NICE National Institute for Health and Care Excellence

Long-acting reversible contraception (update)

Issued: September 2014

NICE clinical guideline 30

guidance.nice.org.uk/cg30

Contents

Introduction

Recommendations on progestogen-only subdermal implants in section 1.5 have been updated and replaced. The addendum to NICE clinical guideline 30 contains details of the methods and evidence used to update these recommendations.

The 8-year review of the NICE guideline on long-acting reversible contraception concluded that there were changes to product licensing that meant that the section on progestogen-only subdermal implants was out of date. This is because the guideline referred specifically to the subdermal implant Implanon, which is no longer available. Implanon has been replaced by the implant Nexplanon, which contains the same drug (etonogestrel) and dose, but also contains barium to make it radio-opaque, and has a different insertion device. The evidence on progestogen-only subdermal implants has been reviewed and the recommendations in this section have been updated.

It is estimated that about 30% of pregnancies are unplanned. The effectiveness of the barrier method and oral contraceptive pills depends on their correct and consistent use. By contrast, the effectiveness of long-acting reversible contraceptive (LARC) methods does not depend on daily concordance. The uptake of LARC is low in Great Britain, at around 12% of women aged 16–49 in 2008–09, compared with 25% for the oral contraceptive pill and 25% for male condoms.

Expert clinical opinion is that LARC methods may have a wider role in contraception and their increased uptake could help to reduce unintended pregnancy. The current limited use of LARC suggests that healthcare professionals need better guidance and training so that they can help women make an informed choice. Health providers and commissioners also need a clear understanding of the relative cost effectiveness of LARC compared with other methods of fertility control. Enabling women to make an informed choice about LARC and addressing women's preferences is an important objective of this guideline.

LARC is defined in this guideline as contraceptive methods that require administration less than once per cycle or month. Included in the category of LARC are:

- copper intrauterine devices
- progestogen-only intrauterine systems
- progestogen-only injectable contraceptives

- progestogen-only subdermal implants
- combined vaginal rings – these are excluded from the original guideline because they did not have UK Marketing Authorisation at the time the original guideline was published in 2005.

The guideline offers the best-practice advice for all women of reproductive age who may wish to regulate their fertility by using LARC methods. It covers specific issues for the use of these methods during the menarche and before the menopause, and by particular groups, including women who have HIV, learning disabilities or physical disabilities, or are younger than 16 years.

Drug recommendations

The guideline will assume that prescribers will use a drug's summary of product characteristics to inform decisions made with individual patients.

Woman-centred care

This guideline offers the best-practice advice on the provision of information and care for women who are considering or using LARC. Treatment and care should take into account women's individual needs and preferences.

Women who are considering using or who use LARC, and healthcare professionals, have rights and responsibilities as set out in the NHS Constitution for England – all NICE guidance is written to reflect these. Treatment and care should take into account individual needs and preferences. Women should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. If the patient is under 16, their family or carers should also be given information and support to help the child or young person to make decisions about their treatment. Healthcare professionals should follow the Department of Health's advice on consent. If someone does not have capacity to make decisions, healthcare professionals should follow the code of practice that accompanies the Mental Capacity Act and the supplementary code of practice on deprivation of liberty safeguards.

NICE has produced guidance on the components of good patient experience in adult NHS services. All healthcare professionals should follow the recommendations in Patient experience in adult NHS services.

Key priorities for implementation

The following recommendations were identified as priorities for implementation in the original guideline and have not been changed in the 2014 update.

Contraceptive provision

- Women requiring contraception should be given information about and offered a choice of all methods, including long-acting reversible contraception (LARC) methods. [1.1.1.1]
- Contraceptive service providers should be aware that:
  - all currently available LARC methods (intrauterine devices, the intrauterine system, injectable contraceptives and implants) are more cost effective than the combined oral contraceptive pill even at 1 year of use
  - intrauterine devices, the intrauterine system and implants are more cost effective than the injectable contraceptives
  - increasing the uptake of LARC methods will reduce the numbers of unintended pregnancies. [1.1.1.3]

Counselling and provision of information

- Women considering LARC methods should receive detailed information – both verbal and written – that will enable them to choose a method and use it effectively. This information should take into consideration their individual needs and should include:
  - contraceptive efficacy
  - duration of use
  - risks and possible side effects
  - non-contraceptive benefits
  - the procedure for initiation and removal/discontinuation
  - when to seek help while using the method. [1.1.2.1]

Training of healthcare professionals in contraceptive care

- Healthcare professionals advising women about contraceptive choices should be competent to:
  - help women to consider and compare the risks and benefits of all methods relevant to their individual needs
  - manage common side effects and problems. [1.1.6.1]
- Contraceptive service providers who do not provide LARC within their own practice or service should have an agreed mechanism in place for referring women for LARC. [1.1.6.2]
- Healthcare professionals providing intrauterine or subdermal contraceptives should receive training to develop and maintain the relevant skills to provide these methods. [1.1.6.3]

1 Recommendations

Strength of recommendations

Some recommendations can be made with more certainty than others. The Guideline Development Group makes a recommendation based on the trade-off between the benefits and harms of an intervention, taking into account the quality of the underpinning evidence. For some interventions, the Guideline Development Group is confident that, given the information it has looked at, most patients would choose the intervention. The wording used in the recommendations in this guideline denotes the certainty with which the recommendation is made (the strength of the recommendation).

For all recommendations, NICE expects that there is discussion with the patient about the risks and benefits of the interventions, and their values and preferences. This discussion aims to help them to reach a fully informed decision (see also Woman-centred care).

Interventions that must (or must not) be used

We usually use 'must' or 'must not' only if there is a legal duty to apply the recommendation. Occasionally we use 'must' (or 'must not') if the consequences of not following the recommendation could be extremely serious or potentially life threatening.

Interventions that should (or should not) be used – a 'strong' recommendation

We use 'offer' (and similar words such as 'refer' or 'advise') when we are confident that, for the vast majority of patients, an intervention will do more good than harm, and be cost effective. We use similar forms of words (for example, 'Do not offer…') when we are confident that an intervention will not be of benefit for most patients.

Interventions that could be used

We use 'consider' when we are confident that an intervention will do more good than harm for most patients, and be cost effective, but other options may be similarly cost effective. The choice of intervention, and whether or not to have the intervention at all, is more likely to depend on the patient's values and preferences than for a strong recommendation, and so the healthcare professional should spend more time considering and discussing the options with the patient.

NICE began using this approach to denote the strength of recommendations in guidelines that started development after publication of the 2009 version of 'The guidelines manual' (January 2009). This does not apply to any recommendations ending [2005] (see 'Update information' for details about how recommendations are labelled). In particular, for recommendations labelled [2005] the word 'consider' may not necessarily be used to denote the strength of the recommendation.

The following guidance is based on the best available evidence. The full guideline gives details of the methods and the evidence used to develop the guidance. The guideline addendum, September 2014, gives details of the methods and the evidence used to develop the 2014 update.

1.1 Contraception and principles of care

1.1.1 Contraceptive provision

1.1.1.1 Women requiring contraception should be given information about and offered a choice of all methods, including long-acting reversible contraception (LARC) methods. [2005]

1.1.1.2 Women should be provided with the method of contraception that is most acceptable to them, provided it is not contraindicated. [2005]

1.1.1.3 Contraceptive service providers should be aware that:

- all currently available LARC methods (intrauterine devices [IUDs], the intrauterine system [IUS], injectable contraceptives and implants) are more cost effective than the combined oral contraceptive pill even at 1 year of use
- IUDs, the IUS and implants are more cost effective than the injectable contraceptives
- increasing the uptake of LARC methods will reduce the numbers of unintended pregnancies.[2005]

1.1.2 Provision of information and informed choice

1.1.2.1 Women considering LARC methods should receive detailed information – both verbal and written – that will enable them to choose a method and use it effectively. This information should take into consideration their individual needs and should include:

- contraceptive efficacy
- duration of use
- risks and possible side effects
- non-contraceptive benefits
- the procedure for initiation and removal/discontinuation
- when to seek help while using the method. [2005]

Appendix A summarises information about LARC methods that should be discussed with women.

1.1.2.2 Counselling about contraception should be sensitive to cultural differences and religious beliefs. [2005]

1.1.2.3 Healthcare professionals should have access to trained interpreters for women who are not English speaking, and to advocates for women with sensory impairments or learning disabilities. [2005]

1.1.3 Contraceptive prescribing

1.1.3.1 A medical history – including relevant family, menstrual, contraceptive and sexual history – should be taken as part of the routine assessment of medical eligibility for individual contraceptive methods. [2005]

1.1.3.2 Healthcare professionals helping women to make contraceptive choices should be familiar with nationally agreed guidance on medical eligibility and recommendations for contraceptive use. [2005]

1.1.3.3 When considering choice of LARC methods for specific groups of women and women with medical conditions, healthcare professionals should be aware of and discuss with each woman any issues that might affect her choice (see Sections 1.2, 1.3, 1.4 and 1.5 and Appendix A). [2005]

1.1.3.4 Healthcare professionals should exclude pregnancy by taking menstrual and sexual history before initiating any contraceptive methods. [2005]

1.1.3.5 Healthcare professionals should supply an interim method of contraception at first appointment if required.[2005]

1.1.3.6 Healthcare professionals should ensure that informed consent is obtained from the woman whenever any method of LARC is being used outside the terms of the UK Marketing Authorisation. This should be discussed and documented in the notes. [2005]

1.1.3.7 Women who have a current venous thromboembolism (VTE) and need hormonal contraception while having treatment for the VTE should be referred to a specialist in contraceptive care. [2005]

1.1.4 Contraception and sexually transmitted infection

1.1.4.1 Healthcare professionals providing contraceptive advice should promote safer sex. [2005]

1.1.4.2 Healthcare professionals providing contraceptive advice should be able to assess risk for sexually transmitted infections (STIs) and advise testing when appropriate. [2005]

1.1.4.3 Healthcare professionals should be able to provide information about local services for STI screening, investigation and treatment. [2005]

1.1.5 Contraception for special groups

1.1.5.1 Healthcare professionals should be aware of the law relating to the provision of advice and contraception for young people and for people with learning disabilities. Child protection issues and the Fraser guidelines should be

considered when providing contraception for women younger than 16 years[i]. [2005]

1.1.5.2 Women with learning and/or physical disabilities should be supported in making their own decisions about contraception. [2005]

1.1.5.3 Contraception should be seen in terms of the needs of the individual rather than in terms of relieving the anxieties of carers or relatives. [2005]

1.1.5.4 When a woman with a learning disability is unable to understand and take responsibility for decisions about contraception, carers and other involved parties should meet to address issues around the woman's contraceptive need and to establish a care plan. [2005]

1.1.6 Training of healthcare professionals in contraceptive care

1.1.6.1 Healthcare professionals advising women about contraceptive choices should be competent to:

- help women to consider and compare the risks and benefits of all methods relevant to their individual needs
- manage common side effects and problems. [2005]

1.1.6.2 Contraceptive service providers who do not provide LARC in their practice or service should have an agreed mechanism in place for referring women for LARC. [2005]

1.1.6.3 Healthcare professionals providing intrauterine or subdermal contraceptives should receive training to develop and maintain the relevant skills to provide these methods. [2005]

1.1.6.4 IUDs and the IUS should only be fitted by trained personnel with continuing experience of inserting at least one IUD or one IUS a month. [2005]

1.1.6.5 Contraceptive implants should be inserted and removed only by healthcare professionals trained in the procedure. [2005]

1.2 Copper intrauterine devices

Appendix A lists key features of IUDs to discuss with women, and Appendix B summarises issues affecting choice for specific groups of women and women with medical conditions.

1.2.1 Decision making

1.2.1.1 Women should be given the following information.

Contraceptive efficacy

- IUDs act by preventing fertilisation and inhibiting implantation.
- The licensed duration of use for IUDs containing 380 mm^2 copper ranges from 5 to 10 years, depending on the type of device.
- The pregnancy rate associated with the use of IUDs containing 380 mm^2 copper is very low (fewer than 20 in 1000 over 5 years).
- There is no evidence of a delay in the return of fertility following removal or expulsion of IUDs.

Effect on periods

- Heavier bleeding and/or dysmenorrhoea are likely with IUD use.

Risks and possible side effects

- Up to 50% of women stop using IUDs within 5 years; the most common reasons are unacceptable vaginal bleeding and pain.
- There is no evidence that IUD use affects weight.
- Any changes in mood and libido are similar whether using IUDs or the IUS, and the changes are small.
- The risk of uterine perforation at the time of IUD insertion is very low (less than 1 in 1000).

- The risk of developing pelvic inflammatory disease following IUD insertion is very low (less than 1 in 100) in women who are at low risk of STIs.
- IUDs may be expelled but this occurs in fewer than 1 in 20 women in 5 years.
- The risk of ectopic pregnancy when using IUDs is lower than when using no contraception.
- The overall risk of ectopic pregnancy when using the IUD is very low, at about 1 in 1000 in 5 years.
- If a woman becomes pregnant with the IUD in situ, the risk of ectopic pregnancy is about 1 in 20, and she should seek advice to exclude ectopic pregnancy. [2005]

1.2.2 Other issues to consider before fitting an IUD

1.2.2.1 Women who are aged 40 years or older at the time of IUD insertion may retain the device until they no longer require contraception, even if this is beyond the duration of the UK Marketing Authorisation[2]. [2005]

1.2.2.2 Contraceptive care providers should be aware that the risk of perforation is related to the skill of the healthcare professional inserting the IUD. [2005]

1.2.2.3 Testing for the following infections should be undertaken before IUD insertion:

- *Chlamydia trachomatis* in women at risk of STIs
- *Neisseria gonorrhoeae* in women from areas where the disease is prevalent and who are at risk of STIs
- any STIs in women who request it. [2005]

1.2.2.4 If testing for STIs is not possible, or has not been completed, prophylactic antibiotics should be given before IUD insertion in women at increased risk of STIs. [2005]

1.2.2.5 Women with identified risks associated with uterine or systemic infection should have investigations, and appropriate prophylaxis or treatment before insertion of an IUD. [2005]

Specific groups, medical conditions and contraindications

1.2.2.6 IUDs may be used by adolescents, but STI risk should be considered where relevant.[2005]

1.2.2.7 Healthcare professionals should be aware that:

- IUD use is not contraindicated in nulliparous women of any age
- women of all ages may use IUDs
- IUDs can safely be used by women who are breastfeeding. [2005]

1.2.2.8 Healthcare professionals should be aware that:

- IUD use is not contraindicated in women with diabetes
- IUD use is a safe and effective method of contraception for women who are HIV positive or have AIDS (safer sex using condoms should be encouraged in this group). [2005]

1.2.3 Practical details of fitting IUDs

1.2.3.1 The most effective IUDs contain at least 380 mm^2 of copper and have banded copper on the arms. This, together with the licensed duration of use, should be considered when deciding which IUD to use. [2005]

1.2.3.2 Provided that it is reasonably certain that the woman is not pregnant, IUDs may be inserted:

- at any time during the menstrual cycle
- immediately after first- or second-trimester abortion, or at any time thereafter
- from 4 weeks post-partum, irrespective of the mode of delivery. [2005]

1.2.3.3 Emergency drugs including anti-epileptic medication should be available at the time of IUD insertion in a woman with epilepsy because there may be an increased risk of a seizure at the time of cervical dilation. [2005]

Advice for women at time of fitting

1.2.3.4 Women should be informed:

- about symptoms of uterine perforation or infection that would warrant an early review of IUD use
- that insertion of an IUD may cause pain and discomfort for a few hours and light bleeding for a few days, and they should be informed about appropriate pain relief
- about how to check for the presence of IUD threads and encouraged to do this regularly with the aim of recognising expulsion. [2005]

1.2.4 Follow-up and managing problems

1.2.4.1 A follow-up visit should be recommended after the first menses, or 3–6 weeks after insertion, to exclude infection, perforation or expulsion. Thereafter, a woman should be strongly encouraged to return at any time to discuss problems, if she wants to change her method of contraception, or if it is time to have the IUD removed. [2005]

1.2.4.2 Heavier and/or prolonged bleeding associated with IUD use can be treated with non-steroidal anti-inflammatory drugs and tranexamic acid. [2005]

1.2.4.3 Women who find heavy bleeding associated with IUD use unacceptable may consider changing to a levonorgestrel intrauterine system (LNG-IUS). [2005]

1.2.4.4 The presence of Actinomyces-like organisms on a cervical smear in a woman with a current IUD requires an assessment to exclude pelvic infection. Routine removal is not indicated in women without signs of pelvic infection. [2005]

1.2.4.5 Women who have an intrauterine pregnancy with an IUD in situ should be advised to have the IUD removed before 12 completed weeks' gestation, whether or not they intend to continue the pregnancy. [2005]

1.3 Intrauterine system

Appendix A lists key features of the IUS to discuss with women, and Appendix B summarises issues affecting choice for specific groups of women and women with medical conditions.

1.3.1 Decision making

1.3.1.1 Women should be given the following information.

Contraceptive efficacy

- The IUS may act predominantly by preventing implantation and sometimes by preventing fertilisation.
- The pregnancy rate associated with the use of the IUS is very low (fewer than 10 in 1000 over 5 years).
- The licensed duration of use for the IUS is 5 years for contraception.
- There is no evidence of a delay in the return of fertility following removal or expulsion of the IUS.

Effects on periods

- Irregular bleeding and spotting are common during the first 6 months following IUS insertion.
- Oligomenorrhoea or amenorrhoea is likely by the end of the first year of IUS use.

Risks and possible side effects

- Up to 60% of women stop using the IUS within 5 years. The most common reasons are unacceptable vaginal bleeding and pain; a less common reason is hormonal (non-bleeding) problems.
- There is no evidence that IUS use causes weight gain.
- Any changes in mood and libido are similar whether using the IUS or IUDs, and the changes are small.

- There may be an increased likelihood of developing acne as a result of absorption of progestogen, but few women discontinue IUS use for this reason.
- The risk of uterine perforation at the time of IUS insertion is very low (less than 1 in 1000).
- The risk of developing pelvic inflammatory disease following IUS insertion is very low (less than 1 in 100) in women who are at low risk of STIs.
- The IUS may be expelled, but this occurs in fewer than 1 in 20 women in 5 years.
- The risk of ectopic pregnancy when using the IUS is lower than when using no contraception.
- The overall risk of ectopic pregnancy when using the IUS is very low, at about 1 in 1000 in 5 years.
- If a woman becomes pregnant with the IUS in situ, the risk of ectopic pregnancy is about 1 in 20, and she should seek advice to exclude ectopic pregnancy. [2005]

1.3.2 Other issues to consider before fitting an IUS

1.3.2.1 Women who are aged 45 years or older at the time of IUS insertion and who are amenorrhoeic may retain the device until they no longer require contraception, even if this is beyond the duration of UK Marketing Authorisation[2]. [2005]

1.3.2.2 Contraceptive care providers should be aware that the risk of perforation is related to the skill of the healthcare professional inserting the IUS. [2005]

1.3.2.3 Testing for the following infections should be undertaken before IUS insertion:

- *Chlamydia trachomatis* in women at risk of STIs
- *Neisseria gonorrhoeae* in women from areas where the disease is prevalent and who are at risk of STIs
- any STIs in women who request it. [2005]

1.3.2.4 If testing for STIs is not possible, or has not been completed, prophylactic antibiotics should be given before IUS insertion in women at increased risks of STIs. [2005]

1.3.2.5 Women with identified risks associated with uterine or systemic infection should have investigations, and appropriate prophylaxis or treatment before insertion of the IUS. [2005]

Specific groups, medical conditions and contraindications

1.3.2.6 The IUS may be used by adolescents, but STI risk should be considered where appropriate. [2005]

1.3.2.7 Healthcare professionals should be aware that:

- IUS use is not contraindicated in nulliparous women of any age
- women of all ages may use the IUS.
- the IUS can safely be used by women who are breastfeeding. [2005]

1.3.2.8 Healthcare professionals should be aware that:

- there is no evidence that the effectiveness of the IUS is reduced when taking any other medication
- IUS use is not contraindicated in women with diabetes
- IUS is a safe and effective method of contraception for women who are HIV positive or have AIDS (safer sex using condoms should be encouraged in this group)
- all progestogen-only methods, including the IUS, may be used by women who have migraine with or without aura
- women with a history of VTE may use the IUS
- IUS is medically safe for women to use if oestrogen is contraindicated. [2005]

1.3.3 Practical details of fitting the IUS

1.3.3.1 Provided that it is reasonably certain that the woman is not pregnant, the IUS may be inserted:

- at any time during the menstrual cycle (but if the woman is amenorrhoeic or it has been more than 5 days since menstrual bleeding started, additional barrier contraception should be used for the first 7 days after insertion)
- immediately after first- or second-trimester abortion or at any time thereafter
- from 4 weeks post-partum, irrespective of the mode of delivery[3]. [2005]

1.3.3.2 Emergency drugs including anti-epileptic medication should be available at the time of IUS insertion in a woman with epilepsy because there may be an increased risk of a seizure at the time of cervical dilation. [2005]

Advice for women at time of fitting

1.3.3.3 Women should be informed:

- about symptoms of uterine perforation or infection that would warrant an early review of IUS use
- that insertion of an IUS may cause pain and discomfort for a few hours and light bleeding for a few days, and they should be informed about appropriate pain relief
- about how to check for the presence of IUS threads, and encouraged to do this regularly with the aim of recognising expulsion. [2005]

1.3.4 Follow-up and managing problems

1.3.4.1 A follow-up visit should be recommended after the first menses, or 3–6 weeks after insertion, to exclude infection, perforation or expulsion. Thereafter, a woman should be strongly encouraged to return at any time to discuss problems, if she wants to change her method of contraception, or if it is time to have the IUS removed. [2005]

1.3.4.2 The presence of *Actinomyces*-like organisms on a cervical smear in a woman with a current IUS requires an assessment to exclude pelvic infection. Routine removal is not indicated in women without signs of pelvic infection. [2005]

1.3.4.3 Women with an intrauterine pregnancy with an IUS in situ should be advised to have the IUS removed before 12 completed weeks' gestation whether or not they intend to continue the pregnancy. [2005]

1.4 Progestogen-only injectable contraceptives

Appendix A lists key features of progestogen-only injectable contraceptives to discuss with women, and Appendix B summarises issues affecting choice for specific groups of women and women with medical conditions.

1.4.1 Decision making

1.4.1.1 Women should be given the following information.

Contraceptive efficacy

- Progestogen-only injectable contraceptives act primarily by preventing ovulation.
- The pregnancy rate associated with injectable contraceptives, when given at the recommended intervals, is very low (fewer than 4 in 1000 over 2 years) and the pregnancy rate with Depo medroxyprogesterone acetate (DMPA) is lower than that with norethisterone enantate (NET-EN).
- DMPA should be repeated every 12 weeks and NET-EN every 8 weeks[3].
- There could be a delay of up to 1 year in the return of fertility after stopping the use of injectable contraceptives.
- If a woman stops using injectable contraceptives but does not wish to conceive, she should start using a different contraceptive method immediately even if amenorrhoea persists.

Effects on periods

- Amenorrhoea is likely during use of injectable contraceptives; this is:

  - more likely with DMPA than NET-EN
  - more likely as time goes by
  - not harmful.

- Up to 50% of women stop using DMPA by 1 year; the most common reason is an altered bleeding pattern, such as persistent bleeding.

Risks and possible side effects

- DMPA use may be associated with an increase of up to 2–3 kg in weight over 1 year.
- DMPA use is not associated with acne, depression or headaches.
- DMPA use is associated with a small loss of bone mineral density, which is largely recovered when DMPA is discontinued.
- There is no evidence that DMPA use increases the risk of fracture. [2005]

1.4.2 Other issues to consider before giving injectable contraceptives

Specific groups, medical conditions and contraindications

1.4.2.1 Because of the possible effect on bone mineral density, care should be taken in recommending DMPA to:

- adolescents, but it may be given if other methods are not suitable or acceptable[4]
- women older than 40 years, but in general the benefits outweigh the risks, and it may be given if other methods are not suitable or acceptable[4]. [2005]

1.4.2.2 Healthcare professionals should be aware that:

- women with a body mass index over 30 can safely use DMPA and NET-EN
- women who are breastfeeding can consider using injectable contraceptives. [2005]

1.4.2.3 Healthcare professionals should be aware that:

- all progestogen-only methods, including injectable contraceptives, may be used by women who have migraine with or without aura
- DMPA is medically safe for women to use if oestrogen is contraindicated
- injectable contraceptives are not contraindicated in women with diabetes
- DMPA use may be associated with a reduction in the frequency of seizures in women with epilepsy
- there is no evidence that DMPA use increases the risk of STI or HIV acquisition
- DMPA is a safe and effective method of contraception for women with STIs, including HIV/AIDS (safer sex using condoms should be encouraged in this group)
- women taking liver enzyme-inducing medication may use DMPA and the dose interval does not need to be reduced. [2005]

1.4.3 Practical details of giving injectable contraceptives

1.4.3.1 Injectable contraceptives should be given by deep intramuscular injection into the gluteal or deltoid muscle or the lateral thigh. [2005]

1.4.3.2 Provided that it is reasonably certain that the woman is not pregnant, the use of injectable contraceptives may be started:

- up to and including the fifth day of the menstrual cycle without the need for additional contraceptive protection
- at any other time in the menstrual cycle, but additional barrier contraception should be used for the first 7 days after the injection
- immediately after first- or second-trimester abortion, or at any time thereafter
- at any time post-partum. [2005]

1.4.4 Follow-up and managing problems

1.4.4.1 Women attending up to 2 weeks late for repeat injection of DMPA may be given the injection without the need for additional contraceptives[3]. [2005]

1.4.4.2 A pattern of persistent bleeding associated with DMPA use can be treated with mefenamic acid or ethinylestradiol. [2005]

1.4.4.3 Women who wish to continue DMPA use beyond 2 years should have their individual clinical situations reviewed, the balance between the benefits and potential risks discussed, and be supported in their choice of whether or not to continue. [2005]

1.4.4.4 Healthcare professionals should be aware that if pregnancy occurs during DMPA use there is no evidence of congenital malformation to the fetus. [2005]

1.5 Progestogen-only subdermal implants

Appendix A lists key features of progestogen-only subdermal implants to discuss with women, and Appendix B summarises issues affecting choice for specific groups of women and women with medical conditions.

1.5.1 Inform women that etonogestrel implants[5] have a very low failure rate (less than 1 pregnancy per 1000 implants fitted over 3 years). [new 2014]

1.5.2 Inform women that vaginal bleeding patterns are likely to change while using an etonogestrel implant. Vaginal bleeding may stop, become more or less frequent, or be prolonged during implant use. [new 2014]

1.5.3 Inform women that dysmenorrhoea may reduce during etonogestrel implant use. [new 2014]

1.5.4 Inform women that there is no evidence showing a delay in return to fertility after an etonogestrel implant is removed. [new 2014]

1.5.5 Inform women that complications with etonogestrel implant insertion and removal are uncommon. (Possible complications are listed in the summary of product characteristics.) [new 2014]

[1] See the Department of Health's Best practice guidance for doctors and other healthcare professionals on the provision of advice and treatment to young people under 16 on contraception, sexual and reproductive health (July 2004).

[2] Check the Summary of Product Characteristics of individual devices for current licensed indications. Informed consent is needed when using outside the licensed indications. This should be discussed and documented in the notes.

[3] At the time of original publication (October 2005), use before 6 weeks post-partum is outside the UK Marketing Authorisation for the IUS. Check the Summary of Product Characteristics for current licensed indications. Informed consent is needed when using outside the licensed indications. This should be discussed and documented in the notes.

[4] Refer to CSM advice issued in November 2004. Search for Depo Provera.

[5] At the time of publication (September, 2014), Nexplanon was the only subdermal implant licensed in the UK and did not have UK marketing authorisation for use outside of the age range 18-40 years. Outside of this age range, the prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Good practice in prescribing medicines – guidance for doctors and the Nursing and Midwifery Council's Standards of proficiency for nurse and midwife prescribers for further information.

2 Research recommendations

The scarcity of robust evidence to answer important clinical questions on the use of LARC methods by women in the UK posed great challenges to the developers of the original guideline (October, 2005). In the majority of cases, the guideline recommendations were based on extrapolated evidence that is indirect or of poor methodological quality. In 2005, the Guideline Development Group made the following recommendations for research on the basis of its review of the evidence.

In making these recommendations for research, the guideline developers consider it important and relevant that the research should be specific to the UK population because there are cultural differences in the response to side effects and non-contraceptive effects of hormonal contraceptives. In addition, freedom to choose any contraceptive method and the provision of a free contraceptive health service in the UK can influence important outcomes such as continuation rates and patterns of method switching.

2.1 Typical use of contraception

Few women use contraception perfectly (that is, exactly in accordance with the product instructions) and consistently. Pregnancy rates during typical use reflect effectiveness of a method among women who use the method incorrectly or inconsistently. Few data are available on typical use of any contraceptive method among women in the UK. Much of the data on contraceptive effectiveness used in the guideline come from clinical trials or surveys undertaken in other countries such as the USA. Large prospective cohort studies are needed to compare the contraceptive effectiveness of LARC methods with non-LARC methods during typical use in the UK. [2005]

2.2 Patterns of LARC use

Most women will need to use contraception for more than 30 years. Patterns of contraceptive use vary with age, ethnicity, marital status, fertility intention, education and lifestyle. Large prospective cohort studies are needed to identify:

- patterns of use (initiation, continuation and switching between methods) of LARC methods compared with non-LARC methods

- factors that influence the patterns of use of LARC. [2005]

2.3 Uptake and acceptance of LARC

In addition to individual circumstances and needs, a woman's choice and acceptance of LARC may be influenced by potential health disbenefits (side effects and risks) as well as non-contraceptive benefits of LARC (such as alleviation of menorrhagia). Large population studies of appropriate design are needed to determine the effect of these factors on the uptake of LARC methods and the implications for NHS resources. [2005]

2.4 Bone mineral density in women using DMPA

The effect of injectable contraceptives on bone mineral density in women who have used DMPA for longer than 2 years is uncertain. Adequately powered surveys or cross-sectional studies are needed to examine the recovery of bone mineral density after discontinuation of DMPA after long-term and very long-term use. Studies are also needed to examine the risk of bone fractures in older women. [2005]

3 Other information

3.1 The guideline scope

The scope for the original NICE clinical guideline 30 (published October, 2005) covers the recommendations labelled **[2005]**. The recommendations labelled **[2014]** have been produced during the update.

Long-acting reversible contraception (LARC) is defined in this guideline as methods that require administration less than once per cycle or month.

The guideline does not include any contraception for men because there are currently no long-acting reversible methods. The guideline does not cover methods of contraception that are intended to result in permanent sterilisation. Contraceptive methods that are related to coitus or that need frequent (more than once per cycle or month for women) repeat administration (for example, the combined oral contraceptive pill or progestogen-only pills) are not included. Postcoital or emergency contraceptive methods (including IUD insertion for that use) are also not covered. The use of these technologies for non-contraceptive reasons (such as heavy menstrual bleeding or hormone replacement therapy) is outside the scope of this guideline.

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3.2 Related NICE guidance

Details are correct at the time of publication of the guideline (September, 2014). Further information is available on the NICE website.

Published

General

- Patient experience in adult NHS services. NICE clinical guidance 138 (2012).
- Medicines adherence. NICE clinical guidance 76 (2009).

Condition-specific

- Contraceptive services with a focus on young people up to the age of 25. NICE public health guidance 51 (2014).
- Postnatal care. NICE clinical guideline 37 (2006)
- Heavy menstrual bleeding. NICE clinical guideline 44 (2007).

4 Standing Committee A and NICE project team

4.1 Standing Committee A

The Committee members listed are those for the 2014 update. For the composition of (the) previous Guideline Development Group, see the full guideline.

Standing Committee members

Damien Longson (Chair)
Consultant Liaison Psychiatrist, Manchester Mental Health and Social Care Trust

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Sarah Fishburn
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Jim Gray
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Kath Nuttall
Director, Lancashire & South Cumbria Cancer Network (- April 2013)

Tilly Pillay
Consultant Neonatologist, Staffordshire, Shropshire and Black Country Newborn Network, Royal Wolverhampton Hospitals Trust

Nick Screaton
Radiologist, Papworth Hospital NHS Foundation Trust

Lindsay Smith
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Philippa Williams
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Sophie Wilne
Paediatric Oncologist, Nottingham Children's Hospital

Topic-specific Committee members

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Consultant in Sexual and Reproductive Healthcare, Croydon Health Service NHS Trust

Shelley Mehigan
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Sonja Jutte
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Appendix A: Features of the LARC methods to discuss with women

	Copper IUD	IUS	Progestogen-only injection	Implant
How it works	By preventing fertilisation and inhibiting implantation	Mainly by preventing implantation; sometimes by preventing fertilisation	Primarily by preventing ovulation	Primarily by preventing ovulation
Duration of use	5–10 years for IUDs with 380 mm^2 copper, depending on type Until contraception no longer needed if woman 40 years or more at time of insertion[a]	5 years Until contraception no longer needed if woman 45 years or more at time of insertion and does not have periods with IUS in place[a]	Repeat injections needed every 12 weeks (DPMA) or 8 weeks (NET-EN)[b]	3 years
Failure rate	Fewer than 2 in 100 women over 5 years, for IUDs with at least 380 mm^2 copper Expulsion occurs in fewer than 1 in 20 women in 5 years	Fewer than 1 in 100 women over 5 years Expulsion occurs in fewer than 1 in 20 women in 5 years	Fewer than 0.4 in 100 over 2 years; pregnancy rates lower for DPMA than NET-EN	Fewer than 1 pregnancy in 1000 implants fitted over 3 years

Effects on periods	Heavier bleeding and/or dysmenorrhoea likely	Irregular bleeding and spotting common in first 6 months Oligomenorrhoea or amenorrhoea likely by end of first year	Amenorrhoea common, and is more likely with DMPA than NET-EN, and with longer use; not harmful Persistent bleeding may occur	Bleeding patterns are likely to change during implant use. Bleeding may stop, become more or less frequent, or be prolonged. Dysmenorrhoea may be reduced.

Other risks	Up to 50% of women stop using IUDs within 5 years; most common reasons are unacceptable vaginal bleeding and pain Ectopic pregnancy: overall rates lower than with no contraception But if a woman becomes pregnant with IUD in situ, risk is about 1 in 20 so she should seek advice to exclude it Pelvic inflammatory disease: less than 1% for women at low risk of STI Uterine perforation: less than 1 in 1000 Change in mood or libido: may be a small effect, similar for IUD and IUS **No evidence of effect on:** Weight gain	Up to 60% of women stop using the IUS within 5 years; most common reasons are unacceptable vaginal bleeding and pain, less common reason is hormonal (non-bleeding) problems Ectopic pregnancy: overall rates lower than with no contraception But if a woman becomes pregnant with IUS in situ, risk is about 1 in 20 so she should seek advice to exclude it Pelvic inflammatory disease: less than 1% for women at low risk of STI Uterine perforation: less than 1 in 1000 Change in mood or libido: may be a small effect, similar for IUD and IUS Acne: risk may be increased, but is an uncommon reason for stopping use	Up to 50% of women stop using DMPA by 1 year; the most common reason is an altered bleeding pattern, such as persistent bleeding Weight gain: may be up to 2–3 kg over a year on DMPA Bone mineral density: DMPA use is associated with small loss; largely recovered when DMPA is stopped No evidence that fracture risk is increased **No evidence of effect of DMPA on:** Depression Acne Headaches	Complications with insertion and removal are uncommon. Refer to the summary of product characteristics for a full list of risks

		No evidence of effect on: Weight gain		
Return to fertility	No evidence of delay	No evidence of delay	Can take up to a year But women who do not want to get pregnant should start a different contraceptive as soon as they stop injections	No evidence of delay
Advice at time of fitting	There may be pain and discomfort for a few hours and light bleeding for a few days Watch for symptoms of uterine perforation Follow-up visit after first menses or 3–6 weeks after insertion Return at any time if problems or to change method Check for threads regularly	There may be pain and discomfort for a few hours and light bleeding for a few days Watch for symptoms of uterine perforation Follow-up visit after first menses or 3–6 weeks after insertion Return at any time if problems or to change method Check for threads regularly	Return for next injection, or if problems	Refer to the summary of product characteristics

[a] Check Summary of Product Characteristics for current licensed indications; if using outside licensed indications, discuss, obtain informed consent and document this is the notes.

[b] At time of publication, NET-EN is licensed for short-term use (two injections); if using outside licensed indications, discuss, obtain informed consent and document this is the notes.

Appendix B: Choice of method for different groups of women

All LARC methods are suitable for:

- nulliparous women
- women who are breastfeeding
- women who have had an abortion – at time of abortion or later
- women with BMI > 30
- women with HIV – encourage safer sex Note 2013: for sub-dermal implants, see section 1.5
- women with diabetes
- women with migraine with or without aura – all progestogen-only methods may be used
- women with contraindication to oestrogen

Choices for adolescents

- **IUD, IUS, implants:** no specific restrictions to use
- **DMPA:** care needed; only use if other methods unacceptable or not suitable[6]

Choices for women more than 40 years old

- **IUD, IUS, implants:** no specific restrictions to use
- **DMPA:** care needed, but generally benefits outweigh risks[6]

Choices for women post-partum, including breastfeeding

- **IUD, IUS:** can be inserted from 4 weeks after childbirth
- **DMPA, implants:** any time after childbirth

Choices for women taking other medication

- **IUS, DMPA:** no evidence that effectiveness of other medication reduced.
- **Implants:** not recommended for women taking enzyme-inducing drugs

Choices for women with epilepsy

- **IUD, IUS, DMPA:** no specific contraindications; DMPA use may be associated with reduced seizure frequency
- **Implants:** not recommended for women taking enzyme-inducing drugs

Choices for women at risk for STI

- **IUD, IUS:** tests may be needed before insertion
- **DMPA, implants:** no specific contraindications
  Provide advice on safer sex.

[6] Refer to CSM advice issued in November 2004. Search for Depo Provera.

About this guideline

NICE clinical guidelines are recommendations about the treatment and care of people with specific diseases and conditions.

NICE guidelines are developed in accordance with a scope that defines what the guideline will and will not cover. The original guideline (October, 2005) was developed by the National Collaborating Centre for Women's and Children's Health. The Collaborating Centre worked with a Guideline Development Group, comprising healthcare professionals (including consultants, GPs and nurses), patients and carers, and technical staff, which reviewed the evidence and drafted the recommendations. The recommendations were finalised after public consultation.

The methods and processes for developing NICE clinical guidelines are described in The guidelines manual.

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Update information

The NICE Clinical Guidelines Update Programme updates discrete parts of published clinical guidelines as requested by NICE's Guidance Executive.

Suitable topics for update are identified through the surveillance programme (see surveillance programme interim guide).

The surveillance programme, when reviewing the long-acting reversible contraception (LARC) guideline, concluded that there were changes to product licensing that meant that the section on progestogen-only subdermal implants was out of date because the guideline referred specifically to the subdermal implant Implanon, which is no longer available. The full surveillance review decision is available on the NICE website.

NICE's Clinical Guidelines Update Programme updated this guideline in 2014. These guidelines are updated using a Standing Committee of healthcare professionals, methodologists and lay members from a range of disciplines and localities. For the duration of the update, the core members of the Committee are joined by up to 5 additional members who are have specific expertise in the topic being updated. All of the standing members and the topic-specific members are fully voting members of the Committee.

The interim process and methods guide for the clinical guidelines update pilot programme (2013) can be found here.

New recommendations on progestogen-only subdermal implants have been added to the Progestogen-only subdermal implants section.

This update is an addendum to NICE clinical guideline 30. New and updated recommendations are marked as:

- **[2014]** if the evidence has been reviewed and the recommendation has been added or updated.

Where recommendations end **[2005]**, the evidence has not been reviewed since the original guideline. The original NICE guideline and supporting documents are available here.

Other versions of this guideline

The full guideline, 'Long-acting reversible contraception' contains details of the methods and evidence used to develop the guideline. It is published by the National Collaborating Centre for Women's and Children's Health.

The addendum to the full guideline contains details of the methods and evidence used to develop the update.

The recommendations from this guideline have been incorporated into a NICE Pathway.

We have produced information for the public about this guideline.

Implementation

Implementation tools and resources to help you put the guideline into practice are also available.

Your responsibility

This guidance represents the view of NICE, which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer, and informed by the summaries of product characteristics of any drugs.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

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