

Royal College of Obstetricians and Gynaecologists
Setting standards to improve women's health

Male and Female Sterilisation

Guideline Summary

Evidence-based Clinical Guideline Number 4



January 2004

GUIDELINE

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Development of the guideline

This guideline is an updated version of that published in 1999 and was funded by the Department of Health. It was revised by Kirsten Duckitt MRCOG, who worked as a clinical research fellow on the original guideline.

The development of the original guideline was supported by a multidisciplinary group with representation of all parties interested in the provision of sterilisation services. In this document ‘the guideline development group’ and ‘the guideline group’ refers to this group.

The development of this revised guideline was supported by the RCOG Guidelines and Audit Committee. The members were:

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Peer reviewers

The document was sent out to 16 peer reviewers, nine of whom were the members of the original guideline development group. Responses were received from 12 of these peer reviewers: Mr VP Argent, Ms T Belfield, Mr P Bowen-Simpkins, Mr JM Emens, Mr GM Filshie, Mr MR Gazvani, Professor J Guillebaud, Dr GC Penney, Mr JP Pryor, Dr SC Rowlands, Dr L Spooner, Ms B Walters.

Comments on the draft guideline posted on the RCOG website were received from Dr M Kittel, Dr S Pringle, Dr D Sokal and Dr E Willis.

Acknowledgements

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Chapter 1

Executive summary

Introduction

This summary is based on the evidence-based and referenced guideline developed by a multidisciplinary guideline group and published by the Royal College of Obstetricians and Gynaecologists (RCOG) after extensive peer review. It replaces the previous version published in 1999.

Sterilisation procedures were one of the first clinical areas to be subject to detailed review, because large numbers are performed on mainly healthy individuals at their request and because they attract a relatively high level of medico-legal activity. A study of the General Practice Research Database data suggests that in 1999 an estimated 47 268 tubal occlusions and 64 422 vasectomies were performed in England in the National Health Service and charitable sectors.

The guideline synthesises available evidence and expert opinion on current tubal occlusion and vasectomy procedures in the UK. Its primary purpose is to inform healthcare providers and purchasers, so that patients receive a high-quality service based on the best evidence available.

Identified articles were assessed on their methodology and the best evidence was used to form and support the recommendations; for more information on methods see Chapter 3.

The guideline points towards best practice but does not preclude alternatives that can be justified on the basis of the individual needs of the case or special skills and innovations that are subject to ethically approved research. Particular attention should be paid to the estimate of average lifetime postoperative pregnancy rates and the specific consent issues that should be addressed in every case.

Indications for sterilisation

There are no absolute contraindications to sterilisation of men or women, provided that they make the request themselves, are of sound mind and are not acting under external duress. A history should be taken and an examination should be carried out on every person requesting sterilisation (C).

Counselling and advice on sterilisation procedures should be provided to women and men within the context of a service providing a full range of information about and access to other long-term reversible methods of contraception. This should include information on the advantages, disadvantages and relative failure rates of each method (C).

All verbal counselling must be supported by accurate, impartial printed or recorded information (in translation, where appropriate and possible), which the person requesting sterilisation may take away and read before the operation (C).

As a precaution against the risk of later regret, additional care must be taken when counselling people under the age of 30 years or people without children (C). Care should also be exercised in

discussions with people taking decisions during pregnancy, or in reaction to a loss of relationship, or who may be at risk of coercion by their partner or family or health or social welfare professionals. Counsellors and advisers should also be aware and take account of cultural, religious, psychosocial, psychosexual and other psychological issues, some of which may have implications beyond fertility.

If there is any question of a person not having the mental capacity to consent to a procedure that will permanently remove their fertility, guidelines from the Official Solicitor make it clear that the case should be referred to court for judgment (C).

The doctor who performs or supervises a trainee performing a sterilisation takes responsibility for the procedure even when discussion, examination and consent were undertaken by other healthcare professionals. The operating doctor will need to ensure that the counselling, information exchange, history and examination have been completed and be satisfied that the patient does not suffer from concurrent conditions which may require an additional or alternative procedure or precaution (C). They should also take steps to avoid finding themselves responsible for a procedure to which they may have objections in principle or for which they lack the necessary competence. Locally agreed protocols based upon these guidelines should be agreed for the management and referral from primary care of patients requesting sterilisation.

Sterilisation procedures

Tubal occlusion

Tubal occlusion can be performed at any time during the menstrual cycle provided that the clinician is confident that the woman has used effective contraception up until the day of the operation. Otherwise the operation should be deferred until the follicular phase of a subsequent cycle. The woman should be advised to use effective contraception until her next menstrual period (B).

Tubal occlusion should be performed after an appropriate interval following pregnancy, wherever possible. Women who request tubal occlusion postpartum or following abortion should be made aware of the increased regret rate and the possible increased failure rate (B). If tubal occlusion is to be performed at the same time as a caesarean section, counselling and agreement should have been given at least one week prior to the procedure (C).

A pregnancy test must be performed before the operation to exclude a pre-existing pregnancy. However, a negative test does not exclude the possibility of a luteal phase pregnancy. Routine curettage at the time of tubal occlusion, in order to prevent a luteal phase pregnancy, is not recommended (B).

Laparoscopic approach

Where equipment and trained staff are available, the laparoscopic approach to the fallopian tubes is quicker and results in less minor morbidity compared with mini-laparotomy (A). The procedure should be performed as a day case wherever possible (C).

Although general anaesthesia is usually used in the UK, local anaesthesia is an acceptable alternative (A). Topical application of local anaesthesia to the fallopian tubes should be used whenever mechanical occlusive devices are being applied, whether under a general or local anaesthetic (A).

Mechanical occlusion of the tubes by either Filshie clips or rings should be the method of choice for laparoscopic tubal occlusion (A). The routine use of more than one Filshie clip is not recommended (C). Diathermy should not be used as the primary method of tubal occlusion because it increases the risk of subsequent ectopic pregnancies and is less easy to reverse than mechanical occlusive methods (C).

All equipment involved in performing tubal occlusions should be properly maintained. Laparoscopic tubal occlusion should only be performed at a site where there are facilities to perform a laparotomy safely (✓). Trainees should perform at least 25 supervised laparoscopic tubal occlusions before operating without supervision (C).

Other approaches

When a mini-laparotomy is used as the method of approach for an interval sterilisation, any effective surgical or mechanical method of tubal occlusion can be used (B). A modified Pomeroy procedure rather than Filshie clip application may be preferable for postpartum sterilisation using mini-laparotomy or at the time of caesarean section, as it leads to lower failure rates (B).

Hysteroscopic methods for tubal occlusion are still under evaluation and should only be used within the present guidance system for new surgical interventions (C). Culdoscopy should not be used as a method of approach (A).

Vasectomy

Except when technical considerations dictate otherwise, a no-scalpel approach should be used to identify the vas, as this results in a lower rate of early complications (A). Division of the vas on its own is not an acceptable technique because of its failure rate. Division should be accompanied by fascial interposition or diathermy (A). Clips should not be used for occluding the vas, as failure rates are unacceptably high (B). Irrigation of the vas during vasectomy does not reduce failure rates or reduce time to clearance (A).

Vasectomy should be performed under local anaesthesia wherever possible (C). Excised portions of vas should only be sent for histological examination if there is any doubt about their identity (C).

Practitioners who are being trained to perform vasectomies should make sure that their training conforms to that advocated by the Faculty of Family Planning and Reproductive Health Care (FFPRHC). Doctors with no prior experience should be supervised for ten operating sessions or 40 procedures, while doctors with relevant prior surgical experience should perform eight supervised procedures (C).

Although there are no explicit standards for the facilities required for vasectomy at general practice or other sites away from hospital, there are general guidelines for minor surgery in these situations. Operators performing vasectomies in primary care settings should be able to demonstrate appropriate training or experience and planned appropriate access to secondary care advice and services when necessary.

Specific consent issues

Information should be given and specific consent sought from each patient regarding the following aspects of sterilisation.

Men and women requesting sterilisation should be given information about other long-term reversible methods of contraception. This should include information on the advantages, disadvantages and relative failure rates of each method. Both vasectomy and tubal occlusion should be discussed with all men and women requesting sterilisation (C). Women in particular should be informed that vasectomy carries a lower failure rate in terms of post-procedure pregnancy and there is less risk related to the procedure (B).

Although people requesting sterilisation should understand that the procedure is intended to be permanent, they should be given information about the success rates associated with reversal, should this procedure be necessary (B). They should be informed that reversal operations, *in vitro* fertilisation (IVF) and intracytoplasmic sperm injection (ICSI) are rarely provided by the NHS (✓).

People requesting sterilisation should be informed that tubal occlusion and vasectomy are associated with failure rates and that pregnancies can occur several years after the procedure. They should be told of the lifetime risk of failure in general for tubal occlusion, which is estimated at one in 200. They should also be made aware that the longest period of follow-up data available for the most common method used in the UK, Filshie clips, suggests a failure rate after ten years of two to three per 1000 procedures. The failure rate for vasectomy should be quoted as approximately one in 2000 after clearance has been given (B).

In a small minority of men, non-motile sperm persist after vasectomy. In such cases, 'special clearance' to stop contraception may be given when less than 10 000 non-motile sperm/ml are found in a fresh specimen examined at least seven months after vasectomy, as no pregnancies have yet been reported under these circumstances (C).

Women should be informed that if tubal occlusion fails the resulting pregnancy might be an ectopic pregnancy (B). After tubal occlusion, they should be advised to seek medical advice if they think that they might be pregnant or if they have abnormal abdominal pain or vaginal bleeding (✓).

Women should be informed of the method of access and, should tubal occlusion be recommended in their case, the reasons for preferring this method over others, and the method to be used if the intended method fails for any reason (✓). They should be informed of the risks of laparoscopy and the chances of laparotomy being necessary if there are problems with laparoscopy, particularly if they are at increased risk through conditions such as previous abdominal surgery or obesity (B).

No precautions can be guaranteed to avoid early pre-existing pregnancy, which may be undetectable. Women should be advised to use effective contraception until the day of the operation and to continue to use it until their next menstrual period (B). Men should be advised to use effective contraception until azoospermia has been confirmed. The way in which azoospermia is confirmed will depend upon local protocols (C).

Women should be reassured that tubal occlusion is not associated with an increased risk of heavier or irregular periods when performed after 30 years of age. There is an association with subsequent increased hysterectomy rates, although there is no evidence that tubal occlusion leads to problems that require a hysterectomy. Data are limited on the effect on menstruation when tubal occlusion is performed on women under 30 years of age (B).

Men requesting vasectomy can be reassured that there is no increase in testicular cancer or heart disease associated with vasectomy. The association, in some reports, of an increased risk of being diagnosed with prostate cancer is at present considered likely to be non-causative. They should be informed about the possibility of chronic testicular pain after vasectomy (B).

Women should be advised after the operation of the method of tubal occlusion actually used and of any complications that occurred during the procedure (✓).

Further research and audit

A national register and audit of failed sterilisations is needed. Hospital-based registers of sterilisation procedure failures would assist this (C). A national register would enable more accurate information to be given to women in the UK concerning short- and long-term failure rates. Like other Confidential Enquiries, it will also serve to inform clinicians about areas of substandard care.

It should be regarded as good practice to conduct a retrospective audit of an individual operator's procedure outcomes if more than one pregnancy is noted following sterilisation procedures with a short separation in either time or number of procedures. Hospital-based registers of sterilisation procedure failures would assist this.

The guideline also indicates areas that require further research. Most of the graded recommendations are suitable for use as audit measures and purchasers and providers are encouraged to undertake local audits based on an appropriate selection.

Revision and amendment of the guideline is due in 2006.

Chapter 2

Introduction

Introduction

Sterilisation has become increasingly popular since the late 1960s and it is now the principal method of contraception used worldwide.¹ Approximately 190 million couples use tubal occlusion while 42 million men have had a vasectomy.² In 2001, 44% of women aged 45–49 years in Great Britain were using sterilisation of themselves or their partner as their method of contraception. Of women aged 16–49 years, 10% had been sterilised, and of men aged 16–64 years, 15% had undergone vasectomy.³ A study of the General Practice Research Database⁴ data suggests that in 1999 an estimated 47 268 tubal occlusions and 64 422 vasectomies were performed in England in the NHS and charitable sectors.

Sterilisation can be an empowering decision for the right person at the right time in their lives. However, its role needs to be re-evaluated as other long-term yet reversible methods of contraception become available. Both male and female sterilisation require a surgical procedure and are therefore unusual in that the indication for surgery is a request by the patient for social reasons and not a treatment prescribed by a doctor for a medical condition. In addition, its intended permanency means that the onus is on the healthcare practitioners involved to ensure that the patient has all the information required in order to make an informed choice.

Sterilisation procedures, both male and female, are a frequent subject of litigation.^{5–7} Sexual Health Direct, the national help line run by the Family Planning Association (fpa), receives many calls suggesting that practice surrounding sterilisation provision is less than perfect. It is partly for these reasons that a national guideline was thought necessary.

Aim of the guideline

The aim of this guideline is to ensure that patients receive a high-quality service based on the best evidence available. The document provides recommendations to help gynaecologists, urologists, family planning doctors, general practitioners, family planning nurses and practice nurses to achieve this standard. It is designed primarily for use in the UK. It is likely that the recommendations would have to be adapted for use in low resource situations. Where possible, recommendations are based upon and explicitly linked to the evidence that supports them. Guidelines are 'systematically developed statements to assist decisions about appropriate care for specific clinical circumstances'.⁸ Practitioners are expected to use the recommendations in the light of each particular patient's circumstances and the resources available.

Patient preferences

The initial request for sterilisation comes from the patient. Throughout the guideline, emphasis has been placed on the importance of information provision to patients and the importance of choice with regard to long-term contraceptive methods, whether tubal occlusion, vasectomy or some other method. The guideline group acknowledges that people seeking such procedures are not ill, but the term 'patient' has nevertheless been used where necessary in this guideline to maintain consistency.

Likely costs and benefits

The cost implications of implementing this guideline have not been considered in detail. It is anticipated that there will be health benefits for men and women in the form of better information and service provision.

Local adaptation, dissemination and implementation

It has been shown that local adaptation enhances the implementation of and compliance with guidelines.^{9,10} It is anticipated that this national guideline will be used as the basis for such local adaptation, based on local resources, community needs and patterns of service provision. Local adaptation should take place in a multidisciplinary group, with collaboration between all interested parties that would be affected by the guidelines. It is essential that commissioners of healthcare, as well as general practitioners and specialists, take part in such a process. A variety of approaches may be necessary to disseminate and implement the local protocols, e.g. distribution of printed protocols to all local general practitioners, specialists and trainees, PGEA (Postgraduate Education Allowance) sessions for general practitioners, postgraduate meetings in hospitals and audit sessions.

Clinical audit

The patient record standard in Appendix 2 could be used to form the basis for audit.

Chapter 3

Methods

Evidence identification, review and synthesis

Search strategy

The aim of the literature review was to identify and synthesise relevant evidence within the published literature to enable recommendations to be based upon evidence wherever possible.

Individual searches were carried out for each topic of interest. For each subject, including foreign language publications, the electronic database MEDLINE (CD Ovid version) was searched for the time period January 1966 to December 2002. The searches were performed using relevant MeSH (Medical Subject Headings) terms and relevant text words. In addition, the electronic database EMBASE was searched for the period between 1974 and December 1997 to identify those publications (usually European) not indexed on MEDLINE. The Cochrane Library was also searched up to Issue 4, 2002, to identify published systematic reviews, meta-analyses and controlled clinical trials. Reference lists of non-systematic review articles and studies obtained from the initial search were trawled and journals in the RCOG library were hand-searched to identify articles not yet indexed. Experts on the guideline development group were also asked to identify key references. There was no systematic attempt to search the 'grey literature' (conference abstracts, theses, unpublished trials).

Reviewing the literature

For all subject areas, published systematic reviews or meta-analyses were used. If these did not exist, randomised controlled trials (RCTs) were obtained. If there were no published RCTs, or if randomised controlled trials were not appropriate for a particular clinical question, other appropriate experimental or observational studies were sought. Articles were initially retained after reading their title and abstract. The full papers were then obtained and read. Articles not relevant to the subject in question were rejected, as were articles where desired outcomes were not reported.

Synthesising the evidence

Identified papers were assessed on their methodology and the best evidence was used to form and support the recommendations (Tables 3.1 and 3.2). If a question could be answered by a good systematic review, meta-analysis or RCT, studies of weaker design were ignored. The evidence was synthesised using qualitative methods. These involved summarising the content of identified papers into brief statements that accurately reflected the relevant evidence. Quantitative techniques (meta-analyses), apart from those published, were not performed owing to time constraints and the difficulty of combining studies of various designs.

Table 3.1 Levels of evidence

Level	Evidence
1a	Evidence obtained from systematic review of meta-analysis of randomised controlled trials
1b	Evidence obtained from at least one randomised controlled trial
2a	Evidence obtained from at least one well-designed controlled study without randomisation
2b	Evidence obtained from at least one other type of well-designed quasi-experimental study
3	Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies
4	Evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities

Table 3.2 Forming recommendations

Grade of Recommendation	Evidence Level
A	Requires at least one randomised controlled trial as part of a body of literature of overall good quality and consistency addressing the specific recommendation (evidence levels 1a, 1b)
B	Requires the availability of well-conducted clinical studies but no randomised clinical trials on the topic of the recommendation (evidence levels 2a, 2b, 3)
C	Requires evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities. Indicates an absence of directly applicable clinical studies of good quality (evidence level 4)
<i>Good practice points</i> ✓	Recommended good practice based on the clinical experience of the Guideline Development Group

The views of the guideline group combined with comments from the peer review outlined below suggest that recommendations with C grading are acceptable to a wide body of expert opinion pending the results of future research.

Peer review

The 1999 guideline

After the initial draft of the guideline had been written and approved by the guideline group, a formal peer review process was undertaken. Each member of the guideline group put forward six to eight names of individuals or organisations from the area of practice that they represented. A copy of the draft guideline, together with a guideline appraisal document based on that used by the Scottish Intercollegiate Guidelines Network,¹¹ was sent out to 59 nominated people. Replies were received from 39 reviewers (37 completed the form; two others provided written comments only), a response rate of 66%.

All comments from this peer review were discussed by the guideline group and amendments agreed by informal consensus. There was little dissent among the peer reviewers with regard to the recommendations. Suggested amendments mainly concerned style, presentation and typography. There were also requests from peer reviewers for expansion on the evidence in certain areas. None of the recommendations was substantially changed as a result of the peer review.

The revised guideline

The members of the original guideline development group were invited to make comments on areas to be considered for this revision. Replies were received from eight of them, including a consumer representative and a representative of the Royal College of Nursing. A first draft of the revised guideline was circulated to members of the RCOG Guidelines and Audit Committee, who made comments on it and approved it for peer review. The guideline, together with guidance on appraisal, was sent out to the nine members of the original guideline development group and seven other nominated people. Replies were received from 12 of the peer reviewers, a response rate of 75%. Comments on the draft posted on the RCOG website were received from four people.

A list of these peer reviewers can be found on page v.

Review of the guideline

The guideline should be reviewed no later than the year 2006. This will be done by the RCOG using a similar methodology to that outlined above. The process will involve updating the literature searches and reviews for each topic, to take into account any new developments in the area.

Chapter 4

Summary of recommendations

General

Indications for or against sterilisation (Section 5.1)

Recommendation 1

C If there is any question of a person not having the mental capacity to consent to a procedure that will permanently remove their fertility, the case should be referred to the courts for judgment.

Recommendation 2

C Additional care must be taken when counselling people under 30 years of age or people without children who request sterilisation.

What is required before the procedure is performed? (Section 5.2)

Recommendation 3

C All verbal counselling advice must be supported by accurate, impartial printed or recorded information (in translation, where appropriate and possible), which the person requesting sterilisation may take away and read before the operation.

Recommendation 4

C Counselling and advice on sterilisation procedures should be provided to women and men within the context of a service providing a full range of information about and access to other long-term reversible methods of contraception. This should include information on the advantages, disadvantages and relative failure rates of each method.

Recommendation 5

C Both vasectomy and tubal occlusion should be discussed with all men and women requesting sterilisation.

Recommendation 6

- B** Women in particular should be informed that vasectomy carries a lower failure rate in terms of post-procedure pregnancies and that there is less risk related to the procedure.

Recommendation 7

- C** A history should be taken and an examination should be performed on all men and women requesting vasectomy or tubal occlusion.

Recommendation 8

- C** The operating doctor will need to ensure that the counselling, information exchange, history and examination have been completed and be satisfied that the patient does not suffer from concurrent conditions which may require an additional or alternative procedure or precaution.

Tubal occlusion

Methods (Section 6.1)

Recommendation 9

- A** Culdoscopy should not be used as a method of approach for sterilisation.

Recommendation 10

- A** Where equipment and trained staff are available, the laparoscopic approach to the fallopian tubes is quicker and results in less minor morbidity compared with mini-laparotomy.

Recommendation 11

- B** Any effective surgical or mechanical method of tubal occlusion can be used when a mini-laparotomy is used as the method of approach for an interval sterilisation.

Recommendation 12

- B** A modified Pomeroy procedure rather than Filshie clip application may be preferable for postpartum sterilisation performed by mini-laparotomy or at the time of caesarean section, as this leads to lower failure rates.

Recommendation 13

- A** Mechanical occlusion of the tubes by either Filshie clips or rings should be the method of choice for laparoscopic tubal occlusion.

Recommendation 14

C The routine use of more than one Filshie clip is not recommended.

Recommendation 15

C Diathermy should not be used as the primary method of tubal occlusion because it increases the risk of subsequent ectopic pregnancy and is less easy to reverse than mechanical occlusive methods.

Recommendation 16

C Hysteroscopic methods of tubal occlusion are still under evaluation and should only be used within the present guidance system for new surgical interventions.

Information (Section 6.2)

Recommendation 17

B Women, particularly those at increased risk from conditions such as previous abdominal surgery or obesity, should be informed of the risks of laparoscopy and the chances of laparotomy being necessary if there are problems with laparoscopy.

Recommendation 18

✓ Women should be informed of the method of access and tubal occlusion being recommended in their case, the reasons for preferring it over other methods, and the method to be used if the intended method fails for any reason.

Recommendation 19

✓ Women should be advised after the operation of the method of tubal occlusion actually used and of any complications that occurred during the procedure.

Anaesthesia (Section 6.3)

Recommendation 20

A While recognising that general anaesthesia is usually used in the UK for laparoscopic tubal occlusion, local anaesthesia is an acceptable alternative.

Recommendation 21

C Laparoscopic tubal occlusion should be performed as a day case wherever possible.

Recommendation 22

A Topical application of local anaesthesia to the fallopian tubes should be used whenever mechanical occlusive devices are being applied either under general or local anaesthesia.

Failure (Section 6.4)

Recommendation 23

- B** Women should be informed that tubal occlusion is associated with a failure rate and that pregnancy can occur several years after the procedure. The lifetime risk of failure in general is estimated to be one in 200. The longest period of follow-up data available for the most common method used in the UK, the Filshie clip, suggests a failure rate after ten years of two to three per 1000 procedures.

Recommendation 24

- B** Women should be informed that, if tubal occlusion fails, the resulting pregnancy may be ectopic.

Recommendation 25

- ✓** After tubal occlusion, women should be advised to seek medical advice if they think they might be pregnant or if they have abnormal abdominal pain or vaginal bleeding.

Timing (Section 6.5)

Recommendation 26

- B** Tubal occlusion should be performed after an appropriate interval following pregnancy wherever possible. Should tubal occlusion be requested in association with pregnancy (either postpartum or post-abortion), the woman should be made aware of the increased regret rate and the possible increased failure rate.

Recommendation 27

- C** If tubal occlusion is to be performed at the same time as a caesarean section, counselling and agreement should have been given at least one week prior to the procedure.

Recommendation 28

- B** Tubal occlusion can be performed at any time during the menstrual cycle, provided that the clinician is confident that the woman has used effective contraception up to the day of the operation. If this is not the case, the operation should be deferred until the follicular phase of a subsequent cycle. The woman should be advised to continue to use effective contraception until her next menstrual period.

Recommendation 29

- B** A pregnancy test must be performed before the operation to exclude the possibility of a pre-existing pregnancy. However, a negative test does not exclude the possibility of a luteal-phase pregnancy.

Recommendation 30

- B** Routine curettage at the time of tubal occlusion, in order to prevent a luteal-phase pregnancy, is not recommended.

Reversal (Section 6.6)

Recommendation 31

- B** Although women requesting sterilisation should understand that the procedure is intended to be permanent, they should be given information about the success rates associated with reversal, should this procedure be necessary.

Recommendation 32

- ✓** Women should be informed that reversal operations are rarely provided by the National Health Service.

Risks (Section 6.7)

Recommendation 33

- B** Women should be reassured that tubal occlusion is not associated with an increased risk of heavier or irregular periods when performed after 30 years of age. There is an association with subsequent increased hysterectomy rate, although there is no evidence that tubal occlusion leads to problems that require a hysterectomy. Data are limited on the effect on menstruation when tubal occlusion is performed on women under 30 years of age.

Equipment and facilities (Section 6.8)

Recommendation 34

- ✓** All equipment involved in performing tubal occlusions should be properly maintained.

Recommendation 35

- ✓** Laparoscopic tubal occlusion should only be performed at a site where there are facilities to perform a laparotomy safely.

Training (Section 6.9)

Recommendation 36

- C** Trainees should perform at least 25 supervised laparoscopic tubal occlusions before operating without supervision.

Vasectomy

Methods (Section 7.1)

Recommendation 37

- A** Except when technical considerations dictate otherwise, a no-scalpel approach should be used to identify the vas, as this results in a lower rate of early complications.

Recommendation 38

- A** Division of the vas on its own is not an acceptable technique because of its failure rate. It should be accompanied by fascial interposition or diathermy.

Recommendation 39

- B** Clips should not be used for occluding the vas, as failure rates are unacceptably high.

Anaesthesia (Section 7.2)

Recommendation 40

- C** Vasectomy should be performed under local anaesthetic wherever possible.

Histological examination (Section 7.3)

Recommendation 41

- C** Excised portions of vas should only be sent for histological examination if there is any doubt about their identity.

Post-vasectomy semen analysis (Section 7.4)

Recommendation 42

- C** Men should be advised to use effective contraception until azoospermia has been confirmed. The way in which azoospermia is confirmed will depend upon local protocols.

Recommendation 43

- A** Irrigation of the vas during vasectomy does not reduce failure rates or time to clearance.

Special clearance (Section 7.5)

Recommendation 44

C In a small minority of men, non-motile sperm persist after vasectomy. In such cases, 'special clearance' to stop contraception may be given when less than 10 000 non-motile sperm/ml are found in a fresh specimen examined at least seven months after vasectomy, as no pregnancies have yet been reported under these circumstances.

Failure (Section 7.6)

Recommendation 45

B Men should be informed that vasectomy has an associated failure rate and that pregnancies can occur several years after vasectomy. The rate should be quoted as approximately one in 2000 after clearance has been given.

Reversal (Section 7.7)

Recommendation 46

B Although men requesting vasectomy should understand that the procedure is intended to be permanent, they should be given information on the success rates associated with reversal, should this procedure be necessary.

Recommendation 47

✓ Men should be informed that reversal operations or intracytoplasmic sperm injections are rarely provided within the National Health Service.

Risks (Section 7.9)

Recommendation 48

B Men requesting vasectomy can be reassured that there is no increase in testicular cancer or heart disease associated with vasectomy. The association, in some reports, of an increased risk of being diagnosed with prostate cancer is at present considered likely to be non-causative.

Recommendation 49

B Men should be informed about the possibility of chronic testicular pain after vasectomy.

Training (Section 7.10)

Recommendation 50

C Practitioners who are being trained to perform vasectomies should ensure that their training conforms to that advocated by the Faculty of Family Planning and Reproductive Health Care. Doctors with no prior experience should be supervised for ten operating sessions or 40 procedures, while doctors with relevant prior surgical experience should perform eight supervised procedures.

Audit (Section 8.1)

Recommendation 51

C A national register and audit of failed sterilisations is needed. Hospital-based registers of sterilisation procedure failures would assist this.

