Royal College of Obstetricians & Gynaecologists

Amniocentesis for Prenatal Diagnosis

Consent Advice No. 6a

January 2026

Amniocentesis for Prenatal Diagnosis

1. When to use this guidance

This is the second edition of this guidance, first published in May 2006 with the title *Amniocentesis*.

This guidance is for healthcare professionals who care for pregnant women, non-binary and trans people who are offered amniocentesis for prenatal diagnosis, in order to aid the provision of appropriate and balanced information about the potential benefits, risks and alternatives to the procedure.

Amniocentesis is predominantly offered for prenatal diagnosis, but it can also be undertaken for other indications that are outside the remit of this guidance.

This guidance is relevant to those aged 16 years and over with mental capacity, and those under 16 years of age who are considered competent*,[1–3] to help make the decisions that are appropriate for them.

Within this document we use the terms woman and women's health. However, it is important to acknowledge that it is not only women for whom it is necessary to access women's health and reproductive services in order to maintain their gynaecological health and reproductive wellbeing. Gynaecological and obstetric services and delivery of care must therefore be appropriate, inclusive and sensitive to the needs of those individuals whose gender identity does not align with the sex they were assigned at birth.

2. How to use this guidance

This guidance should be used by healthcare professionals to support personal informed choices, with reference to the General Medical Council's guidance on *Decision making and consent*[4] and *Intimate examinations and chaperones*,[5] and the following resources on procedures for prenatal diagnosis:

- NHS England *Screening in pregnancy: CVS and amniocentesis information for parents* (www.gov.uk/government/publications/cvs-and-amniocentesis-diagnostic-tests-description-in-brief/nhs-fetal-anomaly-screening-programme-chorionic-villus-sampling-cvs-and-amniocentesis-information-for-parents).[6]
- NHS website (www.nhs.uk/conditions/amniocentesis).
- Antenatal Results & Choices (www.arc-uk.org/tests-explained/amniocentesis).[7]
- RCOG Green-top Guideline No. 8 *Amniocentesis and chorionic villus sampling*.[8]

3. How to provide information

Information about amniocentesis should be provided when prenatal diagnosis is first discussed with the woman to allow them enough time to consider the implications and ask any questions.[6]

Information should be made available in commonly used languages, and large print/Braille versions should be made available for those with impaired vision. Healthcare professionals must make all reasonable efforts to make translators or translation services available to those unable to read and/or understand the information.

* If a child (under 16) has sufficient maturity and understanding to make informed decisions about their treatment, they would be considered to meet the requirements of 'Gillick' competency as recognised in England, Wales and Northern Ireland; and described in the Age of Legal Capacity (Scotland) Act 1991. Under these circumstances, the child can consent to their own medical treatment without the need for parental knowledge or expressed permission.

For non-English speaking users, consent should be obtained with the use of an interpreter or language line. Healthcare professionals should not rely on family members or friends as interpreters.

Healthcare professionals are encouraged to consider using visual or other explanatory aids and to signpost to available resources[7] to support the woman's understanding of the risks, taking into account their clinical and personal circumstances, compared with population level risk. Benefits of the proposed option and reasonable alternatives including the option to take no action should be discussed.[4] Women should be signposted to reliable sources of information if testing for specific conditions.

After provision and discussion of all available information, women should be offered time and opportunity to clarify any concerns they may have, before seeking their written consent. B.R.A.I.N. can be a helpful tool to share with the person considering whether or not to have any procedure, in order to make sure informed consent is authentically obtained, that is:

- **B**enefits – What are the benefits of making this decision?
- **R**isks – What are the risks associated with this decision?
- **A**lternatives – Are there any alternatives?
- **I**ntuition – How do I feel? What does my 'gut' tell me?
- **N**othing – What if I decide to do nothing/wait and see? What happens next?

4. Documentation of informed consent

Using the information in the attached consent form, healthcare professionals should explain that the potential risks of amniocentesis, as stated, are summary estimates only, mainly based on available evidence from the RCOG Green-top Guideline No. 8 *Amniocentesis and Chorionic Villus Sampling*.[8] Women should be informed that some of these figures indicate the additional risks related to the procedure over the background (e.g. miscarriage/preterm labour) and some are primarily because of the procedure.

4.1 Details of the procedure

Women opting to have an amniocentesis must be informed that, in the UK, it is carried out at or after 15^{+0} weeks of gestation. They must also be informed about the prerequisites, anticipated duration, precautions and recovery following the procedure. They should be made aware that the procedure is carried out under continuous ultrasound guidance, using Local Safety Standards for Invasive Procedures (LocSSIPs).[9]

Local turnaround times for the results and how they will be communicated should also be stated.

4.2 Specific circumstances

Women having a twin or higher order multiple pregnancy who are considering amniocentesis must be informed that it is recommended that it is carried out in tertiary fetal medicine centres, by an operator with the skill to carry out a selective feticide, if subsequently decided, and they should receive individualised counselling about the risks and benefits.

Women should be informed that amniocentesis will not be performed until their blood-borne virus status is known. For women living with human immunodeficiency virus (HIV), amniocentesis appears to be safe while taking highly active antiretroviral therapy if the viral load is undetectable.[10]

The risk of vertical transmission should be discussed with women who have hepatitis B or C virus. There is no clear evidence of increased vertical transmission with either strain of the virus, although 'e' antigen positive state (associated only with type B), or a high viral load, may potentially increase this risk.[11] Seeking specialist input to optimise their condition should be discussed.

4.3 Tests on the amniotic fluid sample

Women should be informed that genetic, microbiological, viral or other studies could be performed on the amniotic sample, depending on the indication for amniocentesis. Genetic testing includes analysis of the chromosomes or individual genes, and other genomic studies; women should be made aware that further consent for some of these tests, such as genomic arrays, would be required and details provided about the turnaround times. They should also be informed that parental blood samples might be required at the time of amniocentesis or later (according to the indication for the test) to help with interpretation of the results.

Women must be informed that the amniotic sample will be processed, tested, and that any of the remaining genetic material extracted will be stored in the genetics laboratory, to be available for further testing should the need arise. It is helpful to explain that the yield of fetal cells or DNA from the amniotic fluid is crucial for rapid and reliable completion of the analysis. Women should also be made aware that storage and disposal of genetic material will be in accordance with recommended laboratory protocols, compliant with the Human Tissue Act 2004.[12]

4.4 Results of prenatal diagnosis and choices

Women should be informed that amniocentesis can provide information that may help them to make choices about their pregnancy, birth and neonatal care.

Women should be made aware that tests done on the amniotic sample may not come back with a definite diagnosis and may bring unexpected or uncertain information. They should also be informed that if the results do not indicate any chromosomal/genetic condition, this does not completely rule out the possibility of any condition.

Signposting to the relevant organisations with guidance or helplines to support decision making, if available, is recommended if testing for any specific conditions.

4.5 Alternatives

The following alternatives and their potential risks and benefits compared with amniocentesis should be discussed with the woman.

- No further testing.
- Non-invasive prenatal diagnostic (NIPD) testing, using cell-free fetal DNA (cffDNA) from maternal blood samples, can be offered as an alternative for invasive procedures for some genetic disorders if the pregnancy meets the eligibility criteria in the National Genomic Test Directory.[13,14]
- Chorionic villus or placental sampling:
  - Chorionic villus sampling (CVS) can be offered as an alternative invasive test for prenatal genetic diagnosis and involves taking a sample from the placenta. CVS is usually carried out from 11^{+0} weeks of gestation and is suitable when earlier diagnosis is desired.[8] Women should be supported to assess whether this benefit outweighs the slightly higher background risk of miscarriage in earlier gestations.
  - Women should be informed that placental samples might show chromosomal anomalies confined to the placental tissue and not present in the fetus, known as confined placental mosaicism.[15] In this instance, amniocentesis would be recommended to confirm whether or not the fetus has the same genetic makeup.
- Postnatal testing of cord blood or neonatal sampling can be offered if the woman accepts that potentially useful information will be unavailable to optimise care during pregnancy, birth, and in the immediate care of the baby.

All of the above, except CVS, avoid the additional risks of an invasive procedure during pregnancy.

4.6 Post procedure care

Women who are rhesus D (RhD) negative serotype must be informed that an anti-D injection will be offered after the amniocentesis in case their fetus is RhD positive to reduce the risk of maternal sensitisation. This will not be necessary if the woman has already had non-invasive prenatal testing to confirm that their fetus is RhD negative.

Women should be offered written information about the procedure[6] and given contact details for the team who organise appointments and provide test results. They should be told when their results are likely to be made available. They should also be advised about when to seek help and who to contact for advice if they experience any symptoms suggestive of complications following their procedure. They should be advised about pain relief (if required).

References

1. House of Lords in Gillick v West Norfolk and Wisbech Area Health Authority, 1985.
2. The Northern Ireland Executive Department of Health. Consent guides for healthcare professionals. Seeking consent: Working with children [www.health-ni.gov.uk/publications/consent-guides-healthcare-professionals]. Accessed 14 Jan 2026.
3. Age of Legal Capacity (Scotland) Act 1991, section 2 [www.legislation.gov.uk/ukpga/1991/50/section/2]. Accessed 14 Jan 2026.
4. General Medical Council. Decision making and consent [www.gmc-uk.org/professional-standards/professional-standards-for-doctors/decision-making-and-consent]. Accessed 14 Jan 2026.
5. General Medical Council. Intimate examinations and chaperones [www.gmc-uk.org/professional-standards/professional-standards-for-doctors/intimate-examinations-and-chaperones]. Accessed 14 Jan 2026.
6. NHS England [www.gov.uk/government/publications/cvs-and-amniocentesis-diagnostic-tests-description-in-brief/nhs-fetal-anomaly-screening-programme-chorionic-villus-sampling-cvs-and-amniocentesis-information-for-parents]. Accessed 14 Jan 2026.
7. Antenatal Results and Choices [www.arc-uk.org]. Accessed 14 Jan 2026.
8. Navaratnam K, Alfirevic Z; on behalf of the Royal College of Obstetricians and Gynaecologists. Amniocentesis and chorionic villus sampling. Green-top Guideline No. 8. *BJOG* 2022;129:e1–e15.
9. NHS England. Patient Safety Alert – Supporting the introduction of the National Safety Standards for Invasive Procedures [www.england.nhs.uk/2015/09/psa-natssips]. Accessed 14 Jan 2026.
10. Byrne L, Short C-E, Bamford A, Bradshaw D, Cheserem E, Clarke E, et al. BHIVA guidelines on the management of HIV in pregnancy and the postpartum period 2025. *HIV Med* 2025;26:1757–1880.
11. Veronese P, Dodi I, Esposito S, Indolfi G. Prevention of vertical transmission of hepatitis B virus infection. *World J Gastroenterol* 2021;27:4182–4193.
12. Royal College of Physicians, Royal College of Pathologists and British Society for Genetic Medicine. Consent and confidentiality in genomic medicine: Guidance on the use of genetic and genomic information in the clinic. 3rd edition. Report of the Joint Committee on Genomics in Medicine. London: RCP, RCPath and BSGM, 2019.
13. NHS England. National genomic test directory [www.england.nhs.uk/publication/national-genomic-test-directories/]. Accessed 14 Jan 2026.
14. NHS England. National Genomics Education Programme – GeNotes. Non-invasive prenatal diagnosis (NIPD) [www.genomicseducation.hee.nhs.uk/genotes/knowledge-hub/non-invasive-prenatal-diagnosis-nipd]. Accessed 14 Jan 2026.
15. Reilly K, Doyle S, Hamilton SJ, Kilby MD, Mone F. Pitfalls of prenatal diagnosis associated with mosaicism. *The Obstetrician & Gynaecologist* 2023;25:28–37.

Consent form for amniocentesis for prenatal diagnosis

Patient identifier:

Name of proposed procedure: Amniocentesis for prenatal diagnosis

Indication:

Anaesthesia: Amniocentesis is usually performed without any anaesthesia. This will be discussed with you by the healthcare professional who will perform the procedure.

Statement of health professional (to be filled in by healthcare professional with appropriate knowledge of the procedure):

I have explained the procedure, specifically, I have explained that:

- The procedure involves obtaining a sample of the amniotic fluid from around your baby.
- The sample will be obtained by passing a thin needle through your abdomen into the amniotic sac (pregnancy sac) inside your uterus (womb).
- The procedure will be carried out under continuous ultrasound guidance using an aseptic technique.
- The sample will be sent for testing which involves: **QF-PCR*** / **Karyotyping** / **Chromosomal microarray** / other (specify details) ..... for which further detailed consent may be required. (circle all applicable)
- A blood sample from the biological parent(s) may need to be sent with the amniotic sample or afterwards: **Yes** / **No** (delete as appropriate)

Below is a table showing the chance of experiencing certain complications when having an amniocentesis performed by an appropriately trained healthcare professional. **These numbers are estimates only and the chance of experiencing a complication will also depend on the individual situation.**

		Frequency/occurrence
Chance of procedure-related complications	**Miscarriage (if < 24^{+0} weeks pregnant)**	1 in 200 over the background chance
	Preterm birth before 34^{+0} weeks of gestation (if > 24^{+0} weeks pregnant)	3–4 in 100 (background risk of approximately 8 in 100† before 37^{+0} weeks of gestation)
	Severe infection (in the amniotic sac/ to the woman)	Rare‡
	Injury to the baby	Rare‡
	Maternal organ injury	Rare‡
	Second or repeat procedure advised	Up to 6 in 100
	Blood-stained sample	8 in 1000 (higher in third trimester, 5–10 in 100)
	Maternal cell contamination	1–2 in 100
	Unable to give rapid result	2 in 100
	Failed cell culture	0.5–1 in 100 (higher in third trimester, up to 1 in 10)
	Amniotic fluid leakage/bleeding	1–2 in 100

* QF-PCR, quantitative fluorescent-polymerase chain reaction.
† Office for National Statistics. Dataset. Births in England and Wales: linked births. 2024 edition.
‡ Rare is defined as affecting between 1 in 1000 and 1 in 10 000.

I have discussed the chance of complications taking into account their personal circumstances, and plans for the future (specify details): ☐

I have discussed the alternatives, and their potential benefits and limitations compared with amniocentesis (not having the procedure, non-invasive prenatal diagnostic testing of cell-free fetal DNA [cffDNA] in maternal blood, testing after birth and chorionic villus sampling): ☐

I have discussed the procedures that may become necessary (tick as appropriate if agreed by the patient):

- Repeat procedure if the sample is insufficient or no results from the sample ☐
- Additional consent for more detailed genetic testing ☐

The following resources have been provided:

- NHS England: Screening in pregnancy: CVS and amniocentesis information for parents
- Antenatal Results & Choices: www.arc-uk.org/tests-explained/amniocentesis
- Other (specify details):

.....

I confirm that ..... **has been offered the time and opportunity to ask further questions about the information provided.**

Healthcare professional:

Signed ..... Date .....

Name (PRINT) .....

GMC/NMC number .....

Job title .....

Contact details (if the patient wishes to discuss options or ask further questions later):

.....

Patient:

I do / do not agree* to the procedure, examination or treatment described, including the procedures, treatments or examinations which may become necessary.

I do / do not agree* for trainees/students to be present during the procedure.

I do / do not agree* for trainees/students to examine me during the procedure.

I understand that I will be awake, and that no anaesthetic is used during the procedure. Yes / No*

Signed ..... Date .....

Name (PRINT) .....

(*please delete as appropriate)

Statement of interpreter (where appropriate):

I have interpreted the information above to the patient to the best of my ability and in a way in which I believe they can understand.

Signed ..... Date .....

Name (PRINT) .....

Contact details .....

Confirmation of consent on the day of the procedure (to be completed by a healthcare professional and the patient).

I agree to the procedure described above.

I understand that you cannot guarantee that a particular person will perform the procedure. The person will, however, have appropriate experience.

I understand that the procedure will / will not* involve local anaesthesia.

Healthcare professional:

Signed ..... Date .....

Name (PRINT) .....

GMC/NMC number .....

Job title .....

Patient:

I confirm that I still want the procedure/treatment to go ahead.

Signed ..... Date .....

Name (PRINT) .....

(*please delete as appropriate)

This Consent Advice was produced on behalf of the Royal College of Obstetricians and Gynaecologists by the RCOG Patient Safety Committee.

The following individuals and organisations submitted comments at peer review:
Mr S Abdel-Fattah FRCOG, Bristol; Antenatal Results & Choices; British Maternal and Fetal Medicine Society; Down's Syndrome Association; Professor E Jauniaux FRCOG, London; Dr M Kalgo MRCOG, Wolverhampton; Maternity and Newborn Safety Investigations; Dr P Moran MRCOG, Newcastle Upon Tyne; Mr A Mortimer MRCOG, Exeter; Professor K O'Donoghue FRCOG, Cork, Republic of Ireland; Royal College of Midwives; Dr L Scott MRCOG, Aberdeen; Dr T Sultana MRCOG, Kuwait City, Kuwait; and Dr P Timmons MRCOG, Norwich.

The Patient Safety Committee lead reviewers were: Dr EA Khan MRCOG, Milton Keynes; Dr P Greenfield MRCOG, Colchester[1]; and Dr A Gorry FRCOG, London[2].

[1]until December 2024; [2]from June 2025

The Chair of the Patient Safety Committee was: Dr SL Cunningham MRCOG, Stoke-on-Trent[3]; Dr CJ Calderwood FRCOG, Clydebank[4]; and the Vice Chair was: Dr J Elson FRCOG, Nottingham.

[3]until May 2024; [4]from June 2024

The final version is the responsibility of the Patient Safety Committee of the RCOG.

The review process will commence in 2029, unless otherwise indicated.

