Contraception for women over 40: A comprehensive guide

Michelle Emerson, Alex Polyakov

This article is part of a longitudinal series on gynaecology.

Background
Women in their 40s experience significant reproductive health changes, requiring personalised contraception to avoid unintended high-risk pregnancies and adapt to changing health conditions.

Objective
This article examines optimal contraceptive choices for women in their 40s, considering effectiveness, ease of use, non-contraceptive benefits, side effects, contraindications and re-evaluation or discontinuation timings.

Discussion
Contraceptive choices for women in their 40s vary depending on their family planning status, underlying health conditions and risk factors. Long-acting reversible contraceptives, permanent sterilisation and progestogen-only methods (excluding depot medroxyprogesterone acetate) are preferred options for women who have completed their families. Hormonal contraceptives can help manage menstrual disorders and bone health issues while providing endometrial protection during menopause. Regular contraceptive reviews should be conducted, and options adapted as needed.

Statement about gendered language

This article discusses contraception use for people aged over 40 years and is therefore relevant to any person who has a uterus. For the purpose of this article, we have described these people as women and refer to them with she/her pronouns. We acknowledge that this does not encompass all people who have a uterus and require contraception.

Introduction

As women age, their reproductive health undergoes significant changes, yet they still require contraception until menopause if they wish to avoid unplanned pregnancies.[1] The average age of menopause in Australia is 51 years, and thus, women in their 40s require a personalised approach to contraception to avoid unintended high-risk pregnancies,[2] as well as to adjust to their changing underlying health conditions, take advantage of non-contraceptive benefits, avoid unwanted adverse side effects and optimise ease of use.

In this article, we examine the optimal contraceptive choices for typical situations faced by women in their 40s. This will encompass the effectiveness of different contraceptive choices, ease of utilisation, non-contraceptive advantages, potential side effects, contraindications and appropriate timings for re-evaluation or discontinuation of contraceptive treatment.

Pregnancy

Wanting to conceive

There are increasing rates of women giving birth in their 40s; in 2019, in Australia, 4.5% of mothers were aged ≥40 years.[3] Pregnancies in women aged ≥40 years have increased risks to both mother and baby, and include pre-existing and gestational hypertension, pre-existing and gestational diabetes, lower rates of spontaneous labour, higher rates of caesarean section delivery, higher rates of preterm birth (<37 weeks), higher rates of stillbirth at term and higher rates of chromosomal abnormalities.[3] It is therefore important to discuss these pregnancy risks with women trying to conceive at ages ≥40 years, as well as to optimise prepregnancy medical conditions and commence appropriate antenatal supplements (folate and iodine).[4]

For women still wanting to conceive at some point, contraceptive options need to be reversible, without delay to fertility, due to the natural decline in fertility over the age of 40.[5] It is also advised that if a couple without known factors for infertility fails to fall pregnant within six months of trying to conceive after the age of 35 (for the woman), they are referred to a specialist for review and investigations.[6]

Methods known not to significantly delay return to fertility include levonorgestrel-releasing intrauterine devices (LNG-IUD; Mirena [Bayer HealthCare] or Kyleena [Bayer HealthCare]), copper intrauterine devices (Cu-IUD; Copper T and Load 375

[Medical Industries Australia]), implants (Implanon NXT [Organon]), the combined oral contraceptive pill (COCP) and the progesterone-only oral contraceptive pill (POP).[7] Other acceptable forms of contraception might include the vaginal ring (NuvaRing [Organon]) and barrier methods, but these have a higher user dependency, and therefore reduced real-world efficacy, compared with user-independent options that are highly efficacious (>99% effective in preventing pregnancy).[8] It is important to note that COCP and NuvaRing have more medical contraindications and should be used more cautiously in this age group for appropriately selected women only.[1]

Contraceptive options to avoid are permanent sterilisation due to its irreversible nature, Depo-Provera due to the potential delay in return to fertility[9] and other non-hormonal methods (including the fertility awareness-based method, the withdrawal method, and the lactational amenorrhoea method) due to their high failure rates.[1,10]

Family complete

When women have completed their family, their contraceptive priorities often change, and the preference is for highly effective long-acting options such as long-acting reversible contraception (LARC) and permanent sterilisation.[11] In our opinion, the best contraceptive options for these women include permanent sterilisation and LARC (LNG-IUD, Cu-IUD and implants).

Permanent sterilisation for women is usually laparoscopic and involves either tubal ligation or salpingectomy. There is evidence that salpingectomy might decrease ovarian cancer rates,[12] has a similar safety and efficacy profile to tubal ligation[13] and is becoming the standard of care in some countries.[14] The benefits of tubal ligation/bilateral salpingectomy are its permanence and effectiveness, which is usually quoted as a 1–2% lifetime failure rate,[15] and its non-hormonal nature, which makes it a suitable option where hormonal preparations might be contraindicated or where the hormonal side effects are significant. The negative aspects of permanent sterilisation also paradoxically include its permanence; although tubal ligation can be reversed, it is a complex microsurgical procedure without a guarantee of success. Another consideration is the need for a surgical procedure; although generally safe, laparoscopy has some well-recognised complications, including bleeding, infections and damage to various intra-abdominal structures, such as blood vessels, the bowel and bladder. The risk of a significant complication requiring a laparotomy is low, probably less than one in 2000 procedures.[16] There is also no benefit of cycle regulation or improvement in bleeding patterns, and if a woman is nearing menopause, the time-limited benefit of permanent sterilisation needs to be considered.[1]

It is important to note that male sterilisation (vasectomy) is not only a safer but also a quicker procedure and is associated with lower morbidity than female sterilisation.[1] Small surgical risks include pain, bleeding and infection. A vasectomy is a procedure performed under local anaesthetic, where the vas deferens is cut to cause a physical barrier for the sperm to enter the ejaculate. Alternative forms of contraception are required for three months after the procedure until azoospermia is confirmed on semen analysis.[17]

Underlying health conditions

Cardiovascular disease

Although coronary heart disease and stroke are more common in older women (highest rates among women aged ≥75 years), between 2001 and 2015, the incidence of stroke increased by 16% for women aged 35–44 years and 12% for those aged 45–54 years.[18] Thus, considering cardiovascular risk factors when choosing contraceptive options is vitally important, particularly for First Nations people at higher absolute cardiovascular disease (CVD) risk.[18] Behavioural modifications should include smoking cessation, weight reduction if appropriate and improvement of diet and exercise to lower fasting cholesterol and glucose levels.[18]

One of the best resources when choosing contraception with medical comorbidities is the UK Medical Eligibility Criteria, which classifies suitability for contraception based on individual health conditions using a rating scale of 1–4 (with 1 having no contraindication and 4 being at an unacceptable risk level).[19] In general, with CVD, which includes hypertension, vascular disease, diabetes, obesity, smoking, high cholesterol and stroke, any oestrogen-containing contraceptive is not recommended, which includes the COCP and vaginal ring.[19] Because of its multiple CVD risk factors, the Depo-Provera injection is classified as Category 3 and is best avoided.

The safest contraceptive choices in women with CVD are non-hormonal, including permanent sterilisation (if suitable for surgery) and the Cu-IUD as first-line choices, followed by options with lower typical use effectiveness, such as barrier methods (male and female condoms and the diaphragm). Other suitable options might include the Mirena and POP, which have been shown not to be associated with adverse cardiovascular outcomes.[1]

Bone health

There is a decline in bone health with increasing age; specifically, between the ages of 40 and 50 years, the rate of reabsorption increases.[20] Most Australian data are reported for women aged ≥50 years, and there are studies suggesting osteopenia and osteoporosis can already be present in women aged 40–49 years (prevalence 29.6% and 5.6%, respectively).[21]

Due to the morbidity associated with osteoporotic fractures, it is important to optimise bone health, and contraceptive options can play a role in the holistic care of this patient issue. Although lifestyle strategies are first-line options (smoking cessation, weight-bearing exercise and supplementation with calcium and vitamin D), the use of oestrogen-containing contraceptives is important for women who undergo early menopause or are in the perimenopausal state.[1,22] Alternatively, the use of the Depo-Provera injection is associated with a loss of bone mineral density and, therefore, use in women aged >45 years is not routinely recommended.[1]

Menstrual disorders

Heavy menstrual bleeding, abnormal uterine bleeding and dysmenorrhoea are all common complaints for women aged >40 years.[1] These issues should be taken into consideration when choosing a method of contraception because some will improve these symptoms and some can worsen them. It is also important to consider

further investigations for women with these symptoms, such as a pelvic ultrasound to rule out endometrial hyperplasia and speculum examination with a cervical screening test to screen for cervical cancer.[1]

The best contraceptive options for women with menstrual disorders are usually the LNG-IUD and COCP due to a reduction in both menstrual flow and associated cyclical pelvic pain. The Implanon NXT implant might improve dysmenorrhoea in some women but can often cause irregular bleeding, which might not be acceptable. Contraceptive methods not recommended include the POP, due to high rates of irregular bleeding patterns, and the Cu-IUD, due to an increase in heavy periods.[1]

Risks

Cancer

Any type of hormonal therapy raises the question of cancer risks, partly attributable to the Women's Health Initiative published in 2002.[23] The cancers most commonly associated with hormonal therapy are breast, ovarian and endometrial, which are discussed below. We strongly recommend that all women who have a history of breast cancer be managed in consultation with their oncologist.

Breast cancer

The COCP is also associated with a slight increase in breast cancer rates for current users, which revert to baseline after 10 years following cessation.[1] There is conflicting evidence regarding the LNG-IUD and the risk of breast cancer,[1] and there is a new study that demonstrates there might be a slight increase in breast cancer rates from progestogen only contraceptives, regardless of route of administration.[24]

Ovarian and endometrial cancer

The COCP is associated with reduced ovarian and endometrial cancer rates, even after cessation of use.[1] The LNG-IUD also offers some protection against endometrial cancer and is used as a treatment for the premalignant condition of endometrial hyperplasia; there is also some evidence that it is protective against ovarian cancer.[1] As mentioned previously, there is also emerging evidence that salpingectomy confers some protection against ovarian cancer.[12]

Venous thromboembolism and stroke

There is a well-established link between COCP and increased venous thromboembolism (VTE) and stroke risk, and therefore any patients with a previous history or risk factors for VTE (including immobilisation, surgery, obesity and family history) should avoid its use.[1]

Progesterone-only contraceptives (including LNG-IUD, Implanon NXT and POP), with the exception of the Depo-Provera injection, have not been found to increase VTE or stroke risk.[1] Non-hormonal contraceptive options will have no effect on VTE and stroke risk, although it is important to note that all surgery carries the risk of VTE.

Sexual relationships

Much of the conversation about contraception in women aged ≥40 years is catered towards heteronormative monogamous couples, and it is important to consider that not all women will fit into that category. It is vital that we still take into consideration sexually transmissible infection (STI) protection and sexual function.

Male and female condoms are the only contraceptive methods that will provide protection against STI transmission; due to their lower typical use efficacy, they could be used in conjunction with more effective contraception methods.[17] However, due to declining fertility over the age of 40 and more consistent use, condoms might be an effective contraceptive method in this age group.[1] There can be issues with erectile dysfunction and male condom use, which might need to be considered in the ageing male population.

Notably, intrauterine devices (LNG-IUD and Cu-IUD) should not be inserted with an active STI, and an adequate sexual history and screening should be undertaken prior to insertion, including a pregnancy test.[1]

Although there is no conclusive evidence that certain contraceptives can contribute to sexual dysfunction, it is something to consider when talking to your patient about their contraceptive options and an important side effect to ask about during the review period of a contraceptive method.[25,26]

Menopause

As women age towards menopause, their contraceptive needs will change, and the addition of endometrial protection while using menopausal hormone therapy (MHT) and the treatment of vasomotor symptoms might become more relevant. It is important to note that because the dose of MHT is lower than that in regular contraceptives, it does not offer protection against pregnancy.

Endometrial protection

Anyone who has a uterus and is on MHT with oestrogen treatment needs endometrial protection to prevent endometrial hyperplasia.[27,28] The use of Mirena or oral 1 mg norethisterone acetate (Primolut N [Bayer]) or 1.5 mg medroxyprogesterone acetate (Provera) is recommended.[29] It is of note that, worldwide, the lower-dose LNG-IUD (Kyleena) is not licenced for endometrial protection.[30]

Vasomotor symptoms

Hot flushes, night sweats and mood changes are common complaints for women in the perimenopausal period, and the only contraceptive with evidence for improving vasomotor symptoms is the COCP.[1]

When to stop treatment

With the exception of MHT and the need for endometrial protection, contraception can usually be ceased once menopause has been achieved, which is 12 months after the last menstrual period. If there is a LARC in situ, it can usually be safely removed at age 55 years, when sterility is assumed.[1] Prior to the age of 55, it can be difficult to ascertain menopausal status with the use of a LARC due to the induced absence of periods; thus, a follicle-stimulating hormone concentration >30 IU/L in the presence of amenorrhoea is grounds to discontinue contraception after one more year of use.[1] It is also accepted as off-label use to extend the use of the Mirena (if inserted after age 45 years) and the Cu-IUD (if inserted after age 40 years) until menopause or the age of 55.[31]

All women should undergo a review of their contraception use at least at the ages of 45 and 50 years to ensure their current method is still safe. Some methods need more frequent review or are not generally advised for continuation after a certain age, such as the Depo-Provera injection, which should be reconsidered at age 40, and the COCP, which should be reconsidered at age 50.[1]

Contraceptive profiles

This is not an exhaustive list of all contraceptive options in Australia, but rather a nuanced look at the most common or most suitable methods for women in their 40s. Table 1 should be used as an adjunct to shared decision making between practitioner and patient to assist in the choice of contraception used. It does not replace individualised decision making for patient care, and there are instances where specialist advice is always indicated, such as patients currently being treated for hormone-positive breast cancer.

Recommendation

As a general rule, we recommend using user-independent, long-term contraceptive options with high efficacy and good safety profiles, such as male and female sterilisation, LNG-IUD and Cu-IUD. However, as discussed previously, joint decision making with the patient is vital, and there might be factors that are important to the individual woman, such as a reduction in heavy menstrual bleeding, STI protection, reversibility or non-hormonal methods. There also needs to be consideration of pre-existing medical conditions and contraindications to specific contraceptive methods. We strongly encourage the review of contraception use at the ages of 45 and 50 years to ensure safe and effective methods are being used (Table 1).

We hope we have highlighted the importance for women and healthcare providers to understand the need for and benefit of effective contraception use until after menopause (at least one year after the last menstrual period or two years if under the age of 50).

Key points

- Women in their 40s experience significant reproductive health changes, necessitating personalised contraception.
- Optimal contraceptive choices depend on family planning status, health conditions and risk factors.
- LARC and permanent sterilisation are preferred for those who have completed their families.
- Hormonal contraceptives can help manage menstrual disorders and support bone health.
- Regular reviews and adapting contraceptive options as needed are important for women in their 40s.

Authors

Michelle Emerson BMedSci, MBBS, Reproductive Biology Fellow, Reproductive Services Unit, The Royal Women's Hospital, Melbourne, Vic

Alex Polyakov MBBS, MClinEpid, MReproMed, MHealth&MedLaw, MBioeth, FACLM, FRANZCOG, Consultant, Reproductive Services Unit, The Royal Women's Hospital, Melbourne, Vic; Clinical Director, Melbourne IVF, Melbourne, Vic; Associate Professor, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne, Melbourne, Vic

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Correspondence to:
dralex@dralexpolyakov.com.au

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Table 1. Contraception options

Method	Efficacy[A] (%)	Ease of use[B]	Considerations	Benefits
Sterilisation	>99.5	High	Surgical	No hormonal side effects
LNG-IUD	>99	High		Reduction in HMB, endometrial protection
Cu-IUD	>99	High	MD	No hormonal side effects
Implant	>99	High	MD	
Injection	96	Moderate	CVD, low BMD, VTE/stroke	
Vaginal ring	93	Moderate	Age >50 years, CVD, breast cancer, VTE/stroke	Improved BMD, reduction in MD
COCP	93	Low	Age >50 years, CVD, breast cancer, VTE/stroke	Improved BMD, reduction in MD
POP	93	Low	MD	
Barrier	79–88	Low	Nil	No hormonal side effects, STI prevention

[A]Based on typical use provided by the Australasian Menopause Society.[17]

[B]Based on user dependency: high, less than yearly; moderate, monthly to yearly; low, daily or with each sexual encounter.

BMD, bone mineral density; COCP, combined oral contraceptive pill; Cu-IUD, copper intrauterine device; CVD, cardiovascular disease; HMB, heavy menstrual bleeding; LNG-IUD, levonorgestrel-releasing intrauterine device; MD, menstrual disorders; POP, progesterone-only oral contraceptive pill; STI, sexually transmissible infection; VTE, venous thromboembolism.

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correspondence **ajgp@racgp.org.au**