubricant which may be useful for women experiencing perimenopausal vaginal dryness.

Condoms have a relatively high failure rate in typical use (especially in 'new users') due to the need for consistent use and the risk of breakage, slippage or leakage (98% effective in perfect use and 88% in typical use) (4). Some men and some women believe they interfere with sexual pleasure.

(c) Female Condom

The female condom is a polyurethane sheath inserted into the vagina prior to intercourse. It is less commonly used than other forms of contraception. They are more expensive than male condoms and have a slightly higher failure rate. They can be purchased online at family planning clinics and also at some pharmacies. More information here:
https://www.fpnsw.org.au/factsheets/individuals/contraception/female-condom

5. EMERGENCY CONTRACEPTION

Emergency contraception (previously known as "the morning after pill") is used to prevent pregnancy after unprotected intercourse or contraceptive failure.

(a) Single 1.5mg levonorgestrel emergency contraceptive (LNG-ECP) tablet

The LNG-ECP contains 1.5mg levonorgestrel and is recommended for use up to 72 hours after unprotected intercourse; it has some effectiveness if taken up to 120 hours after unprotected intercourse. It is available over the counter without a prescription. It acts by preventing or delaying ovulation. It can be used by breastfeeding women and can be used multiple times in a cycle if needed.

(b) Single 30mg ulipristal acetate (UPA) tablet

Ulipristal acetate is a selective progesterone receptor modulator (SPRM) which works to prevent or delay ovulation even when the LH surge has begun. It can be used up to 120 hours after unprotected intercourse with superior efficacy to LNG-EC. Breastfeeding women are advised to express and discard breastmilk for one week after taking UPA. Women using progestogen containing contraception should seek medical advice on when to start or re-start the method after taking UPA as UPA can reduce the effectiveness of hormonal contraception.

(c) Copper IUD

If inserted within five days of unprotected intercourse, the copper IUD provides highly effective ongoing long-term contraception. However, it can be difficult to access within the appropriate time frame.

6. PERMANENT

(a) Tubal ligation or Salpingectomy (female sterilization)

Tubal ligation or salpingectomy are carried out under general anaesthetic either laparoscopically or during laparotomy. It may be appropriate for women undergoing laparoscopy for other reasons or at the time of a Caesarian Section. It may be appealing for women concerned about side effects of other contraceptive methods.

(b) Vasectomy (male sterilization)

Vasectomy is a surgical procedure, usually performed under local anaesthetic, during which the vas deferens is cut so that no sperm will enter the ejaculate. It allows the male partner to take responsibility for contraception. Couples should be advised ongoing contraception is required for 3 months after the procedure, at which time a follow-up semen analysis is performed to confirm azoospermia. There is a small risk of haematoma, infection, sperm granuloma and rarely post-vasectomy pain syndrome.

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Table 1: Contraceptive methods

	Effectiveness (%)		Hormones	Advantages	Disadvantages	Other comments
	Perfect use	**Typical use**				
Tubal ligation	>99.5	>99.5	Nil	Immediate effect	Requires hospital admission and surgery	
Vasectomy	99.5	99.5	Nil	Performed under local anaesthetic	Small risk of infection and sperm granuloma	Need semen analysis at 3 months to ensure azoospermia
Mirena® IUD	>99	>99	Progestogen only	Reduces menstrual loss. Cost effective. Suitable for women with contraindications to oestrogen.	Irregular bleeding or spotting may occur in first few months. Some women have progestogenic side effects	Provides endometrial protection for women on MHT.
Kyleena® IUD	>99	>99	Progestogen only	Smaller dose of progestogen than Mirena®. Cost effective. Suitable for women with contraindications to oestrogen		Does not provide endometrial protection for women on MHT. Not suitable for women with heavy bleeding around time of menopause.
Implant	>99	>99	Progestogen only	Cost effective. Suitable for women with contraindications to oestrogen.	20% of women have prolonged or heavy bleeding.	
Copper IUD	>99	>99	Nil	Hormone free. Cost effective.	Periods may be heavier and more painful	
DMPA injections	>99	96	Progestogen only	Useful for women with heavy menses	Reduces bone density	Not recommended for women > 45

Combined oral contraceptive pill (COCP)	>99	93	Oestrogen and progestogen	Convenience	Not suitable for women with VTE of complex migraines.	Not recommended for women > 50. Consider ceasing by age 45 if cardiovascular risk factors.
Vaginal ring NuvaRing®	>99	93	Oestrogen and progestogen	Works same as the COCP but no tablet taking	Same as for COCP	Same as for COCP
Progestogen only Mini Pill	>99	93	Progestogen only	Suitable for women with contraindications to oestrogen	Must be taken daily within a 3 hour time frame	
Diaphragm	86	82	Nil	Hormone free. Prevents STI's	Risks of urethral irritation, UTI and incorrect placement	
Male condom	98	88	Nil	Hormone free. Prevents STI's Widely available.	Some feel it interferes with sexual pleasure	
Female condom	95	79	Nil	Hormone free Prevents STI's	Difficult to find; purchased online	not commonly used in Australia (? NZ)

Table 2: Emergency contraception

	Hormones	**Advantages**	**Disadvantages**	**Other comments**
Levonorgestrel (LNG- EC)	Progestogen	Readily available at pharmacies without a prescription. Very safe with few side effects	Does not provide ongoing contraception	Ideally take within 72 hours of intercourse
Ulipristal acetate (EllaOne®)	Progesterone receptor modulator		Does not provide ongoing contraception	Can be used for up to 120 hours after intercourse. Don't use with LNG-EC within the same cycle. Superior efficacy to LNG-EC.
Copper IUD	Nil	Highly effective Contraceptive effect is ongoing	Difficult to access within appropriate time frame	

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