

Maternal and child nutrition: nutrition and weight management in pregnancy, and nutrition in children up to 5 years

NICE guideline

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Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the [Yellow Card Scheme](#).

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should [assess and reduce the environmental impact of implementing NICE recommendations](#) wherever possible.

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This guideline replaces PH11.

This guideline partially replaces PH27.

This guideline is the basis of QS22 and QS37.

This guideline should be read in conjunction with NG246.

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in [NICE's information on making decisions about your care](#).

[Making decisions using NICE guidelines](#) explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

1.1 Vitamin supplementation

Unless otherwise stated, these recommendations are for all healthcare professionals who discuss maternal nutrition before, during and after pregnancy, and child nutrition (from birth to 5 years).

The recommendations in this section should be read in conjunction with:

- [NICE's guideline on antenatal care](#)
- [NICE's guideline on postnatal care](#)
- [NICE's guideline on vitamin D](#)
- [NHS advice on planning your pregnancy](#)
- [NHS advice on vitamins, supplements and nutrition in pregnancy](#)

- [NHS advice on vitamin D](#)
- [the recommendations in the Scientific Advisory Committee on Nutrition \(SACN\) update on folic acid](#)
- [the recommendations in the SACN report on vitamin D and health](#)
- [the recommendations on diet, lifestyle and nutritional supplements in NICE's guideline on twin and triplet pregnancy.](#)

Folic acid before and during pregnancy

1.1.1 Commissioners, service providers and healthcare professionals should ensure that information about the importance of folic acid supplementation before and during pregnancy is readily available online and in healthcare settings such as:

- community pharmacies
- GP surgeries
- sexual health clinics
- contraception clinics
- fertility clinics
- antenatal and postnatal care clinics
- specialist clinics for pre-existing medical conditions (for example, diabetes or epilepsy)
- clinics in community centres
- multi-agency health and social care hubs
- young people's services. **[2025]**

1.1.2 Discuss the importance of folic acid with anyone who may become pregnant, is planning a pregnancy or is already pregnant (whether it be their first or a subsequent pregnancy), during face-to-face, telephone or virtual appointments, or group sessions about:

- contraception
- sexual health
- pregnancy planning and preconception health
- reproductive health
- fertility
- antenatal health and wellbeing
- future pregnancies, postnatal health and wellbeing, and child health. [2025]

1.1.3 When discussing folic acid, provide information about the following that is in the person's preferred format and relevant to their individual circumstances and level of understanding:

- What folic acid is and how it helps prevent neural tube defects and other congenital malformations.
- The need to take folic acid before trying for a baby (ideally for 3 months before) or as early as possible after a first positive pregnancy test, and for at least the first 12 weeks of pregnancy.
- The importance of taking folic acid supplements even if food (including flour) is fortified with folic acid.
- That folic acid supplements are easy to take and are well tolerated (also see [NHS advice on taking folic acid with other medicines and herbal supplements](#)).
- How to remember to take the folic acid supplements each day (for example, setting up reminders or pairing with routine activities such as brushing teeth).
- How to obtain [Healthy Start vitamins](#) for free or at low cost, who is eligible for the free vitamins, and how to apply.
- That Healthy Start vitamins contain a daily 400 microgram dose of folic acid, and vitamins C and D.
- Where else to obtain low-cost folic acid supplements.

For more guidance on communication (including different formats and languages), providing information and shared decision making, see the [NICE guidelines on patient experience in adult NHS services and shared decision making](#). [2025]

- 1.1.4 Advise anyone who may become, or is planning to become, pregnant or is in the first 12 weeks of pregnancy to take 400 micrograms of folic acid a day, in line with UK government advice. [2025]
- 1.1.5 Offer a high-dose folic acid supplement (5 mg a day) to anyone who is planning to become pregnant or is in the first 12 weeks of pregnancy if they have an increased risk of having a baby with a neural tube defect or other congenital malformation, for example, if they:
- (or their partner) have, or if there is a family history of, a neural tube defect or other congenital malformation
 - have had a previous pregnancy affected by a neural tube defect or other congenital malformation
 - have type 1 or type 2 diabetes
 - have a haematological condition that requires folic acid supplementation, such as sickle cell anaemia or thalassaemia
 - are taking medicines that can affect how folic acid is absorbed or metabolised (for example, people taking anti-epileptic medicines or medicines for HIV). [2025]
- 1.1.6 Reassure anyone with a body mass index (BMI) of 25 kg/m² or more who is planning to become pregnant or is in the first 12 weeks of pregnancy that they do not need to take more than 400 micrograms of folic acid a day, unless they have any of the factors listed in recommendation 1.1.5. [2025]
- 1.1.7 Reassure anyone with an increased risk of pre-eclampsia who is planning to become pregnant or is in the first 12 weeks of pregnancy that they do not need to take more than 400 micrograms of folic acid a day unless they have any of the factors listed in recommendation 1.1.5. [2025]

- 1.1.8 If a person has had bariatric surgery and is planning a pregnancy or is pregnant, advise them to contact their bariatric surgery unit for individualised, specialist advice about folic acid and other micronutrients. **[2025]**
- 1.1.9 For anyone who is not taking the recommended folic acid supplement, explore any reasons or barriers, and offer support through individualised information and follow-up reminders (including digital health technologies such as apps or digital support groups, if available). Also see [NICE's guideline on medicines adherence](#). **[2025]**

For a short explanation of why the committee made these recommendations and how they might affect practice, see the [rationale and impact section on folic acid before and during pregnancy](#).

Full details of the evidence and the committee's discussion are in:

- [evidence review A: high-dose folic acid supplementation before and during the first 12 weeks of pregnancy](#)
- [evidence review B: optimum folic acid supplementation dose before and during the first 12 weeks of pregnancy for those with a BMI 25 kg/m² or more](#)
- [evidence review C: interventions to increase uptake of folic acid supplementation before and during the first 12 weeks of pregnancy](#)
- [evidence review P: facilitators and barriers to increase the uptake of government advice on folic acid and vitamin supplements](#).

Vitamin D and other vitamin supplements during and after pregnancy, and for babies and children under 5

- 1.1.10 Discuss the importance of vitamin supplements during and after pregnancy, and for children under 5 years, at opportunities such as:
- antenatal health and wellbeing appointments

- health visitor appointments
- baby development checks
- postnatal health and wellbeing appointments, including the 6- to 8-week maternal postnatal GP consultation
- vaccination appointments (both during pregnancy and after the birth)
- appointments in specialist clinics for pre-existing medical conditions (for example, diabetes or epilepsy)
- community pharmacy visits
- visits to multi-agency health and social care hubs
- visits to young people's services
- breastfeeding support group sessions. **[2025]**

1.1.11 Advise anyone who is pregnant or breastfeeding about taking vitamin D and other vitamin supplements. Discuss the following and provide information that is in the person's preferred format and relevant to their individual circumstances and level of understanding:

- Why vitamin supplements are needed in addition to a healthy diet.
- Which vitamins are important during pregnancy, after pregnancy and for babies and children, in particular, folic acid (see the [section on folic acid](#)) and vitamin D (see [NICE's guideline on vitamin D: supplement use in specific population groups](#) and the [NHS advice on vitamin D](#)).
- How to take vitamin supplements, different formulations and the importance of taking the recommended dosage.
- Ways to remember to take the vitamin supplements each day.
- Where to obtain vitamin supplements, including how to obtain [Healthy Start vitamins](#) for free or at low cost, who is eligible for the free vitamins, and how to apply.
- That Healthy Start vitamins for anyone who is pregnant or breastfeeding

contain a daily 400 microgram dose of folic acid as well as vitamins C and D.

- That Healthy Start vitamin drops for children contain vitamins A, C and D.

For more guidance on communication (including different formats and languages), providing information, and shared decision making, see the [NICE guidelines on patient experience in adult NHS services](#) and [shared decision making](#). [2025]

1.1.12 In line with UK government guidance, advise anyone who is pregnant or breastfeeding about the following:

- They should take a vitamin D supplement (10 micrograms or 400 international units [IU] a day) between October and March (because the body produces vitamin D from direct sunlight on the skin, and between October and early March, the sun is not strong enough for the body to make enough vitamin D).
- They should take vitamin D (10 micrograms or 400 IU a day) throughout the year if they are at increased risk of vitamin D deficiency because they, for example:
 - have darker skin, such as people of African, African-Caribbean or south Asian ethnicity, because they may need more sunlight exposure to produce the same amount of vitamin D as people with lighter skin pigmentation **or**
 - have little or no exposure to sunshine because they are not often outdoors or usually wear clothes that cover up most of their skin when outdoors.
- If they are eligible for free [Healthy Start vitamins](#) (which contain vitamins D, C and folic acid), that they should take 1 vitamin tablet a day.
- That during pregnancy, they should not take cod liver oil or any supplements containing vitamin A (retinol); this may include regular (non-pregnancy) multivitamins.
- If they are following a restricted diet (for example, a vegan or gluten-free diet), that they may need to add foods and drinks containing vitamin B12 to their diet or take a vitamin B12 supplement (see the [NHS advice on being](#)

vegetarian or vegan and pregnant and the NHS advice on B vitamins. Also see the NICE guideline on vitamin B12 deficiency in over 16s for advice about taking vitamin B12 supplements and what to do if vitamin B12 deficiency is suspected or confirmed). [2025]

1.1.13 Advise parents and carers of babies and children under 5 years to give vitamin supplements in line with UK government recommendations about vitamins for babies and vitamins for children; see table 1 on vitamin supplements for babies and children under 5 years. Also advise parents that those eligible for Healthy Start vitamins can receive the free vitamin drops up to their fourth birthday (these contain vitamins A, C and D and are suitable from birth). [2025]

Table 1 Vitamin supplements for babies and children under 5 years

Age	Breastfed	Formula-fed (500 ml/day or more)	Daily dose of vitamin D
0 to 6 months	Vitamin D or Healthy Start vitamins if eligible	None (formula is fortified)	8.5 to 10 micrograms (340 to 400 IU)
6 to 12 months	Vitamins A, C and D	None (formula is fortified)	8.5 to 10 micrograms (340 to 400 IU)
1 to 4 years	Vitamins A, C and D (note that Healthy Start vitamins are only available up to the child's fourth birthday)	Vitamins A, C and D (note that formula is not needed from 1 year)	10 micrograms (400 IU)

1.1.14 Commissioners and service providers should offer free vitamin D supplements for anyone who is pregnant or breastfeeding, and for children under 5 years (except babies under 1 year who take more than 500 ml of formula milk a day), if they have:

- darker skin, for example, people of African, African-Caribbean or south Asian ethnicity, because they may need more sunlight exposure to produce the same amount of vitamin D as people with lighter skin pigmentation **or**

- little or no exposure to sunshine because they are not often outdoors or usually wear clothes that cover up most of their skin when outdoors. [2025]

For a short explanation of why the committee made these recommendations and how they might affect practice, see the [rationale and impact section on vitamin D and other vitamin supplements during and after pregnancy, and for babies and children under 5](#).

Full details of the evidence and the committee's discussion are in:

- [evidence review E: interventions to increase uptake of vitamin supplements \(including Healthy Start vitamins\) in line with government advice](#)
- [evidence review P: facilitators and barriers to increase the uptake of government advice on folic acid and vitamin supplements](#).

1.2 Healthy eating, physical activity and weight management during pregnancy

Unless otherwise stated, these recommendations are for all healthcare professionals who discuss maternal health during pregnancy, in particular, midwives, dietitians and health visitors.

The recommendations in this section should be read in conjunction with:

- [NICE's guideline on antenatal care](#)
- [NICE's guideline on overweight and obesity management](#), which covers weight management before and after pregnancy
- [NHS advice on keeping well in pregnancy](#), particularly the sections about food and diet
- [NHS Start for Life advice on healthy eating in pregnancy](#)
- the [Eatwell Guide](#)

- [NHS Healthy Start page for healthcare professionals](#)
- the [recommendations on diet, lifestyle and nutritional supplements in NICE's guideline on twin and triplet pregnancy](#).

1.2.1 Commissioners and service providers should ensure that healthcare professionals provide independent and non-commercial, evidence-based, consistent information about healthy eating, physical activity and weight management during pregnancy, in line with UK government advice, whether it is a person's first or a subsequent pregnancy. **[2025]**

Healthy eating in pregnancy

1.2.2 Discuss the importance of healthy eating with anyone who is pregnant. Ask people about their usual dietary habits and preferences, and discuss the following:

- The benefits of healthy foods and drinks, as well as healthy dietary habits, for the pregnant person, baby and the wider family.
- Foods and drinks that should be encouraged and avoided during pregnancy (see [NHS advice on foods to avoid in pregnancy](#) and the [UK Chief Medical Officers' low risk drinking guideline](#) chapter on pregnancy and drinking).
- Healthy food and drink options that are acceptable and available for the person.
- Myths about what and how much to eat during pregnancy. For example, reassure people that they do not need to 'eat for two' and, other than avoiding specific foods and drinks, they do not need a special diet during pregnancy, but it is important to eat a variety of different foods every day to get the right balance of nutrients for them and their baby. **[2025]**

1.2.3 When discussing healthy eating in pregnancy:

- Take into account the person's needs and circumstances (including, for example, any difficulties with eating or communication).

- Take into account the person's current dietary habits and preferences, and recognise that for some people, healthy eating may be the goal over a longer period of time.
- Provide tailored, non-judgemental and culturally sensitive information that is in the person's preferred format.
- Provide evidence-based, non-commercial sources of further information, such as printed and online materials.
- Consider additional support for young pregnant people and those from low income or disadvantaged backgrounds (see the [NICE guideline on pregnancy and complex social factors](#)). This may include, for example, longer or more frequent contacts, bespoke or enhanced services, modified communication, referrals to or information about services in local family hubs or charities, and information about [Healthy Start](#) (depending on eligibility).
- Take into account affordability and people's resources when giving advice about a healthy diet and cooking; if needed, provide information about government and local schemes that can offer advice and help to access healthy food and drinks (including Healthy Start, depending on eligibility) and income support schemes.

For more guidance on communication (including different formats and languages), providing information and shared decision making, see the [NICE guidelines on patient experience in adult NHS services](#) and [shared decision making](#). **[2025]**

- 1.2.4 Help people gain the skills and the confidence they need to incorporate healthy foods into their diet. For example, refer people to local cookery classes or groups promoting healthy eating where people share their skills by cooking and eating together. **[2025]**

For a short explanation of why the committee made these recommendations and how they might affect practice, see the [rationale and impact section on healthy eating in pregnancy](#).

Full details of the evidence and the committee's discussion are in:

- [evidence review G: interventions for helping to achieve healthy and appropriate weight change during pregnancy](#)
- [evidence review I: interventions to increase uptake of healthy eating and drinking advice during pregnancy](#)
- [evidence review Q: facilitators and barriers to increase the uptake of government advice on healthy eating and drinking in pregnancy](#).

Physical activity in pregnancy

1.2.5 Discuss the importance of physical activity with anyone who is pregnant (see the [UK Chief Medical Officers' guidance on physical activity in pregnancy](#) and the [NHS Start for Life advice on exercising in pregnancy](#)). Ask people about their usual physical activity and exercise habits and preferences, and provide information on the following that is in the person's preferred format and relevant to their individual circumstances:

- How to safely continue with physical activity.
- How to gradually increase physical activity during pregnancy if they are not already physically active.
- The importance of minimising sedentary time, such as sitting for long periods. **[2025]**

For a short explanation of why the committee made this recommendation and how it might affect practice, see the [rationale and impact section on physical activity in pregnancy](#).

Full details of the evidence and the committee's discussion are in [evidence review G: interventions for helping to achieve healthy and appropriate weight change during pregnancy](#).

Weight management in pregnancy

- 1.2.6 When discussing weight during pregnancy, follow the recommendations on sensitive communication and avoiding stigma during discussions about weight in the [NICE guideline on overweight and obesity management](#). For more guidance on communication, providing information (including providing information in different formats and languages) and shared decision making, see the [NICE guidelines on patient experience in adult NHS services](#) and [shared decision making](#). **[2025]**
- 1.2.7 In line with [NICE's guideline on antenatal care](#), offer to measure the person's height and weight and calculate BMI at the first face-to-face antenatal appointment, and explain why this is important for planning care. Use a BMI centile chart (see the [Royal College of Paediatrics and Child Health's BMI chart](#)) for anyone under 18, because the BMI measure alone does not take growth into account and is inappropriate for this age group. **[2025]**
- 1.2.8 Reassure the person that their weight and BMI can be shared sensitively with them (for example, by being written down rather than spoken aloud) or not shared with them, depending on what they prefer. **[2025]**
- 1.2.9 For anyone with a BMI of over 30 kg/m² at the booking appointment, offer testing for gestational diabetes in line with the [recommendations on testing in the NICE guideline on diabetes in pregnancy](#). **[2025]**
- 1.2.10 For anyone with a BMI of over 40 kg/m² at the booking appointment, discuss the option for referral to a specialist obesity service or a specialist practitioner for tailored advice and support during the pregnancy. **[2025]**

- 1.2.11 Because there are uncertainties around optimal weight change in pregnancy, focus advice on starting or maintaining a healthy diet and physical activity during the pregnancy. This is because of the following:
- There are different factors that can affect weight change during pregnancy, for example, weight of the baby, weight of the placenta, maternal increase in blood volume, amniotic fluid, breast tissue expansion and body fat, and how these (especially the weight of the baby) vary between individuals and affect weight differently.
 - There is a lack of evidence about what the optimal total weight change in pregnancy or weight change in each trimester should be.
 - There is not enough evidence to suggest that any particular nutritionally balanced diet is better than another in helping to achieve optimal weight change in pregnancy. **[2025]**
- 1.2.12 Give people advice on how they can monitor their diet and physical activity levels (see the [sections on healthy eating in pregnancy](#) and [physical activity in pregnancy](#)) as well as local and online sources of information and support, including self-management tools and materials (particularly those that are free or low cost). **[2025]**
- 1.2.13 Do not routinely offer to weigh people throughout their pregnancy unless there is a clinical reason to do so (for example, gestational diabetes, hyperemesis gravidarum or thromboprophylaxis). **[2025]**
- 1.2.14 If people are interested in monitoring their weight change during pregnancy, refer them to the estimated healthy total weight change in a singleton pregnancy according to pre-pregnancy BMI; see table 1 in the [National Academy of Medicine's report on the current understanding of gestational weight gain among women with obesity and the need for future research](#), taking into consideration recommendation 1.2.11. Topics for discussion could include the following:
- The risks associated with gaining excessive weight during the pregnancy for people with a pre-pregnancy BMI in the healthy, overweight and obesity weight categories (see [NHS information on BMI ranges](#)). Risks include having a baby who is large for gestational age, developing hypertension or gestational diabetes, or needing a caesarean section (see the [section on](#)

excessive weight gain in pregnancy).

- The risks associated with gaining too little weight during the pregnancy regardless of pre-pregnancy BMI, for example, having a baby who is small for gestational age (see the section on low weight gain in pregnancy).
- Where to access weighing equipment, if needed. [2025]

1.2.15 Advise people that intentional weight loss during pregnancy is not recommended because of potential adverse effects on the baby. [2025]

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on weight management in pregnancy.

Full details of the evidence and the committee's discussion are in:

- evidence review F: healthy and appropriate weight change during pregnancy
- evidence review G: interventions for helping to achieve healthy and appropriate weight change during pregnancy
- evidence review I: interventions to increase uptake of healthy eating and drinking advice during pregnancy.

Low weight gain in pregnancy

1.2.16 If concerns about low weight gain during the pregnancy are raised by anyone who is pregnant, or by a healthcare professional as part of weight monitoring for a clinical reason (also see recommendation 1.2.13):

- ask for further details, for example, ask about the person's physical and psychological wellbeing, and any clinical interventions that have been offered
- discuss healthy eating and physical activity in pregnancy (see the sections on healthy eating in pregnancy and physical activity in pregnancy)

- ensure routine monitoring of the baby to check whether they are potentially small for their gestational age (see the [section on monitoring fetal growth and wellbeing in NICE's guideline on antenatal care](#)). **[2025]**

For a short explanation of why the committee made this recommendation and how it might affect practice, see the [rationale and impact section on low weight gain in pregnancy](#).

Full details of the evidence and the committee's discussion are in [evidence review F: healthy and appropriate weight change during pregnancy](#).

Excessive weight gain in pregnancy

1.2.17 If concerns about excessive weight gain during the pregnancy raised by anyone who is pregnant, or by a healthcare professional as part of weight monitoring for a clinical reason (also see recommendation 1.2.13):

- ask for further details, for example, ask about the person's physical and psychological wellbeing
- discuss healthy eating and physical activity in pregnancy (see the [sections on healthy eating in pregnancy](#) and [physical activity in pregnancy](#))
- ensure routine monitoring of the baby to check whether they are potentially large for their gestational age (see the [section on monitoring fetal growth and wellbeing in NICE's guideline on antenatal care](#))
- consider a test for gestational diabetes. **[2025]**

For a short explanation of why the committee made this recommendation and how it might affect practice, see the [rationale and impact section on excessive weight gain in pregnancy](#).

Full details of the evidence and the committee's discussion are in [evidence review F: healthy and appropriate weight change during pregnancy](#).

Gestational diabetes

The recommendations in this section should be read in conjunction with [NICE's guideline on diabetes in pregnancy](#).

- 1.2.18 When a person is diagnosed with gestational diabetes, ask about their usual diet and physical activity in order to provide individualised advice. **[2025]**
- 1.2.19 Advise people with gestational diabetes that there is currently no convincing evidence that a particular diet (for example, a low-glycaemic-index diet, low-carbohydrate diet, low-fat diet, or high-fibre diet) is better than the other. Discuss a healthy diet for gestational diabetes that is the most preferable and appropriate for the person. See [NHS advice on a healthy diet for gestational diabetes](#). **[2025]**

For a short explanation of why the committee made these recommendations and how they might affect practice, see the [rationale and impact section on gestational diabetes](#).

Full details of the evidence and the committee's discussion are in [evidence review H: healthy lifestyle interventions for those with gestational diabetes](#).

1.3 Breastfeeding and formula feeding beyond 8 weeks after birth

Unless otherwise stated, these recommendations are for all healthcare professionals and practitioners with skills and competencies in babies' feeding, for example, midwives, health visitors, maternity support workers, GPs, paediatricians and breastfeeding peer supporters.

The recommendations in this section should be read in conjunction with:

- the [recommendations on planning and supporting babies' feeding in NICE's guideline on postnatal care](#) (which covers the antenatal period and the first 8 weeks after birth)
- [NICE's guideline on faltering growth](#)

- [NHS Start for Life advice on feeding your baby](#)
- [the recommendations in the Scientific Advisory Committee on Nutrition \(SACN\) report on feeding in the first year of life](#)
- [the UNICEF UK Baby Friendly Initiative](#).

Discussing babies' feeding

- 1.3.1 To improve the likelihood of continued breastfeeding in line with national recommendations, provide support throughout the pregnancy and the postnatal period about planning, starting and establishing breastfeeding in line with the [recommendations on planning and supporting babies' feeding in the NICE guideline on postnatal care](#). **[2025]**
- 1.3.2 At each health contact, discuss the baby's feeding in a sensitive, non-judgemental way. Ask how it is going, whether there are any new or continuing issues or questions, and seek to address them. See the sections on:
- [supporting continued breastfeeding](#)**and**
 - [supporting safe and appropriate formula feeding](#). **[2025]**

Supporting continued breastfeeding

- 1.3.3 At each health contact, provide information, reassurance and support about continuing breastfeeding, as follows:
- If the parent is exclusively breastfeeding, provide encouragement and reassurance to continue exclusive breastfeeding until around 6 months.
 - If the parent is combination feeding, discuss whether they would like to re-establish exclusive breastfeeding, provide encouragement to sustain breastfeeding and advice about how they can maintain their breast milk supply. **[2025]**
- 1.3.4 When discussing breastfeeding, include the following topics:

- The value of breastfeeding and breast milk for the baby's health and development, and for maternal health (see [NHS Start for Life advice on the benefits of breastfeeding](#)).
 - The importance of continuing breastfeeding alongside solid foods for the first year, and the value of continuing until around 2 years or beyond.
 - The impact that combination feeding can have on breast milk supply and how to maintain breast milk supply (see the [section on safe and appropriate formula feeding](#)).
 - The person's experience of breastfeeding and its emotional impact, including feeding decisions and challenges.
 - How people can feel more confident and comfortable to breastfeed in different situations, including the right to breastfeed in any public space (under the [Equality Act 2010](#)).
 - The level of support available from partners, family and friends to continue breastfeeding.
 - Attending local breastfeeding support groups, for example, breastfeeding 'cafes' and drop-in groups.
 - Practical suggestions and tips for convenience, such as how to safely express and store breast milk. See [NHS Start for Life advice on expressing breast milk](#) and [storing breast milk](#).
 - Reassurance that a special diet is not required to meet the nutritional needs for the baby, but that anyone who is breastfeeding should have a healthy diet (see also [recommendations 1.1.10 and 1.1.11 on vitamin supplementations when breastfeeding](#)). **[2025]**
- 1.3.5 Be aware that parents from a low income or disadvantaged background may need more support to continue breastfeeding. Signpost to government and local schemes that can offer advice and help to access healthy food and drinks (including Healthy Start, depending on eligibility) and income support schemes. **[2025]**
- 1.3.6 Use appropriate resources for safe medicine use and prescribing during

breastfeeding, such as the [UK Drugs in Lactation Advisory Service](#), to enable continued breastfeeding. **[2025]**

1.3.7 Provide information and encouragement for partners and other family members to support continued breastfeeding, as appropriate. **[2025]**

1.3.8 When discussing continuing breastfeeding, allow adequate time so that conversations do not feel rushed. Information provided should support informed decision making and be:

- clear, evidence-based and consistent
- tailored to the person's needs, preferences, beliefs, culture and circumstances
- supportive, non-judgemental and respectful.

For more guidance on communication, providing information (including providing information in different formats and languages) and shared decision making, see the [NICE guidelines on patient experience in adult NHS services and shared decision making](#). **[2025]**

1.3.9 Provide additional support (for example, virtual support groups, phone calls, emails or text messages, depending on the person's preference) by appropriately trained healthcare professionals or peer supporters to supplement (but not replace) face-to-face discussions about continuing breastfeeding. This may include information about out-of-hours support (such as the [national breastfeeding helpline](#)) and peer support. **[2025]**

1.3.10 Offer face-to-face breastfeeding support group sessions (such as breastfeeding 'cafes' or drop-in groups) where appropriately trained healthcare professionals or peer supporters provide people with individualised, practical, emotional and social support to maintain breastfeeding. **[2025]**

For a short explanation of why the committee made these recommendations and how they might affect practice, see the [rationale and impact section on discussing babies' feeding and supporting continued breastfeeding](#).

Full details of the evidence and the committee's discussion are in:

- [evidence review J: approaches and interventions for maintaining breastfeeding beyond 8 weeks after birth](#)
- [evidence review K: facilitators and barriers for maintaining breastfeeding beyond 8 weeks after birth](#).

Supporting continued breastfeeding after returning to work or study

- 1.3.11 Reassure people who are breastfeeding that they do not need to stop when they return to work or education. See [NHS Start for Life advice on breastfeeding and returning to work](#). [2025]
- 1.3.12 Encourage people to inform their employer or education provider about continuing breastfeeding in good time before they return to work or study. Advise that they may find it helpful to involve human resources or student services in the discussions, as appropriate. [2025]
- 1.3.13 Discuss how people can balance breastfeeding with returning to work or education, and encourage them to think about what support they may need from their employer or education provider for as long as they continue breastfeeding. Topics to discuss include the following:
- The person's views, preferences and perceived challenges and potential solutions about continuing breastfeeding when they return to work or education.
 - The timing of any shared parental leave, because it may be more helpful for the other parent to take parental leave after breastfeeding has been well established.

- The timing of the person's return to work or education, whether they can take extended leave or extend their studies, and whether there are flexible working or learning possibilities such as different working hours or days, hybrid or remote work or study options.
- The need to express breast milk, and facilities for expressing milk (depending on the age of the child and duration of separation).
- The support that employers and education providers can offer, for example, providing a private, safe and hygienic area to express milk, fridge and storage space, and additional breaks.
- That the Equality Act 2010 states that it is legal to breastfeed in public places anywhere in the UK, and that it is unlawful for businesses to discriminate against anyone who is breastfeeding a child of any age.
- That employers have legal requirements and guidance that they need to follow, for example:
 - [Health and Safety Executive \(HSE\) guidance for employers about protecting pregnant workers and new mothers](#)**and**
 - [ACAS advice on returning to work](#).
- How to express breast milk (by hand or with a breast pump) and how to safely store expressed breast milk. See [NHS Start for Life advice on expressing breast milk](#).
- Childcare options, including the facilities that childcare settings have for safe storage and provision of breast milk (as needed), and the practical benefits of childcare being near to the place of work or education.
- Sources of further advice and support about returning to work or education, for example, helplines such as the [national breastfeeding helpline](#), peer support and local and national support groups. **[2025]**

1.3.14 Employers, human resource teams, senior leadership staff and managers, and staff in education settings should take into account the following to improve the work and education environment and meet legislation around accommodating breastfeeding employees or students:

- Legal requirements and guidance for employers, for example:
 - [Health and Safety Executive \(HSE\) guidance for employers about protecting pregnant workers and new mothers](#)**and**
 - [ACAS advice on returning to work](#).
- Options for flexible, hybrid or home working.
- How settings can support people to breastfeed or express milk (for example, providing a private space, fridge and storage space, and additional breaks).
- Developing a breastfeeding policy for employees and students.
- Appointing a designated breastfeeding lead.
- Training for all employees about policies and legislation.
- Support from breastfeeding ambassadors, champions or advocates, and from peers. **[2025]**

For a short explanation of why the committee made these recommendations and how they might affect practice, see the [rationale and impact section on supporting continued breastfeeding after returning to work or study](#).

Full details of the evidence and the committee's discussion are in [evidence review M: facilitators and barriers to continue breastfeeding when returning to work or study](#).

Supporting safe and appropriate formula feeding

- 1.3.15 Commissioners and service providers should ensure that healthcare professionals provide independent and non-commercial, evidence-based, consistent advice on safe and appropriate formula feeding. **[2025]**
- 1.3.16 Commissioners and service providers should ensure that healthcare professionals do not inadvertently promote or advertise infant or follow-on formula by displaying, distributing or using any materials or equipment produced or donated by infant formula, bottle and teat manufacturers, including, but not limited to,

product samples, leaflets, posters or charts. **[2025]**

1.3.17 When discussing babies' feeding, if parents are thinking about introducing formula, support them to make an informed decision and offer information about how to maintain breast milk supply if they are planning to combination feed. Also see the [section on supporting continued breastfeeding](#). **[2025]**

1.3.18 If parents give formula milk, offer non-commercial, evidence-based, consistent advice about safe and appropriate formula feeding practices, and direct them to additional non-commercial, evidence-based, consistent sources and advice, such as:

- [NHS Start for Life advice on bottle feeding](#)
- [NHS Start for Life advice on mixed feeding](#)
- [NHS bottle feeding advice](#)
- [Better Health Start for Life and UNICEF UK Baby Friendly Initiative Guide to bottle feeding](#)
- [NHS advice on when to introduce beakers and cups](#)
- schemes that offer advice and help to buy healthy food and milk (including [Healthy Start](#), depending on eligibility).

Also see the [recommendations on formula feeding in NICE's guideline on postnatal care](#). **[2025]**

For a short explanation of why the committee made these recommendations and how they might affect practice, see the [rationale and impact section on supporting safe and appropriate formula feeding](#).

Full details of the evidence and the committee's discussion are in [evidence review L: facilitators and barriers to follow existing government advice on safe and appropriate formula feeding](#).

1.4 Weighing babies and young children

- 1.4.1 As a minimum, weigh babies at birth and in the first week as part of an overall assessment of feeding. If a baby loses more than 10% of their birth weight in the early days of life, measure their weight again at appropriate intervals depending on the level of concern, but no more frequently than daily, in line with [NICE's guideline on faltering growth](#). Also see the recommendations on weighing babies in the sections on:
- [care of the newborn baby in NICE's guideline on intrapartum care](#) **and**
 - [assessment and care of the baby in NICE's guideline on postnatal care](#). **[2011, amended 2025]**
- 1.4.2 Weigh healthy babies at 8, 12 and 16 weeks and at 1 year, at the time of routine immunisations. If there is concern, see [NICE's guideline on faltering growth](#). **[2011, amended 2025]**
- 1.4.3 Weigh babies using digital scales that are maintained and calibrated appropriately (spring scales are inaccurate and should not be used). **[2008, amended 2025]**
- 1.4.4 Commissioners and managers should ensure that health professionals receive training on weighing and measuring babies. This should include how to:
- use equipment
 - document and interpret the data **and**
 - help parents and carers understand the results and implications. **[2008]**
- 1.4.5 Ensure that support staff are trained to weigh babies and young children and to record the data accurately in the child health record held by the parents. **[2008]**

1.5 Healthy eating behaviours in babies and children from 6 months and up to 5 years

Unless otherwise stated, these recommendations are for all healthcare professionals who discuss child nutrition.

The recommendations in this section should be read in conjunction with:

- NICE's guidelines on:
 - [faltering growth](#)
 - [oral health promotion for local authorities and partners](#)
 - [oral health promotion for general dental practice](#)
 - [food allergy in under 19s: assessment and diagnosis](#)
- the recommendations for improving nutrition in schools, nurseries and childcare facilities in [NICE's guideline on overweight and obesity management](#)
- the recommendations in the SACN reports on:
 - [feeding in the first year of life](#)
 - [feeding young children aged 1 to 5 years](#)
- NHS advice on:
 - [weaning and feeding](#)
 - [food allergies in babies and young children](#)
- [NHS Start for Life advice on weaning](#).

Introducing solid foods (complementary feeding) for babies between 6 months and 1 year old

- 1.5.1 Commissioners and providers of services should ensure that healthcare professionals have independent and non-commercial, evidence-based, and consistent information about the timely and appropriate introduction of solid foods to babies in line with UK government advice and this guideline. **[2025]**
- 1.5.2 Commissioners and providers of services should support healthcare professionals who have knowledge and expertise in introducing solid foods to babies (for example, health visitors) to act as 'champions' to pass on information to other staff. **[2025]**

- 1.5.3 In the final trimester of pregnancy, advise parents-to-be:
- that they should introduce solid foods to their baby from around 6 months onwards, alongside usual milk feeds
 - about government and local schemes that offer advice and help to buy healthy food and milk (including [Healthy Start](#), depending on eligibility), and income support schemes. **[2025]**
- 1.5.4 When the baby is 2, 3 and 4 months old, remind parents that they should not introduce solid foods until their baby is around 6 months old. This could include reminders at appointments, or sending text messages or letters. **[2025]**
- 1.5.5 When the baby is between 4 and 5 months old, health visiting teams or other community health services should arrange an opportunity for parents to find out more about introducing their baby to solid food from the age of 6 months. This could be a face-to-face or online appointment, phone consultation or group session. **[2025]**
- 1.5.6 When discussing and giving advice on introducing solid foods, discuss the topics in Box 1 and:
- provide independent, non-commercial, evidence-based information in line with current UK government advice, and use printed or online resources (for example, [Start for Life materials](#)) to complement and reinforce the discussions
 - take into account the family's circumstances and living conditions
 - be culturally sensitive. **[2025]**

Box 1 Information about introducing solid foods (complementary feeding) for babies between 6 months and 1 year

Topics to discuss

- When and how to introduce solid foods, which foods and drinks to introduce and which to avoid.
- The continuing role of breast milk, breastfeeding and infant formula.
- The importance of offering a variety of foods, flavours and textures (not all sweet).
- The benefits of homemade foods (without adding sugar, salt or sweetening agents), including nutrition, taste and texture, and that commercial foods and drinks are not needed to meet nutritional requirements.
- Responsive feeding, building up feeding frequency, and increasing the diversity of foods over time.
- Introducing cups and beakers alongside solid foods.
- Safety, including concerns about gagging and choking, not leaving a baby alone when they are eating or drinking, and safe and appropriate preparation of foods.
- Introducing potentially allergenic foods, including egg and peanut products, in small amounts in age-appropriate forms alongside other solid foods, advice and reassurance about why this is important, signs of an allergic reaction, and what to do if symptoms occur.
- Concerns such as mess and food waste.
- The cost of healthy food and where to get support, including government and local schemes that offer advice and help to buy healthy food and milk (including [Healthy Start](#), depending on eligibility) and income support schemes.
- Being aware of potentially misleading information and marketing from commercial baby food companies that conflicts with UK government guidance, for example, age of introduction, hidden sugar content and snack foods.

1.5.7 For babies between 6 months and 1 year old, at every contact and at the Healthy Child Programme developmental review at 8 to 12 months, ask about the baby's

feeding and remind families of the topics discussed in recommendation 1.5.6.
[2025]

For a short explanation of why the committee made these recommendations and how they might affect practice, see the [rationale and impact section on introducing solid foods \(complementary feeding\) for babies between 6 months and 1 year](#).

Full details of the evidence and the committee's discussion are in:

- [evidence review N: interventions to promote appropriate and timely introduction to solids \(complementary feeding\) for babies from 6 to 12 months](#)
- [evidence review R: facilitators and barriers to increase the uptake of government advice on appropriate and timely introduction to solids and healthy eating and drinking in children](#).

Healthy eating and drinking for children from 1 to 5 years

- 1.5.8 Commissioners and providers of services should ensure that healthcare professionals and people working in early years services have independent and non-commercial, evidence-based and consistent information about healthy eating and drinking for children from 1 up to 5 years, in line with UK government advice and this guideline. **[2025]**
- 1.5.9 Take into account the family's circumstances, and sensitively tailor the discussion and advice around healthy eating and drinking to the child's and family's needs, circumstances, preferences and understanding. Give particular consideration to children from low income or disadvantaged backgrounds, for example, by providing additional support for their families, such as longer or more frequent contacts, bespoke or enhanced services, modified communication, referrals to or information about services in local family hubs or charities and information about [Healthy Start](#) (depending on eligibility). **[2025]**
- 1.5.10 Provide independent, non-commercial, evidence-based and consistent information on healthy eating practices and promote interventions, such as:

- schemes that improve access to healthy foods, for example, Healthy Start, free school meals or local initiatives
- interventions that improve families' skills and confidence to include healthy foods in their diet such as 'cook and eat' classes. **[2025]**

1.5.11 When discussing healthy eating and drinking with families, discuss the topics in Box 2 and:

- provide independent, non-commercial, evidence-based information in line with current UK government advice, and use printed or online resources (for example, Start for Life Feeding at 12 months and over) to complement and reinforce the discussions
- take into account the family's circumstances and living conditions
- recognise that for some families, healthy eating may be the goal over a longer period of time
- be culturally sensitive. **[2025]**

Box 2 Information about healthy eating and drinking for children from 1 to 5 years

Topics to discuss

- The importance of a balanced and diverse diet, comprising 3 meals a day, 2 healthy snacks and breast milk, water or milk.
- That formula milks are not needed, sweetened drinks should not be given, and fruit juice should be limited (no more than 150 ml per day). In addition, drinks should be given in cups and bottles with teats should be avoided.
- That the UK government dietary recommendations as depicted in the [Eatwell Guide](#) apply from around 2 years.
- The benefits of homemade food (without adding sugar, salt or sweetening agents).
- Ensuring that snacks offered between meals are low in sugar and salt (for example, vegetables, fruit, plain [not flavoured] milk, bread and homemade sandwiches with savoury fillings).
- The importance of families eating together, and how parents and carers can set a good example through their own food choices.
- Encouraging children to repeatedly handle and taste a wide range of vegetables and fruit at home and in early years settings.
- Avoiding food-based rewards, and instead using, for example, stickers.
- Being aware of potentially misleading information and marketing from commercial food companies that conflicts with UK government guidance, for example, hidden sugar content and pre-packaged snack foods.
- Concerns about the cost of healthy food and where to get support, including government schemes that offer advice and help to buy healthy food and milk (including [Healthy Start](#), depending on eligibility), free school meal schemes, local initiatives, and income support schemes.

1.5.12 Early years settings should ensure that healthy eating and drinking are prioritised, and that actions are part of a whole setting approach that involve the following:

- Providing healthy foods and drinks in line with the [early years foundation stage \(EYFS\) statutory framework](#) (if possible, prepared on-site; also see [example menus for early years settings in England](#)), including produce from settings-based gardens where possible.
- Repeated offering of unfamiliar foods (vegetables and fruit) and role modelling.
- Talking to children about healthy foods and healthy eating, and food education such as cooking, play and themed weeks.
- Involving families and carers to promote consistency between the setting and home.

See also recommendations on preventing overweight, obesity and central adiposity for early years settings, nurseries, other childcare facilities and schools in [NICE's guideline on overweight and obesity management](#). **[2025]**

For a short explanation of why the committee made these recommendations and how they might affect practice, see the [rationale section on healthy eating and drinking for children from 1 to 5 years](#).

Full details of the evidence and the committee's discussion are in:

- [evidence review O: interventions to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years](#)
- [evidence review R: facilitators and barriers to increase the uptake of government advice on appropriate and timely introduction to solids and healthy eating and drinking in children](#).

Recommendations for research

The guideline committee has made the following recommendations for research.

Key recommendations for research

1 Digital technologies to increase uptake of folic acid supplementation

What is the clinical and cost effectiveness of digital technologies (for example, social media and online support groups) to increase the uptake of folic acid supplementation before and during the first 12 weeks of pregnancy? **[2025]**

For a short explanation of why the committee made this recommendation for research, see the [rationale section on folic acid before and during pregnancy](#).

Full details of the evidence and the committee's discussion are in [evidence review C: interventions to increase uptake of folic acid supplementation before and during the first 12 weeks of pregnancy](#).

2 High-dose folic acid supplementation

What is the safest and most effective dose for folic acid supplementation before and during the first 12 weeks of pregnancy for people at a high risk of conceiving a child with a neural tube defect or congenital malformation? **[2025]**

For a short explanation of why the committee made this recommendation for research, see the [rationale section on folic acid before and during pregnancy](#).

Full details of the evidence and the committee's discussion are in [evidence review A: high-dose folic acid supplementation before and during the first 12 weeks of pregnancy](#).

3 Optimum dose of vitamin D during pregnancy for people with a BMI that is within the overweight or obesity weight categories

What dose of vitamin D is appropriate during pregnancy for people with a body mass index (BMI) that is within the overweight or obesity weight categories? **[2025]**

For a short explanation of why the committee made this recommendation for research, see the [rationale section on vitamin D and other vitamin supplements during and after pregnancy and for babies and children under 5](#).

Full details of the evidence and the committee's discussion are in [evidence review D: optimum vitamin D dose during pregnancy for those medically classified as being in the overweight or obese weight categories](#).

4 Dietary interventions during pregnancy for people with gestational diabetes

What are the most clinically and cost-effective dietary interventions to improve glycaemic control, maternal and baby outcomes for people with gestational diabetes? **[2025]**

For a short explanation of why the committee made this recommendation for research, see the [rationale section on gestational diabetes](#).

Full details of the evidence and the committee's discussion are in [evidence review H: healthy lifestyle interventions for those with gestational diabetes](#).

5 Safe and appropriate formula feeding

What are the facilitators and barriers for safe and appropriate formula feeding in the context of poverty and food insecurity? **[2025]**

For a short explanation of why the committee made this recommendation for research, see the [rationale section on supporting safe and appropriate formula feeding](#).

Full details of the evidence and the committee's discussion are in [evidence review L: facilitators and barriers to follow existing government advice on safe and appropriate formula feeding](#).

Rationale and impact

These sections briefly explain why the committee made the recommendations and how they might affect practice.

Folic acid before and during pregnancy

Recommendations 1.1.1 to 1.1.9

Why the committee made the recommendations

Evidence on interventions to improve the uptake of folic acid supplementation before and during pregnancy showed mixed findings. Overall, information provision and education interventions compared with usual care helped to improve uptake when provided face-to-face as well as in printed materials, and when delivered by healthcare professionals. Qualitative evidence also highlighted the importance of making information about folic acid supplementation before and during pregnancy available in different healthcare settings that people who may become pregnant visit, to raise awareness of its importance. This could be in the form of, for example, posters or leaflets, as well as online.

In addition to having information readily available, the committee agreed that folic acid supplementation should be proactively discussed with anyone who is likely to become pregnant, planning to become pregnant or is already pregnant. Qualitative evidence showed that barriers to taking folic acid supplements include misinformation or confusion about the impact of folic acid, including a belief that it causes nausea. The committee agreed the importance of providing information in line with government advice, and reassuring people that folic acid supplementation is well tolerated and low cost or, in some cases, free.

No evidence was identified on high-dose (5 mg or more) folic acid during preconception and pregnancy, although 5 mg is the current recommended dose for those with an increased risk of conceiving a child with neural tube defects or other congenital malformations.

There was evidence that women with a history of births affected by neural tube defects who took 4 mg of folic acid before conception and during pregnancy had a lower risk of

having a baby with a neural tube defect in the current pregnancy. No evidence was available for other known 'at-risk' groups so these were based on committee consensus. Based on the evidence, the committee would have recommended 4 mg of folic acid as the high dose for the 'at-risk' populations; however, 5 mg is recommended, partly for practical reasons, and it reflects current practice. This is because the only formulations available are 0.4 mg (400 micrograms) and 5 mg, so it is not feasible for people to take 4 mg. Folic acid is generally well tolerated even in high doses, and there is no known evidence of harm in different populations (evidence for other populations than those in the preconception period or during pregnancy was not reviewed by the committee). There is also likely to be little difference between a 5 mg and 4 mg dose because folic acid does not have a narrow therapeutic index. The recommendation reflects current practice because 5 mg is the current recommended dose for those with increased risk of having a baby with neural tube defects or other congenital malformations. The committee also made a recommendation for research into the safest and most effective dose of folic acid supplementation for this population.

There was no evidence to support high-dose folic acid for those with a body mass index (BMI) that is within the overweight or obesity weight categories. The committee agreed that the standard dose of 400 micrograms is sufficient, unless there are other factors that increase the risk of having a baby with neural tube defect or congenital malformation. For those at risk of pre-eclampsia, the evidence, while limited, did not show that high-dose folic acid would prevent pre-eclampsia. The committee agreed that people who have had bariatric surgery may need specific advice about folic acid and other micronutrients before and during pregnancy.

The committee also agreed the importance of additional discussions and support for people who do not take folic acid supplements as recommended.

The evidence on the role of digital technologies to improve uptake of folic acid supplementation before and during pregnancy was limited, so the committee made a recommendation for research on the clinical and cost effectiveness of such technologies, including subgroup analysis (for example, by age, ethnicity and socioeconomic status) to enable exploration of health inequality issues.

How the recommendations might affect practice

Overall, the recommendations should reinforce best practice. Providing targeted information and reminders may have a small resource impact but this should be offset by

the benefits of improving folic acid uptake. The recommendations on high-dose folic acid generally reflect current best practice. However, there will be a change in practice because people with a BMI that is within the obesity weight category will no longer be advised to take high-dose folic acid unless they have other risk factors. The recommendation to advise people to contact their bariatric surgery unit for individualised, specialist advice about folic acid and other micronutrients if they have had bariatric surgery and are planning a pregnancy or are pregnant might result in some changes in practice and have resource implications.

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Vitamin D and other vitamin supplements during and after pregnancy, and for babies and children under 5

[Recommendations 1.1.10 to 1.1.14](#)

Why the committee made the recommendations

Overall, there was limited evidence on interventions to improve the uptake of vitamin supplements. Qualitative evidence showed that people sometimes lacked information about the benefits of vitamin D supplementation or found the information confusing. Tailored information provided in different appointments, settings and opportunities was preferred. The committee agreed that healthcare professionals should provide current government advice about vitamin supplementation at various opportunities and in different settings.

There was some evidence that information provision, together with a supply of vitamin D drops, improved vitamin D uptake in babies aged 3 months. The committee agreed that it is important to make people aware of the Healthy Start scheme so that those eligible can access free vitamins. Qualitative evidence showed that even those eligible for the free Healthy Start vitamins sometimes struggle to obtain them for various reasons, emphasising the importance of information from healthcare professionals. Because the Healthy Start scheme is not universally available, the committee agreed that providing free vitamin supplements to those at an increased risk of vitamin D deficiency could prevent vitamin D deficiency and associated outcomes. According to the UK government advice, young children are at an increased risk of vitamin D deficiency. There was evidence that

free vitamin D supplementation during pregnancy and for children up to 4 years of age with dark or medium tone skin (who are at higher risk for vitamin D deficiency) is cost effective.

Evidence on the appropriate dose of vitamin D during pregnancy for people with a BMI that is within the overweight or obesity weight categories was limited and inconclusive, so the committee made a [recommendation for research on the optimum dose of vitamin D for people with a BMI that is within the overweight or obesity weight categories](#).

How the recommendations might affect practice

The recommendations on information provision reinforces current best practice. Free Healthy Start vitamins are already available in some areas for everyone who is pregnant or breastfeeding and children under 5, regardless of their eligibility for the wider Healthy Start scheme. Where this is not available, provision of free vitamin supplements for those at an increased risk of deficiency may have some resource impact but this should be balanced by preventing vitamin D deficiency.

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Healthy eating in pregnancy

[Recommendations 1.2.1 to 1.2.4](#)

Why the committee made the recommendations

The recommendations are based on quantitative and qualitative evidence and the committee's expertise.

Evidence from randomised controlled trials showed that information provision and education on healthy eating and drinking during pregnancy (compared with usual care) had some beneficial effects on eating practices.

Qualitative evidence suggested that people value personalised discussions with midwives about healthy eating. Feeling accepted and understood were considered important. There was qualitative evidence that young pregnant people lack trust in healthcare professionals because of a perceived lack of support and understanding of their situation.

There was evidence that overall, dietary advice from healthcare professionals leads to better understanding for the person and their unborn baby, and influences uptake of healthy cooking and dietary habits in the long term. Qualitative evidence also showed that, in addition to discussions, people value other written information, particularly in digital formats, and want these to be trustworthy. The committee agreed that information sources should be evidence-based and non-commercial.

A major barrier for healthy eating identified in qualitative research is the cost of healthy food. The committee agreed that practical support and advice about accessing free or affordable foods and financial help are essential in supporting pregnant people to eat healthily. In addition, people may lack confidence and skills in cooking healthy meals, so classes where people can learn to cook healthy, affordable meals were highlighted as an example of how to overcome this.

How the recommendations might affect practice

The recommendations reinforce current best practice. In some areas, the recommendations may have small resource implications relating to the additional healthcare professional time needed to discuss healthy eating in pregnancy, particularly with young people and those from low income or disadvantaged backgrounds. Commissioners and service providers in some areas may need to improve training for healthcare professionals about healthy eating in pregnancy. Interventions to improve people's skills and confidence related to healthy eating, such as local cookery classes or groups, may not be available in all areas so establishing these may have resource implications but promoting healthy eating can, in turn, bring long-term benefits.

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Physical activity in pregnancy

[Recommendation 1.2.5](#)

Why the committee made the recommendation

Overall, evidence on physical activity-based interventions during pregnancy showed no impact on weight change during pregnancy, but showed some benefit in terms of other outcomes such as reducing the rate of gestational diabetes and babies being large for

gestational age. The committee agreed that starting or maintaining moderate physical activity during pregnancy is important for both the pregnant person and their unborn baby. They recommended that discussion around physical activity is individualised and based on a discussion about the person's usual habits and preferences, because this will help encourage physical activity during pregnancy.

How the recommendation might affect practice

The recommendation reinforces current best practice. In some areas, the recommendation may have small resource implications relating to the additional healthcare professional time needed to discuss physical activity in pregnancy.

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Weight management in pregnancy

[Recommendations 1.2.6 to 1.2.15](#)

Why the committee made the recommendations

The committee were aware that discussions around weight are often perceived as judgemental and insensitive. This can prevent people from engaging, and creates distrust and negative feelings towards healthcare professionals.

BMI is currently calculated at the antenatal booking appointment, in line with current practice and [NICE's guideline on antenatal care](#). This enables risk assessment and determines the need for further tests or referral. The committee agreed that a referral to a specialist obesity service or a specialist practitioner should be discussed with people with a pre-pregnancy BMI of 40 kg/m² or over because of the higher risk of complications and other considerations during the pregnancy.

Evidence from randomised controlled trials was not able to show that dietary and physical activity interventions are particularly helpful in managing weight in pregnancy; however, they did show some other benefits, for example, on gestational hypertension and pre-eclampsia.

The committee agreed that the evidence does not support weighing everyone throughout

pregnancy and this should only be offered when there is a clinical need. They also acknowledged that some people may want to monitor their weight themselves throughout pregnancy. Quantitative evidence was unable to determine the optimal weight change during pregnancy; however, there are estimates of healthy total weight change in a singleton pregnancy according to the pre-pregnancy BMI that healthcare professionals can refer to, although these estimates do not account for trimester-specific healthy weight change (note that separate estimates exist for twin pregnancies).

There was evidence that both low weight gain and excessive weight gain during pregnancy lead to an increased chance of some adverse outcomes. Excess weight gain, in particular, is associated with adverse outcomes such as gestational hypertension, gestational diabetes and the baby being large for gestational age. Those with a pre-pregnancy BMI in the overweight and obesity weight categories are most affected, although an impact was also seen in those with a pre-pregnancy BMI in the healthy weight category.

How the recommendations might affect practice

The recommendations reinforce current best practice. In some areas, the recommendations may have some resource implications relating to the additional healthcare professional time needed to discuss weight in pregnancy.

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Low weight gain in pregnancy

[Recommendation 1.2.16](#)

Why the committee made the recommendation

There was evidence that low weight gain during pregnancy is associated with the baby being small for gestational age across all pre-pregnancy weight categories. The committee agreed that there may be various reasons for low weight gain during pregnancy, for example, nausea and vomiting in pregnancy, mental health issues, or clinical interventions that have been recommended for the person, for example, after a diagnosis of gestational diabetes.

How the recommendation might affect practice

The recommendation reinforces current best practice. In some areas, the recommendation may have some resource implications relating to the additional healthcare professional time needed to discuss weight in pregnancy.

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Excessive weight gain in pregnancy

[Recommendation 1.2.17](#)

Why the committee made the recommendation

There was evidence that excessive weight gain during pregnancy is associated with gestational diabetes in people with a pre-pregnancy BMI in the healthy, overweight and obesity weight categories. Excessive weight gain is also associated with the baby being large for gestational age. The committee agreed that there may be various underlying reasons for excessive weight gain during pregnancy, and a holistic exploration of the person's wellbeing is important.

How the recommendation might affect practice

More people may be considered for gestational diabetes testing, but resource implications are not expected to be significant, and any potential additional cost is likely to be offset by the benefits of early identification of gestational diabetes. It is current practice to offer people with a pre-pregnancy BMI in the obesity weight category testing for gestational diabetes. In some areas, the recommendation may have some resource implications relating to the additional healthcare professional time needed to discuss weight in pregnancy.

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Gestational diabetes

[Recommendations 1.2.18 and 1.2.19](#)

Why the committee made the recommendations

Dietary change is the first-line intervention for gestational diabetes. However, the evidence did not show any particular diet to be better than another for outcomes such as weight change during pregnancy, gestational hypertension, mode of birth, baby being born large for gestational age and the need for pharmacological interventions. The committee agreed that a healthy diet that is appropriate and preferable for the individual should be discussed. They also made a [recommendation for research to determine what type of diet is most beneficial for those with gestational diabetes](#).

How the recommendations might affect practice

The recommendations reflect current best practice.

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Discussing babies' feeding and supporting continued breastfeeding

[Recommendations 1.3.1 to 1.3.10](#)

Why the committee made the recommendations

The UK Scientific Advisory Committee on Nutrition (SACN), UNICEF and the World Health Organization recommend 6 months of exclusive breastfeeding, and continuing breastfeeding to their second year and beyond. The committee agreed that appropriate support before birth and during the first weeks after birth will enable continued breastfeeding for longer. The committee acknowledged the importance of discussing babies' feeding at every healthcare contact to support continued breastfeeding, or safe and appropriate formula feeding, support informed decision making and to address any problems or concerns with feeding. There are various reasons why people may consider stopping breastfeeding or starting supplementing with formula, and the committee agreed that every face-to-face health contact is an opportunity to support continued breastfeeding (whether exclusive or not). The committee emphasised the importance of these discussions being sensitive and non-judgemental. The committee agreed to list different discussion points that can help with this, based on qualitative evidence and their knowledge and experience.

Qualitative evidence showed that in order to maintain breastfeeding, it is important to build the confidence and motivation to breastfeed. The evidence also highlighted the important impact that partners, family members and friends have in either discouraging or supporting breastfeeding. The positive impact that peers can have was also evident. The evidence also highlighted that breastfeeding is sometimes experienced as embarrassing or not socially acceptable. Evidence showed that receiving inconsistent or conflicting information about breastfeeding, often in a rushed encounter with a healthcare professional, contributes to the challenges in continuing breastfeeding. Sometimes people felt that discussions on breastfeeding were judgemental or intrusive, rather than supportive.

From their knowledge and experience, the committee agreed about the importance of maintaining a healthy and balanced diet for anyone who is breastfeeding but agreed that it is not necessary to follow a special diet to meet the nutritional requirements of the baby.

Breastfeeding rates are known to be lower among people in lower socioeconomic groups, so in line with [NICE's guideline on postnatal care](#), the committee acknowledged that more support to continue breastfeeding may be needed for parents from low income or disadvantaged backgrounds.

Using medicines can sometimes be, or may be perceived to be, a contraindication for breastfeeding, so the committee included a recommendation about clinicians using appropriate sources for safe medicine use and prescribing during breastfeeding so that breastfeeding can continue despite the need to take medicines. The committee were aware that the Breastfeeding Network's Drugs in Breastmilk Service is often used in practice for advice on safe use of medicines during breastfeeding.

The committee agreed that face-to-face contacts with a healthcare professional after the baby is 8 weeks old are usually infrequent, so opportunities to provide support and advice are considered beneficial.

There was evidence from an analysis of randomised controlled trials that group interventions aimed at promoting breastfeeding are effective in increasing breastfeeding rates. Economic analysis showed that group interventions delivered by a mixture of healthcare professionals and peer supporters in addition to standard care provides additional benefits and reduced costs compared with standard care alone, making additional group interventions highly cost effective.

How the recommendations might affect practice

Support for breastfeeding exists but is not consistently available in primary care and community services. There may be some costs associated with improving breastfeeding support services through enhancing face-to-face discussions, virtual or remote contacts, and drop-in group sessions. However, improving breastfeeding rates could bring cost savings to the healthcare system as a whole because breastfeeding is associated with the prevention of breast and ovarian cancer, diabetes and obesity in breastfeeding people, as well as prevention of infections and obesity in babies.

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Supporting continued breastfeeding after returning to work or study

[Recommendations 1.3.11 to 1.3.14](#)

Why the committee made the recommendations

The recommendations are based on qualitative evidence and the committee's expertise. The committee agreed that healthcare professionals and breastfeeding peer supporters can play an important role in supporting people to continue breastfeeding after returning to work or study. They can discuss the different topics that the person may need to think about, and encourage them to talk to their employer or education provider before their return. The committee also agreed that employers and education providers can facilitate continuation of breastfeeding by exploring how their setting, policies and arrangements can better support those returning to work after having a baby.

The evidence identified various barriers to continue breastfeeding. It showed that people worry that breastfeeding at work is perceived as unprofessional and feel embarrassed, isolated or judged when trying to maintain breastfeeding while working or studying. Many reported that they did not know about a policy on breastfeeding in their workplace or university, or what facilities were available for them to use. Even if a breastfeeding policy was in place, implementation tended to vary from office to office and in practice, often depending on supervisors' and colleagues' attitudes towards breastfeeding. The evidence also reported that some women experience difficulties accessing breastfeeding spaces, even if they were available. Sometimes the breastfeeding spaces were considered to be

unclean and unsuitable, lacking privacy or lacking important features such as power plugs, a sink or fridge to store breast milk safely.

The evidence also highlighted issues that could encourage the person to continue with breastfeeding after they return to work or study. The evidence emphasised the value of raising awareness of breastfeeding in workplaces or universities, having clear policies, and the need to assess each person's needs individually. The evidence showed that people value proactive and supportive communication and conversations that began before their return to work or study. The evidence also reported on the benefits of peer support. Having childcare near the workplace or campus area is a key factor in maintaining breastfeeding according to the evidence. The evidence described how workplaces that show flexibility through, for example, flexible hours, flexible breaks, part-time work or working from home arrangements can help ease the struggle of maintaining breastfeeding while working.

How the recommendations might affect practice

Healthcare professionals and peer supporters may need to spend more time discussing how to enable people to continue breastfeeding after returning to work or study.

There is great variation in how workplaces and education settings support breastfeeding, so the recommendations may lead to improved support and greater consistency.

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Supporting safe and appropriate formula feeding

[Recommendations 1.3.15 to 1.3.18](#)

Why the committee made the recommendations

The recommendations are based on qualitative evidence and the committee's expertise. The evidence showed that support and advice on safe and appropriate formula feeding from healthcare professionals is often felt to be limited, inconsistent and confusing, so people seek information from various other sources that are often inconsistent or unreliable. There was evidence that people perceive healthcare professionals to be reluctant to discuss formula feeding and people reported feeling judged.

There was also evidence about the power that the marketing of infant formula brands can have on people's choices. The committee discussed that people feel confused about the information in formula brand labels and the differences between different brands, and can perceive the most expensive brands to be the best quality while being hesitant to buy cheaper options. At the same time, the cost of infant formula as a barrier for safe formula feeding was reflected in the qualitative evidence. This was confirmed by the committee's experience that because of cost, people regularly have to dilute infant formula, give less infant formula than recommended, or substitute infant formula with other drinks that are not suitable for babies. These practices can lead to adverse outcomes for the babies. To better understand parents' experiences related to formula feeding within the context of poverty and food insecurity, the committee made a [recommendation for research on the facilitators and barriers for safe and appropriate formula feeding](#).

The committee discussed the importance of healthcare professionals providing independent, non-commercial, evidence-based and consistent advice and additional resources as well as providing information about the Healthy Start scheme and other initiatives that give advice and financial support to access infant formula. In addition to the resources listed in the recommendation, the committee were also aware that the [First Steps Nutrition Trust](#) provides useful, evidence-based and non-commercial advice on formula feeding.

How the recommendations might affect practice

The recommendations should improve support for safe formula feeding and reinforce current best practice. Commissioners and service providers in some areas may need to improve training for healthcare professionals about advice on safe and appropriate formula feeding.

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Introducing solid foods (complementary feeding) for babies between 6 months and 1 year

[Recommendations 1.5.1 to 1.5.7](#)

Why the committee made the recommendations

Evidence from randomised controlled trials about which interventions improve appropriate and timely introduction to solid foods for babies was inconclusive. However, providing information to parents (either face-to-face or in a telephone call), in addition to leaflets, was shown to have some benefit on the appropriate timing of introducing solid foods (at around 6 months).

The committee agreed that advice about introducing solid foods should start in late pregnancy and continue in the first months after the birth. An appointment to discuss this in more detail before the baby is 6 months old will allow practical advice and support to be given. The committee agreed that the best timing for this would be when the baby is around 4 to 5 months. Qualitative evidence showed that group sessions help parents understand how to provide variable and nutritional food for the baby, how to adapt family meals to be appropriate for the baby, and the differences between commercial and homemade foods. Qualitative evidence suggested that parents are confused about marketing information in commercial baby foods that conflict with feeding guidelines, such as introducing solids before 6 months of age. Parents also expressed worry and concern over their baby's feeding. Overall, parents found information, even from healthcare professionals, to sometimes be confusing or inconsistent, emphasising the importance of healthcare professionals being appropriately trained and knowledgeable about evidence-based best practice, which can then be shared with parents.

The committee agreed, based on their experience, that knowledge and expertise around the introduction of solids varies between healthcare professionals. They discussed how those with expertise could act as 'champions' to promote and share knowledge among other staff about the safe and appropriate introduction of solids, which can then be shared with parents.

Qualitative evidence showed that affordability of healthy foods can be a barrier. The committee agreed that healthcare professionals should discuss sources of support to access healthy foods.

The committee agreed that healthcare professionals should continue to check on the baby's feeding when there is an opportunity to do so, and that they should reinforce and remind parents about the advice given so that appropriate and safe feeding practices are followed.

How the recommendations might affect practice

The recommendations will largely reinforce current best practice. However, not all areas offer a session to discuss introduction of solids at 4 to 5 months, so there may be some resource implications in these areas. Commissioners and service providers in some areas may need to improve training for healthcare professionals about introducing solid foods to babies, in line with the recommendations and government advice.

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Healthy eating and drinking for children from 1 to 5 years

[Recommendations 1.5.8 to 1.5.12](#)

Why the committee made the recommendations

Qualitative evidence among parents of young children highlighted the importance of sensitively considering the family's individual circumstances and needs when discussing healthy eating. The evidence highlighted the barriers that people face in providing their children with healthy foods. People from low income or disadvantaged backgrounds face particular barriers if they cannot afford food or have living conditions that prevent them from preparing healthy meals.

Evidence from randomised controlled trials on what type of interventions might improve healthy eating in children was inconclusive. There was some evidence that providing information about children's healthy eating for parents from low income or disadvantaged backgrounds had some beneficial impact on healthy eating behaviours and parents' confidence. There was also some evidence that providing information about healthy eating combined with offering children healthy foods improved their vegetable and fruit intake. This was supported by qualitative evidence on parents' views and experiences. Qualitative evidence also showed that parents' lack of skills or confidence in preparing healthy meals prevents them from offering such foods to their children.

The committee agreed that healthy eating in children can be improved in various ways, including providing information through individualised discussions with families supplemented by printed or online resources, improving access to healthy food through,

for example, welfare schemes, and building parents' skills and confidence through, for example, group cooking sessions.

The committees discussed the topics to discuss with families in line with government guidance, including providing information about financial or practical support in accessing healthy foods.

Quantitative and qualitative evidence also touched on the role of early years settings. Based on the evidence and their expertise, committee recommended ways in which these settings can promote healthy eating and drinking in children.

How the recommendations might affect practice

The recommendations reinforce current best practice. In some areas, the recommendations may have small resource implications relating to the additional healthcare professional time needed to discuss healthy eating and drinking for children, particularly with families from low income or disadvantaged backgrounds. Interventions to improve people's skills and confidence related to healthy eating, such as local cookery classes or groups, may not be available in all areas so establishing these may have resource implications but promoting healthy eating can, in turn, bring long-term benefits.

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Context

The aim of this guideline is to improve nutrition during pregnancy and in babies and children under 5. The recommendations focus on supporting best practice on how to improve uptake of existing advice on nutrition in pregnancy and in early childhood.

Nutritional status, weight and health behaviours during pregnancy can have a significant impact on the short- and long-term health of the pregnant person and the growth and development of the baby, which in turn can have effects on the long-term health of the child. Among other things, social determinants of health, including poverty and food insecurity play a role in this. According to the [National Maternal and Perinatal Audit \(NMPA\)](#), more than half (54%) of pregnant people in England in 2018 to 2019 had a body mass index (BMI) outside the healthy weight category (18.5 to 24.9 kg/m²) at the booking appointment. The data shows that those living in the most deprived areas are more likely to have a BMI that is within the underweight or obesity weight categories.

It is estimated that up to 45% of pregnancies in the UK are unplanned or associated with feelings of ambivalence, which can have an impact on poor preconception health, including low uptake of preconception folic acid supplements. According to an [analysis of national maternity services data from 2018 to 2019](#), just over a quarter of people take folic acid before pregnancy, with the lowest uptake observed among people living in the most deprived areas and those of minority ethnic background. This guideline includes recommendations on improving uptake of folic acid and other vitamin supplementation around pregnancy as well as guidance around healthy eating, physical activity and weight management during pregnancy.

The [reports by the Scientific Advisory Committee on Nutrition \(SACN\)](#) on feeding in the first year of life and feeding young children aged 1 to 5 years make recommendations on many areas of public health nutrition for children, but there are still areas of variation regarding implementation and uptake of advice. For example, exclusive breastfeeding is recommended for the first 6 months of age, with continued breastfeeding alongside solid foods for the first 1 to 2 years of life. However, according to the [Office for Health Improvement and Disparities' report on breastfeeding at 6 to 8 weeks](#), in 2020 to 2021 in England, the rate of exclusive breastfeeding at 6 to 8 weeks was only 36.5%, and the rate of partial breastfeeding was 17.7%. Over time, breastfeeding rates drop even more. Again, there is a social gradient, with the lowest breastfeeding rates found among those living in the most deprived areas. There are also differences in breastfeeding rates according to

ethnicity and age, with white or young mothers or parents having the lowest, and black or older mothers or parents having the highest breastfeeding rates. [NICE's guideline on postnatal care](#) includes recommendations on baby feeding that cover the antenatal period as well as the first 8 weeks after the birth. This guideline follows on by providing guidance on support for babies' feeding beyond the first 8 weeks after birth. This guideline also covers recommendations on vitamin supplements for children, introducing solid foods, and healthy eating in children up to 5 years.

Finding more information and committee details

To find NICE guidance on related topics, including guidance in development, see the [NICE topic pages on fertility, pregnancy and childbirth](#) and [diet, nutrition and obesity](#).

For full details of the evidence and the guideline committee's discussions, see the [evidence reviews](#). You can also find information about [how the guideline was developed](#), including [details of the committee](#).

NICE has produced [tools and resources](#) to help you put this guideline into practice. For general help and advice on putting our guidelines into practice, see [resources to help you put NICE guidance into practice](#).

Update information

January 2025: We have updated the NICE guideline on maternal and child nutrition (PH11, published March 2008 and updated in 2011). We have reviewed the evidence, and new recommendations are marked **[2025]**.

We have retained recommendation 17 on weighing babies and young children from PH11. We have not reviewed the evidence or updated the wording apart from minor editorial and formatting changes for clarification. The wording from recommendation 17 appears in this update in the [section on weighing babies and young children](#), and the recommendations are marked **[2008]** or **[2011]**.

We have also updated the recommendations on weight management during pregnancy from the NICE guideline on weight management before, during and after pregnancy (PH27, published July 2010). We have reviewed the evidence, and new recommendations are marked **[2025]**.

Please note that recommendations on weight management before and after pregnancy from NICE's guideline on weight management before, during and after pregnancy (PH27, published July 2010) have been updated in [NICE's guideline on overweight and obesity management](#) (NG246, published January 2025).

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