SIGN 172: Prevention and remission of type 2 diabetes

Summary of adaptations

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
Risk assessment (KQs 1 & 2)				
KQ1 R1	GPs and other health professionals and community practitioners in health and community venues should implement a two-stage strategy to identify people at high risk of type 2 diabetes (and those with undiagnosed type 2 diabetes). First, a risk assessment should be offered (see recommendation 1.1.3). Second, where necessary, a blood test should be offered to confirm whether people have type 2 diabetes or are at high risk (see recommendation 1.1.4).	NICE PH38, 1.1.1	Primary care healthcare professionals should implement a two-stage strategy to identify people at high risk of type 2 diabetes (and those with undiagnosed type 2 diabetes). Firstly, a risk assessment should be offered. Secondly, for those with high risk scores, a blood test should be offered to confirm whether people have type 2 diabetes or prediabetes.	'Primary care' is a more appropriate catch-all term for Scotland.

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KQ1 R2	Service providers including pharmacists, managers of local health and community services and voluntary organisations, employers and leaders of faith groups should offer validated self-assessment questionnaires or validated web-based tools (for examples, see the Diabetes UK website). They should also provide the information needed to complete and interpret them. The tools should be available in local health, community and social care venues. Examples of possible health venues include: community pharmacies, dental surgeries, NHS walk-in centres and opticians. Examples of community and social care venues include: workplaces, job centres, local authority leisure services, shops, libraries, faith centres, residential and respite care homes and day centres (for older adults and for adults with learning disabilities).	NICE PH38, 1.1.2	–	Incorporated into KQ1 R1.
KQ1 R3	Public health, primary care and community services should publicise local opportunities for risk assessment and the benefits of preventing (or delaying the onset of) type 2 diabetes. The information should be up-to-date and provided in a variety of formats. It should also be tailored for different groups and communities. For	NICE PH38, 1.1.3	–	Removed. This principle is captured within the section on provision of information. .

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	example, by offering translation services and information in languages used locally.			
KQ1 R4	Where risk assessment is conducted by health professionals in NHS venues outside general practice (for example, in community pharmacies) the professionals involved should ensure the results are passed on to the person's GP.	NICE PH38, 1.1.4	Where risk assessment is conducted by health professionals in NHS settings outside general practice (for example, in community pharmacies) and the individual is scored as high risk, the professionals involved should work to ensure the results are shared with the person and their GP practice (with permission).	Limited to those with high risk scores. The system in Scotland would not be able to support reporting of every individual's risk score. Permission to share the information is required from the individual before proceeding.
KQ1 R5	GPs should keep records of all risk assessment results to ensure appropriate follow-up and continuity of care.	NICE PH38, 1.1.5	Primary care providers should record risk assessments that score as high risk to ensure appropriate follow up and continuity of care, with consent from the individual.	Limited to those with high risk scores. The system in Scotland would not be able to support reporting of every individual's risk score.
KQ1 R6	Where self-assessment is offered in community venues, health professionals and community practitioners in those venues should encourage people with an intermediate or high risk score to visit their GP to discuss how to manage their risk. Those at high risk should be offered a blood test by their GP.	NICE PH38, 1.1.6	Where self-assessment is offered in community venues, health professionals and community practitioners in those venues should ensure people with a high risk score can have a confirmatory blood test and an informed discussion on how to manage their risk. Those at high	Limited to those with high risk scores and emphasising the next step of care as a blood test with more specific detail on how this can be arranged.

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			risk should have blood test arranged at their GP practice or appropriate primary care provider.	
KQ1 R7	Managers in primary and secondary healthcare should ensure staff actively seek out and offer risk assessments to people who might not realise they could be at high risk. This includes people with particular conditions that can increase the risk such as: cardiovascular disease, hypertension, obesity, stroke, polycystic ovary syndrome, a history of gestational diabetes and mental health problems. In addition, people with learning disabilities and those attending accident and emergency, emergency medical admissions units, vascular and renal surgery units and ophthalmology departments may be at high risk.	NICE PH38, 1.1.8	–	Excluded by subgroup as already part of clinical practice.
KQ1 R8	Encourage the following to have a risk assessment: • all eligible adults aged 40 and above, except pregnant women • people aged 25 to 39 of South Asian, Chinese, African-Caribbean, black African and other high-risk black and minority ethnic groups, except pregnant women • adults with conditions that increase the risk of type 2 diabetes.	NICE PH38, 1.2.1	Encourage the following to have a risk assessment: • all eligible adults aged 40 and above • people aged 25 and above of South Asian, Chinese, African-Caribbean, black African and other high-risk black and minority ethnic groups,	The second part of the recommendation that lists the conditions has been removed and built into the introductory narrative.

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	Particular conditions can increase the risk of type 2 diabetes. These include: cardiovascular disease, hypertension, obesity, stroke, polycystic ovary syndrome, a history of gestational diabetes and mental health problems. People with learning disabilities and those attending accident and emergency, emergency medical admissions units, vascular and renal surgery units and ophthalmology departments may also be at high risk. NICE's guideline on nonalcoholic fatty liver disease notes that it increases the risk of type 2 diabetes.		• adults with conditions that increase the risk of type 2 diabetes.	
KQ1 R9	Explain to people why, even though they feel healthy, they can still be at risk of developing type 2 diabetes. Explain the implications of being at risk and that this can be reduced by making lifestyle changes.	NICE PH38, 1.2.2	–	Included as part of general narrative in the introduction, rather than as a recommendation.
KQ1 R10	Tell people how and where they can be assessed, including at their GP surgery or community pharmacy. Make people aware that they can use a validated self-assessment questionnaire or validated web-based tools (for examples, see the Diabetes UK website). Explain that those who are eligible can be assessed by the NHS Health Check programme. (This programme is for people aged 40 to 74	NICE PH38, 1.2.3	–	Removed to avoid repetition.

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	who are not on a disease register and have not been diagnosed with coronary heart disease, hypertension, atrial fibrillation, stroke, transient ischaemic attack, type 2 diabetes or kidney disease. They will be treated and managed using established healthcare pathways.)			
KQ1 R11	Encourage people who are less likely to attend a GP surgery to go elsewhere for a risk assessment. Possibilities include community pharmacies, dental surgeries, NHS walk-in centres and opticians. Assessments may also be offered in community venues. Examples include: workplaces, job centres, local authority leisure facilities, shops, libraries, faith centres, residential and respite care homes and day centres (for older adults and for adults with learning disabilities).	NICE PH38, 1.2.4	–	Incorporated into KQ1 R1.
KQ1 R12	Advise people with type 2 diabetes to encourage family members to have their risk assessed.	NICE PH38, 1.2.5	–	Removed as not within the scope of a SIGN recommendation.
KQ1 R13	GPs and other primary healthcare professionals should use a validated computer-based risk-assessment tool to identify people on their practice register who may be at high risk of type 2 diabetes. The tool should use routinely available data from patients' electronic health records. If a computer-based risk-assessment tool is	NICE PH38, 1.3.1	–	Removed by subgroup as this is not implementable in Scotland.

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	not available, they should provide a validated self-assessment questionnaire, for example, the Diabetes Risk Score assessment tool. This is available to health professionals on request from Diabetes UK.			
KQ1 R14	GPs and other primary healthcare professionals should not exclude people from assessment, investigation or intervention on the basis of age, as everyone can reduce their risk, including people aged 75 years and over.	NICE PH38, 1.3.2	–	Removed by subgroup as this is not implementable in Scotland.
KQ1 R15	Pharmacists, opticians, occupational health nurses and community leaders should offer a validated self-assessment questionnaire to adults aged 40 and over, people of South Asian and Chinese descent aged 25 to 39, and adults with conditions that increase the risk of type 2 diabetes, other than pregnant women. Or they should tell people how to access specific, validated online self-assessment tools, such as the Diabetes Risk Score featured on the Diabetes UK website. Particular conditions can increase the risk of type 2 diabetes. These include: cardiovascular disease, hypertension, obesity, stroke, polycystic ovary syndrome, a history of gestational diabetes and mental health problems. People with learning disabilities and those	NICE PH38, 1.3.3	–	Incorporated in the other recommendations on risk assessment.

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	attending accident and emergency, emergency medical admissions units, vascular and renal surgery units and ophthalmology departments may also be at high risk. NICE's guideline on non-alcoholic fatty liver disease notes that it increases the risk of type 2 diabetes.			
KQ1 R16	Pharmacists, opticians, occupational health nurses and community leaders involved in risk assessments should advise people with a high risk score to contact their GP or practice nurse for a blood test. The aim is to check if they have type 2 diabetes or to confirm their level of risk and discuss how to reduce it.	NICE PH38, 1.3.4	–	Advise is captured in the other recommendations.
KQ1 R17	All providers of risk assessments should explain to those attending for a type 2 diabetes risk assessment the implications of being at high risk and the consequences of developing the condition.	NICE PH38, 1.3.5	–	Incorporated within KQ1 R6 and captured within the section on information provision.
KQ1 R18	Keep an up-to-date register of people's level of risk. Introduce a recall system to contact and invite people for regular review, using the two stage strategy (see recommendations 1.1.3 and 1.1.4).	NICE PH38, 1.6.1		Removed and replaced with good practice points specific to coding in Scotland.
KQ1 R19	Offer a reassessment based on the level of risk. Use clinical judgement to determine when someone might need to be reassessed more frequently, based on their combination of risk factors (such as their	NICE PH38, 1.6.2	Offer a reassessment based on the level of risk. Use clinical judgement to determine when someone might need to be reassessed more frequently,	List of suggested risk factors removed – further details of risk factors are included in

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	body mass index [BMI], relevant illnesses or conditions, ethnicity and age).		based on their combination of risk factors.	the introduction to the section.
KQ1 R20	For people at low risk (with a low or intermediate risk score) offer to reassess them at least every 5 years to match the timescales used by the NHS Health Check programme. Use a validated risk-assessment tool.	NICE PH38, 1.6.3	Offer to reassess people with a low or intermediate risk score every 5 years using a validated risk-assessment tool.	Minor edits to wording for clarity.
KQ1 R21	For people at moderate risk (a high risk score, but with a fasting plasma glucose less than 5.5 mmol/l, or HbA1c less than 42 mmol/mol [6.0%]), offer to reassess them at least every 3 years.	NICE PH38, 1.6.4	Offer to reassess people with a high-risk score, but with an HbA1c less than 42 mmol/mol (6.0%) or a fasting plasma glucose less than 6.1 mmol/L or, every 3 years.	Edits to wording to keep terminology on 'high risk' clear and consistent throughout the guideline. Thresholds amended to align with other evidence and Scottish guidance.
KQ1 R22	For people at high risk (a high risk score and fasting plasma glucose of 5.5 to 6.9 mmol/l, or HbA1c of 42 to 47 mmol/mol [6.0 to 6.4%]), offer a blood test at least once a year (preferably using the same type of test). Also offer to assess their weight or BMI. This includes people without symptoms of type 2 diabetes whose: • first blood test measured fasting plasma glucose at 7.0 mmol/l or above, or an HbA1c of 48 mmol/mol (6.5%) or greater, but	NICE PH38, 1.6.5	Offer people with a high-risk score and HbA1c of 42 to 47 mmol/mol (6.0 to 6.4%) or fasting plasma glucose of 6.1 to 6.9 mmol/L a blood test at least once a year (preferably using the same type of test). This includes people without symptoms of type 2 diabetes whose: • first blood test measured an HbA1c of 48	Edits to wording to keep terminology on 'high risk' clear and consistent throughout the guideline. The threshold has been changed for consistency with other evidence and Scottish guidance.

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	• whose second blood test did not confirm a diagnosis of type 2 diabetes.		mmol/mol (6.5%) or greater, or fasting plasma glucose at 7.0 mmol/L or above, but whose second blood test did not confirm a diagnosis of type 2 diabetes.	
KQ1 R23	Provide up-to-date information in a variety of formats about local opportunities for risk assessment and the benefits of preventing (or delaying the onset of) type 2 diabetes. This should be tailored for different groups and communities. For example, messages could be provided in a visual, Braille or audio format.	NICE PH38, 1.15.1	–	Principle is captured in the section on information provision.
KQ1 R24	Provide integrated risk-assessment services and intensive lifestyle change programmes for prisons and residential homes, as appropriate.	NICE PH38, 1.15.2	–	Removed as out of scope.
KQ1 R25	Ensure all staff involved in the care of vulnerable groups understand the risk factors for type 2 diabetes and how they can help people reduce their risk. Staff should also be able to recognise and address (where possible) issues which mean someone gives their health a low priority.	NICE PH38, 1.16.1	–	Principle is captured in the section on implementation.

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KQ1 R26	In adults with BMI below 35 kg/m^2 , measure and use their waist-to-height ratio, as well as their BMI, as a practical estimate of central adiposity and use these measurements to help to assess and predict health risks (for example, type 2 diabetes, hypertension or cardiovascular disease).	NICE CG189, 1.2.5	–	Removed by subgroup. Narrative in the introduction reflects that wider risk factors should be considered beyond BMI.
KQ1 R27	Define the degree of central adiposity based on waist-to-height ratio as follows: • healthy central adiposity: waist-to-height ratio 0.4 to 0.49, indicating no increased health risks • increased central adiposity: waist-to-height ratio 0.5 to 0.59, indicating increased health risks • high central adiposity: waist-to-height ratio 0.6 or more, indicating further increased health risks. These classifications can be used for people with a BMI under 35 kg/m^2 of both sexes and all ethnicities, including adults with high muscle mass. The health risks associated with higher levels of central adiposity include type 2 diabetes, hypertension and cardiovascular disease.	NICE CG189, 1.2.11	–	Removed by subgroup. Does not reflect current practice.
KQ1 R28	For all people, screening should begin at age 35 years.	ElSayed et al. (2023), rec. 2.9	–	Excluded at consensus as not feasible.

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KQ2 R1	Trained healthcare professionals should offer venous blood tests (fasting plasma glucose [FPG] or HbA1c) to adults with high risk scores (stage 2 of the identification process). They should also consider a blood test for those aged 25 and over of South Asian or Chinese descent whose body mass index (BMI) is greater than 23 kg/m^2. The aim is to: • determine the risk of progression to type 2 diabetes (a fasting plasma glucose of 5.5 to 6.9 mmol/l or an HbA1c level of 42 to 47 mmol/mol [6.0 to 6.4%] indicates high risk) or • identify possible type 2 diabetes by using fasting plasma glucose, HbA1c or an oral glucose tolerance test (OGTT), according to World Health Organization (WHO) HbA1c criteria.	NICE PH38, 1.4.1	Trained healthcare professionals should offer and follow up with venous blood tests (fasting plasma glucose or HbA1c) to adults with high risk scores.	Included 'and follow up' to incorporate this important stage of care. The remaining parts of the recommendation have been edited into good practice points or built into the narrative.
KQ2 R2	For people with possible type 2 diabetes (fasting plasma glucose of, 7.0 mmol/l or above, or HbA1c of 48 mmol/mol [6.5%] or above, but no symptoms of type 2 diabetes): • Carry out a second blood test. If type 2 diabetes is confirmed, treat this in accordance with NICE's guideline on managing type 2 diabetes. Ensure blood	NICE PH38, 1.5.7	For people with possible type 2 diabetes (fasting plasma glucose of 7.0 mmol/l or above, or HbA1c of 48 mmol/mol [6.5%] or above, but no symptoms of type 2 diabetes): • Carry out a second blood test 3 to 6 months of the original test. If type 2 diabetes is not confirmed, offer them a referral to a local,	Edited to keep more in the scope of this guideline and included use of the term 'prediabetes'. A timescale for carrying out the test added, in line with the NICE guideline on

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	testing conforms to national quality specifications. • If type 2 diabetes is not confirmed, offer them a referral to a local, qualityassured, intensive lifestyle-change programme (see recommendations 1.8.1 to 1.10.2).		quality assured, intensive treatment programme for prediabetes.	management of Type 2 diabetes.
KQ2 R3	In conditions associated with an altered relationship between A1C and glycemia, such as hemoglobinopathies including sickle cell disease, pregnancy (second and third trimesters and the postpartum period), glucose-6-phosphate dehydrogenase deficiency, HIV, hemodialysis, recent blood loss or transfusion, or erythropoietin therapy, only plasma blood glucose criteria should be used to diagnose diabetes.	ElSayed et al. (2023), 2.3	–	Recommendation too detailed and prescriptive. The principle of transient hyperglycaemia has been included within the narrative in the section on testing for prediabetes.
KQ2 R4	When using oral glucose tolerance testing as a screen for diabetes, adequate carbohydrate intake (at least 150 g/day) should be assured for 3 days prior to testing.	ElSayed et al. (2023), 2.12	–	Excluded at consensus as not acceptable.
KQ2 R5	People with HIV should be screened for diabetes and prediabetes with a fasting glucose test before starting antiretroviral therapy, at the time of switching antiretroviral therapy, and 3–6 months after starting or switching antiretroviral therapy. If initial screening results are normal, fasting glucose should be checked annually.	ElSayed et al. (2023), 2.15	–	Excluded by subgroup as this is beyond the scope of the guideline. The principle of transient hyperglycaemia has been included within the narrative in the

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				section on testing for prediabetes.
Preventing progression (KQ3)				
KQ3 R1	For people confirmed as being at high risk (a high risk score and fasting plasma glucose of 5.5–6.9 mmol/l or HbA1c of 42 to 47 mmol/mol [6.0 to 6.4%]): • Tell the person they are currently at high risk but that this does not necessarily mean they will progress to type 2 diabetes. Explain that the risk can be reduced. Briefly discuss their particular risk factors, identify which ones can be modified and discuss how they can achieve this by changing their lifestyle. • Offer them a referral to a local, evidence-based, quality-assured intensive lifestyle-change programme (see recommendations 1.8.1 to 1.10.2). In addition, give them details of where to obtain independent advice from health professionals.	NICE PH38, 1.5.4	For people with a diagnosis of prediabetes (a high risk score and fasting plasma glucose of 5.5–6.9 mmol/l or HbA1c of 42 to 47 mmol/mol [6.0 to 6.4%]): Tell the person they have prediabetes but that this does not necessarily mean they will progress to type 2 diabetes. Explain that the risk can be reduced. Briefly discuss their particular risk factors, identify which ones can be modified and discuss how they can achieve this. Offer them referral to evidence-based, quality-assured programmes which include behaviour change support on diet, physical activity and the wider social determinants of health. Signpost individuals to access additional information, support and services from reliable sources.	Edits to wording to keep terminology on 'high risk' and prediabetes clear and consistent throughout the guideline. Edits to terminology and description of programmes to which people are referred. Edit to emphasise signposting to trusted resources that are detailed in the section on information provision.

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KQ3 R2	When commissioning local or national services to deliver intensive lifestyle-change programmes (see recommendations 1.8.1 to 1.10.2) where the availability of places is limited, prioritise people with a fasting plasma glucose of 6.5 to 6.9 mmol/l or HbA1c of 44 to 47 mmol/mol [6.2 to 6.4%].	NICE PH38, 1.5.5	When planning local or national services to deliver evidence-based, quality-assured programmes where the availability of places is limited, prioritise people with an HbA1c of 44 to 47 mmol/mol (6.2 to 6.4%) or a fasting plasma glucose of 6.5 to 6.9 mmol/L..	Edits to terminology and description of programmes to which people are referred.
KQ3 R3	For people with a high risk score who prefer not to have a blood test, or who do not use primary healthcare services, discuss the importance of early diagnosis to help reduce the risk of long-term complications. Use clinical judgement, based on the person's risk score, to decide whether to offer them a brief intervention or a referral to an intensive lifestyle change programme (see recommendations 1.8.1 to 1.10.2).	NICE PH38, 1.5.8	–	Withdrawn as the group did not feel this added anything to standard good practice.
KQ3 R4	At least once a year, review the lifestyle changes people at high risk have made. Use the review to help reinforce their dietary and physical activity goals, as well as checking their risk factors. The review could also provide an opportunity to help people 'restart', if lifestyle changes have not been maintained.	NICE PH38, 1.6.6	In those with risk factors, reassess the individual's risk factors at least once a year, and review any changes in behaviour or social circumstances or any practical lifestyle changes people at high risk have made. Use the review to help reinforce engagement in reducing modifiable risk behaviours. The	Edited to reflect capacity in service and for sensitivity. Final sentence edited to be clearer, following comments from peer review.

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			review could also provide an opportunity to discuss any barriers and to help motivate people to restart any positive behaviours that may have lapsed.	
KQ3 R5	Offer follow-up sessions at regular intervals (for example, every 3 months) for at least 2 years following the initial intervention period. The aim is to reinforce the positive behaviour change and to provide support, in case of relapse. Larger group sizes may be feasible for these maintenance sessions.	NICE PH38, 1.8.11	–	Removed. Captured within the other recommendations on delivering an effective prevention programme.
KQ3 R6	Link the programmes with weight management and other prevention initiatives that help people to change their diet or become more physically active.	NICE PH38, 1.8.12	–	Removed as the principle is covered in recommendation KQ3 R1.
KQ3 R7	Intensive lifestyle-change programmes should offer ongoing tailored advice, support and encouragement to help people: • undertake at least a level of physical activity that is in line with government recommendations (see the UK Chief Medical Officers' physical activity guidelines for more information) • gradually lose weight to reach and maintain a BMI within the healthy range	NICE PH38, 1.9.1	Lifestyle behaviour-change programmes should offer ongoing tailored advice, support and encouragement to help people: • lose weight towards a healthier body weight • encourage regular eating, developing and maintaining healthy eating behaviours	Edited for conciseness and to move away from the terminology of 'healthy BMI'. 'healthy' changed to 'healthier' in response to peer review comments.

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	• increase their consumption of wholegrains, vegetables and other foods that are high in dietary fibre • reduce the total amount of fat in their diet • eat less saturated fat.		• undertake at least a level of physical activity that is in line with government recommendations.	Gradually removed, as it has no scientific definition.
KQ3 R8	Based on individual preference, certified technology- assisted diabetes prevention programs may be effective in preventing type 2 diabetes and should be considered.	ElSayed et al. (2023), 3.5	Accredited, certified technology-assisted type 2 diabetes prevention programmes should be considered as part of a standard menu of options for delivery.	Wording replaced for clarity.
KQ3 R9	Find out what people already know about the types and amounts of food and drink that can help reduce the risk of type 2 diabetes. Provide this information where necessary. Explain that increasing dietary fibre intake and reducing fat intake (particularly saturated fat) can help reduce the chances of developing type 2 diabetes.	NICE PH38, 1.14.1	–	Removed by subgroup as there is no concrete evidence to include this as a recommendation. Links have been added to the eatwell plate and advice from Diabetes UK.
KQ3 R10	Help people to assess their diet and identify where and how they could make it healthier, taking into account their individual needs, preferences and circumstances. (For example, take into account whether they need to lose weight or if they have a limited income.)	NICE PH38, 1.14.2	–	Removed as this is covered by rec. KQ3 R11.
KQ3 R11	Encourage people to: • Increase their consumption of foods that are high in fibre, such as wholegrain bread	NICE PH38, 1.14.3	Encourage people to: increase their consumption of wholegrains, vegetables and	Edited for conciseness and to remove prescriptive detail; some detail included as

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	and cereals, beans and lentils, vegetables and fruit. • Choose foods that are lower in fat and saturated fat, for example, by replacing products high in saturated fat (such as butter, ghee, some margarines or coconut oil) with versions made with vegetable oils that are high in unsaturated fat, or using low-fat spreads. • Choose skimmed or semi-skimmed milk and low-fat yoghurts, instead of cream and full-fat milk and dairy products. • Choose fish and lean meats instead of fatty meat and processed meat products (such as sausages and burgers). • Grill, bake, poach or steam food instead of frying or roasting (for example, choose a baked potato instead of chips). • Avoid food high in fat such as mayonnaise, chips, crisps, pastries, poppadums (papads) and samosas. • Choose fruit, unsalted nuts or low-fat yoghurt as snacks instead of cakes, biscuits, bombay mix or crisps.		other foods that are high in dietary fibre reduce the total amount of fat in their diet eat less saturated fat.	narrative and as a more general recommendation KQ3 R12.
KQ3 R12	Evaluate systemic, structural, and socioeconomic factors that may impact nutrition patterns and food choices, such as food insecurity and hunger, access to healthful food options, cultural	ElSayed et al. (2023), 8.10	Tailor consultation to consider systemic, structural and socioeconomic factors.	Change to wording for conciseness, clarity and consistency with the rest of the guideline.

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	circumstances, and social determinants of health.			
KQ3 R13	Short-term nutrition intervention using structured, very-low-calorie meals (800–1,000 kcal/day) may be prescribed for carefully selected individuals by trained practitioners in medical settings with close monitoring. Long-term, comprehensive weight maintenance strategies and counseling should be integrated to maintain weight loss.	ElSayed et al. (2023), 8.12		Removed by subgroup as considered too vague. The other recommendations in this section on diet are more helpful.
KQ3 R14	Find out what people already know about the benefits of physical activity and the problems associated with a sedentary lifestyle. Where necessary, provide this information. In addition, explain that being more physically active can help reduce their risk of type 2 diabetes, even when that is the only lifestyle change they make.	NICE PH38, 1.11.1	Routinely discuss the individual's level of physical activity. Where someone is not meeting the recommended minimum, explore the barriers to this. Explain that even small increases in physical activity, such as reducing sedentary behaviour, will be beneficial and can act as a basis for future improvements.	Edited for sensitivity.
KQ3 R15	Explain the government recommendations for weekly physical activity (see the UK Chief Medical Officers' physical activity guidelines for more information).	NICE PH38, 1.11.2	–	Implied within rec. KQ3 R14; cross-referenced to the guideline's narrative.
KQ3 R16	In cases where it is unrealistic to expect someone to meet the recommended minimum, explain that even small increases in physical activity will be	NICE PH38, 1.11.3	–	Incorporated in rec. KQ3 R14.

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	beneficial – and can act as a basis for future improvements.			
KQ3 R17	Explain that people should also reduce the amount of time they spend sitting at a computer or watching TV. Encourage them to be more active during work breaks, for example, by going for a walk at lunchtime.	NICE PH38, 1.11.4	–	The principle of reducing sedentary behaviour is incorporated in rec. KQ3 R14.
KQ3 R18	Explain that some people may need to be more physically active to help lose weight or maintain weight loss (see NICE's guideline on obesity).	NICE PH38, 1.11.5	–	Removed by subgroup because of risk of misinterpretation.
KQ3 R19	Help people to identify which of their activities involve 'moderate' or 'vigorous' physical activity and the extent to which they are meeting the national minimum recommendation on physical activity. Use a validated tool such as the Department of Health's general practitioner physical activity questionnaire or the international physical activity questionnaire (IPAQ).	NICE PH38, 1.12.1	–	This principle is incorporated in rec. KQ3 R14 and some narrative around this is included in the section on physical activity including a good practice point for a specific tool in the Scottish context.
KQ3 R20	Consider referring people who want structured or supervised exercise to an exercise referral scheme or supervised exercise sessions, as part of an intensive lifestyle-change programme.	NICE PH38, 1.12.4	Consider referring people who want structured or supervised exercise to an exercise referral scheme or supervised exercise sessions.	Removed ‘as part of an intensive lifestyle-change programme’ for conciseness as this is implied as part of this section in the guideline.
KQ3 R21	Lifestyle intervention should include aerobic and resistance physical activity in all persons with prediabetes and/or	Blonde et al. (2022), 11.4	–	Excluded at consensus as not acceptable.

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	metabolic syndrome. The initial aerobic prescription may require a progressive increase in the volume and intensity of exercise, and the ultimate goal should be ≥150 min/week of moderate exercise performed during 3 to 5 sessions per week (Grade A; BEL 1). Resistance exercise should consist of single-set exercises that use the major muscle groups 2 to 3 times per week (Grade A; BEL 1). An increase in nonexercise and active leisure activity should be encouraged to reduce sedentary behaviour [Grade B, BEL 2].			
KQ3 R22	Advise and encourage overweight and obese people to reduce their weight gradually by reducing their calorie intake. Explain that losing 5 to 10% of their weight in 1 year is a realistic initial target that would help reduce their risk of type 2 diabetes and also lead to other, significant health benefits.	NICE PH38, 1.13.1	Advise and encourage people living with overweight and obesity to reduce their weight by reducing their calorie intake. Explain that losing 5–10% of their weight is a realistic initial target that would help reduce their risk of type 2 diabetes and also lead to other significant health benefits.	Edited for sensitivity. 'Gradually' removed, as it has no scientific definition.
KQ3 R23	Motivate and support overweight and obese people to continue to lose weight until they have achieved – and can maintain – a BMI within the healthy range. (For the general population, the healthy range is between 18.5 and 24.9 kg/m2 . For people of South Asian or Chinese	NICE PH38, 1.13.3	–	Removed by subgroup as this would set unrealistic targets.

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	descent, the range is likely to be between 18.5 and 22.9 kg/m2 .)			
KQ3 R24	Encourage people to check their weight and waist measurement periodically. Provide brief advice about how to measure their waist correctly (for an example, visit the British Heart Foundation website).	NICE PH38, 1.13.4	–	Incorporated into the narrative on self-management.
KQ3 R25	Offer people with a BMI of 30 kg/m2 or more (27.5 kg/m2 or more if South Asian or Chinese) a structured weight-loss programme as part of, or to supplement, the intensive lifestyle-change programme. Or, if more appropriate, offer them a referral to a dietitian or another appropriately trained health professional. Ensure they are given a personal assessment and tailored advice about diet, physical activity and what techniques to use to help change their behaviour.	NICE PH38, 1.13.5	Recommendation replaced with advice to offer people with prediabetes or Type 2 diabetes a structured weight loss programme, in line with Public Health Scotland standards for weight management.	Aligns to existing Scottish advice.
KQ3 R26	GPs and other health professionals should continue to monitor, support and care for people with a BMI of 30 kg/m2 or more (27.5 kg/m2 or more if South Asian or Chinese) who join slimming clubs or other weight-loss programmes.	NICE PH38, 1.13.6	–	Removed. The principle of regular monitoring is captured within KQ3 R4.
KQ3 R27	If the weight management interventions in recommendations 1.13.1 to 1.13.7 have been unsuccessful, refer people to a specialist obesity management service (see NICE's guideline on obesity).	NICE PH38, 1.13.8	–	Removed. Cross-reference to PHS standards for referral criteria included in

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
				narrative of section 4.1.2.
KQ3 R28	An individual's preferences, motivation, and life circumstances should be considered, along with medical status, when weight loss interventions are recommended.	ElSayed et al. (2023), 8.8	–	Incorporated into the introductory narrative to section 4 and is captured within KQ3 R12.
KQ3 R29	Participants should be encouraged to use self-regulation techniques. This includes self-monitoring (for example, by weighing themselves, or measuring their waist circumference or both). They should also review their progress towards achieving their goals, identify and find ways to solve problems and then revise their goals and action plans, where necessary. The aim is to encourage them to learn from experience.	NICE PH38, 1.9.4	Individuals should be encouraged to use self-monitoring techniques. Discuss with and support them to review their progress towards achieving their goals, identify and find ways to solve problems and then revise their goals and action plans, where necessary. The aim is to encourage them to develop confidence in their own self-management skills.	Edited for sensitivity. Some detail removed and instead included in the preceding narrative.
KQ3 R30	Established behaviour-change techniques should be used (see NICE's guideline on behaviour change: general approaches), including at least all of the following: • Information provision: to raise awareness of the benefits of and types of lifestyle changes needed to achieve and maintain a healthy weight, building on what participants already know. • Exploration and reinforcement of participants' reasons for wanting to change	NICE PH38, 1.9.2	Use defined behaviour-change techniques, including: • Providing information: check and build on what individuals already know about healthy behaviours that help to achieve and maintain a healthy weight. • Exploring and enhancing individuals' motivation about behaviour change and their	Edited for conciseness. Following peer review comments, the point on action planning was revised to make it clearer that the focus should be on one activity:

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
	and their confidence about making changes. This may include using motivational interviewing or similar techniques suitably adapted for use in groups. • Goal setting: prompting participants to set achievable and personally relevant short- and long-term goals (for example, to lose 5–10% of their weight in 1 year is a realistic initial target, or to be more physically active). • Action planning: prompting participants to produce action plans detailing what specific physical activity or eating behaviour they intend to change – and when, where and how this will happen. They should start with achievable and sustainable short-term goals and set graded tasks (starting with an easy task and gradually increasing the difficulty as they progress towards their goal). The aim is to move over time towards long-term, lifestyle change. • Coping plans and relapse prevention: prompting participants to identify and find ways to overcome barriers to making permanent changes to their exercise and eating habits. This could include the use of strategies such as impulse control techniques (to improve management of food cravings).		confidence about making changes. • Goal setting: identify what positive long-term outcomes people want, and help them to set short-term goals related to a specific eating or physical activity behaviour to achieve this. • Action planning: support individuals to develop a plan focusing on a physical activity or eating behaviour they intend to change – including when, where and how they will do this. • Coping plans and relapse prevention: support individuals to identify and problem-solve barriers to maintaining healthy physical activity and eating habits. The aim is to review progress, adjust goals and move towards long-term, sustainable healthy habits.	• Action planning: support individuals to develop a plan focusing on a specific physical activity or eating behaviour they intend to change – including when, where and how they will do this.

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
Added after consensus; agreed at group meeting	Provide specially designed and quality-assured intensive lifestyle-change programmes for groups of 10 to 15 people at high risk of developing type 2 diabetes.	NICE PH38, 1.8.1	Provide specially designed and quality-assured intensive lifestyle-change programmes for groups of people at high risk of developing type 2 diabetes.	Number of people per group removed as too prescriptive and may not be feasible in remote and rural areas.
Added after consensus; agreed at group meeting	Involve the target community (including community leaders) in planning the design and delivery of the programme to ensure it is sensitive and flexible to the needs, abilities and cultural or religious norms of local people. For example, the programme should offer practical learning opportunities, particularly for those who have difficulties with communication or literacy or whose first language is not English.	NICE PH38, 1.8.2	Involve the target community (including community leaders) in planning the design and delivery of the programme to ensure it is sensitive and flexible to the needs, abilities and cultural or religious norms of the community. For example, the programme should offer practical learning opportunities, particularly for those who have difficulties with communication or literacy or whose first language is not English.	No change
Added after consensus; agreed at group meeting	Ensure programmes are delivered by practitioners with relevant knowledge and skills who have received externally accredited training (see recommendations 1.18.1 to 1.18.5). Where relevant expertise is lacking, involve health professionals and specialists (such as dietitians and health psychologists) in the design and delivery of services.	1.8.3	Ensure programmes are delivered by practitioners with relevant knowledge and skills who have received externally accredited training (see recommendations 1.18.1 to 1.18.5). Where relevant expertise is lacking, involve health professionals and specialists (such as dietitians	No change

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
			and health psychologists) in the design and delivery of services.	
Added after consensus; agreed at group meeting	Ensure programmes adopt a person-centred, empathy-building approach. This includes finding ways to help participants make gradual changes by understanding their beliefs, needs and preferences. It also involves building their confidence and self-efficacy over time.	1.8.4	Ensure programmes adopt a person-centred, empathy-building approach. This includes finding ways to help participants make gradual changes by understanding their beliefs, needs and preferences. It also involves building their confidence and self-efficacy over time	No change
Added after consensus; agreed at group meeting	Ensure programme components are delivered in a logical progression. For example: discussion of the risks and potential benefits of lifestyle change; exploration of someone's motivation to change; action planning; self-monitoring and self-regulation.	1.8.5	Ensure programme components are delivered in a logical progression. For example: discussion of the risks and potential benefits of lifestyle change; exploration of someone's motivation to change; action planning; self-monitoring and self-regulation.	No change
Added after consensus; agreed at group meeting	Ensure groups meet at least eight times over a period of 9 to 18 months. Participants should have at least 16 hours of contact time either within a group, on a one-to-one basis or using a mixture of both approaches.	1.8.6	Ensure groups meet at least eight times over a period of 9 to 18 months. Participants should have at least 16 hours of contact time either within a group, on a one-to-one basis or using a mixture of both approaches	No change

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
Added after consensus; agreed at group meeting	Offer more intensive support at the start of the programme by delivering core sessions frequently (for example, weekly or fortnightly). Reduce the frequency of sessions over time to encourage more independent lifestyle management.	1.8.7	Offer more intensive support at the start of the programme by delivering core sessions frequently (for example, weekly or fortnightly). Reduce the frequency of sessions over time to encourage more independent lifestyle management	No change
Added after consensus; agreed at group meeting	Allow time between sessions for participants to make gradual changes to their lifestyle – and to reflect on and learn from their experiences. Also allow time during sessions for them to share this learning with the group	1.8.8	Allow time between sessions for participants to make gradual changes to their lifestyle – and to reflect on and learn from their experiences. Also allow time during sessions for them to share this learning with the group.	No change
Added after consensus; agreed at group meeting	Deliver programmes in a range of venues such as workplaces, leisure, community and faith centres, and outpatient departments and clinics. Run them at different times, including during evenings and at weekends, to ensure they are as accessible as possible.	1.8.9	Deliver programmes in a range of venues such as workplaces, leisure, community and faith centres, and outpatient departments and clinics. Run them at different times, including during evenings and at weekends, to ensure they are as accessible as possible.	No change

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
Added after consensus; agreed at group meeting	As part of the programme, offer referral to, or seek advice from, people with specialist training where necessary. For example, refer someone to a dietitian for assessment and specialist dietary advice if required.	1.8.10	As part of the programme, offer referral to, or seek advice from, people with specialist training where necessary. For example, refer someone to a dietitian for assessment and specialist dietary advice if required.	No change
Added after consensus; agreed at group meeting	Offer follow-up sessions at regular intervals (for example, every 3 months) for at least 2 years following the initial intervention period. The aim is to reinforce the positive behaviour change and to provide support, in case of relapse. Larger group sizes may be feasible for these maintenance sessions.	1.8.11	Following the initial intervention, offer follow-up sessions at 3-month intervals usually up to 12–15 months, and thereafter at appropriate intervals according to clinical need. The aim is to reinforce behaviour change and to provide ongoing support. Larger group sizes may be feasible for these maintenance sessions, depending on service provision and individual's needs.	Tailored to Scottish service provision.
Added after consensus; agreed at group meeting	Link the programmes with weight management and other prevention initiatives that help people to change their diet or become more physically active.	1.8.12	Link the programmes with weight management and other prevention initiatives that help people to change their diet or become more physically active.	No change

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
Pharmacological interventions (KQ4)				
KQ4 R1	GPs should consider offering orlistat, in conjunction with a low-fat diet, to help those who are unable to lose weight by lifestyle-change alone.	NICE PH38, 1.13.7	–	Excluded at consensus.
KQ4 R2	Use clinical judgement on whether to offer orlistat to people with a BMI of 28.0 kg/m2 or more, as part of an overall plan for managing obesity. Take into account the person's risk and the level of weight loss and lifestyle change required to reduce this risk.	NICE PH38, 1.20.1	Use clinical judgement on whether to offer orlistat to people with a BMI of 28 kg/m^2 or more, as part of an overall plan for managing obesity. Take into account the person's risk and the level of weight loss and lifestyle change required to reduce this risk.	No change
KQ4 R3	Advise the person to follow a low-fat diet that provides 30% of daily food energy as fat, distributed over three main meals a day. Offer information and regular support from a dietitian or another appropriate healthcare professional.	NICE PH38, 1.20.3	–	Removed by subgroup. Captured by more general recommendation (KQ4 R6).
KQ4 R4	Review the use of orlistat after 12 weeks. If the person has not lost at least 5% of their original body weight, use clinical judgement to decide whether to stop the orlistat. However, as with adults who have type 2 diabetes, those at high risk of the condition may lose weight more slowly than average, so less strict goals may be appropriate.	NICE PH38, 1.20.5	–	Removed by subgroup as detail is too prescriptive.

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
KQ4 R5	Use clinical judgement on whether (and when) to offer metformin to support lifestyle change for people whose HbA1c or fasting plasma glucose blood test results have deteriorated if: • this has happened despite their participation in intensive lifestyle-change programmes or • they are unable to participate in an intensive lifestyle-change programme particularly if they have a BMI greater than 35.	NICE PH38, 1.19.1	Use clinical judgement on whether (and when) to offer metformin to support lifestyle change for people whose HbA1c or fasting plasma glucose blood test results have deteriorated if: this has happened despite their participation in intensive lifestyle-change programmes or they are unable to participate in an intensive lifestyle-change programme particularly if they have a BMI greater than 35.	No change
KQ4 R6	Discuss with the person the potential benefits and limitations of taking metformin, taking into account their risk and the amount of effort needed to change their lifestyle to reduce that risk. Explain that long-term lifestyle change can be more effective than drugs in preventing or delaying type 2 diabetes. Encourage them to adopt a healthy diet and be as active as possible. Where appropriate, stress the added health and social benefits of physical activity (for example, point out that it helps reduce the risk of heart disease, improves mental health and can be a good way of making friends). Advise them that they might need to take metformin for the	NICE PH38, 1.19.2	Encourage individuals to adopt a healthful diet and be as active as possible. Where appropriate, stress the added health and social benefits of physical activity.	Edited and shortened to become a general recommendation that covers all medicines in this section.

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
	rest of their lives and inform them about possible side effects.			
KQ4 R7	Check the person's renal function before starting treatment, and then twice yearly (more often if they are older or if deterioration is suspected).	NICE PH38, 1.19.4	Check the person's renal function before starting treatment with metformin, and then twice yearly (more often if they are older or if deterioration is suspected).	No change
KQ4 R8	Start with a low dose (for example, 500 mg once daily) and then increase gradually as tolerated, to 1500 to 2000 mg daily. If the person is intolerant of standard metformin consider using modified-release metformin.	NICE PH38, 1.19.5	–	No change
KQ4 R9	Prescribe metformin for 6 to 12 months initially. Monitor the person's fasting plasma glucose or HbA1c levels at 3 month intervals and stop the drug if no effect is seen.	NICE PH38, 1.19.6		Excluded as detail is too prescriptive for this guideline. We have not included detail on length of time to prescribe for the other pharmacological therapies.
KQ4 R10	Long-term use of metformin may be associated with biochemical vitamin B12 deficiency; consider periodic measurement of vitamin B12 levels in metformin-treated individuals, especially in those with anemia or peripheral neuropathy.	ElSayed et al. (2023), rec. 3.7	Long-term use of metformin may be associated with biochemical vitamin B12 deficiency; consider annual review of vitamin B12 levels in metformin-treated individuals, especially in those with anaemia or peripheral neuropathy.	'Annual review' added.

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KQ4 R11	Obesity medications, namely phentermine/topiramate ER, liraglutide 3 mg, or weekly semaglutide 2.4 mg, in conjunction with lifestyle therapy should be considered in persons with prediabetes and/or metabolic syndrome with ABCD, whether overweight (BMI 27 to 29.9 kg/m2) or with obesity (BMI ≥30 kg/m2), when needed to achieve and sustain 7% to 10% weight loss for prevention of T2D.	Blonde et al. (2022), rec. 11.5	Liraglutide or semaglutide should be considered as an adjunct to a reduced-calorie diet and increased physical activity for weight management in adults with prediabetes.	Revised to reflect SMC advice.
KQ4 R12	Although no medications have been approved for the treatment of prediabetes, diabetes medications including metformin, acarbose, pioglitazone, or GLP-1 RA can be considered in persons with prediabetes or in persons who also have ABCD and remain glucose-intolerant following weight loss using lifestyle and/or weight-loss medications.	Blonde et al. (2022), rec. 6	–	Removed by subgroup. This recommendation is superseded by the recommendations on GLP-1s and metformin. Acarbose is no longer prescribed in Scotland.
Achieving remission (KQs 5 & 6)				
KQ5 R1	Low-calorie (~800 to 850 kcal/day) diets with meal replacement products for 3 to 5 months aimed at achieving >15 kg body weight loss, followed by structured food reintroduction and increased physical activity for weight loss maintenance, should be recommended as an option to potentially induce type 2 diabetes remission to selected nonpregnant adults	MacKay et al. (2022), rec. 5	Low-calorie (~800 to 850 kcal/day) diets with meal replacement products for 3 to 5 months aimed at achieving >15 kg body weight loss, followed by structured food reintroduction and increased physical activity for weight-loss maintenance, and with behavioural support,	'Behavioural support' added to incorporate this point from KQ5 R3. Edited to remove specificity of suitable patients. Reworded to be more directive.

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
	with a BMI between 27 and 45 kg/m2 ; type 2 diabetes duration <6 years, A1C <12% and not using insulin.		should be considered for type 2 diabetes remission in non-pregnant adults.	
KQ5 R2	Exercise training (aiming for 240 to 420 min/week of structured physical activity spread over 5 days per week) combined with a calorie-restricted diet to promote modest weight loss (~5% to 7% of initial body weight), may be recommended as an option to potentially induce type 2 diabetes remission to selected nonpregnant adults with a BMI >25 kg/m2 , type 2 diabetes duration <10 years, A1C < 9% and not using insulin.	MacKay et al. (2022), rec. 6	–	Excluded by subgroup because of poor evidence base. Narrative added on more research being needed on the contribution of physical activity to remission.
KQ5 R3	Persons with T2D and ABCD should be instructed and supported in therapeutic lifestyle interventions that include a reduced-calorie healthy diet generally designed to produce a ≥500 kilocalorie daily energy deficit, daily physical activity, regular exercise (several times a week), and behavioral health practices.	Blonde et al. (2022), rec. 10.6	–	Largely redundant in the Scottish context, but the point on behavioural health practices has been incorporated into KQ5 R1.
KQ6 R1	Offer adults a referral for a comprehensive assessment by specialist weight management services providing multidisciplinary management of obesity to see whether bariatric surgery is suitable for them if they: • have a BMI of 40 kg/m2 or more, or between 35 kg/m2 and 39.9 kg/m2 with a	NICE CG189, 1.10.1	Offer adults referral for multidisciplinary team assessment to ascertain if bariatric and metabolic surgery is suitable if they: • have prediabetes or type 2 diabetes	Edited to keep within remit of this guideline on preventing type 2 diabetes (rather than general approach to obesity/bariatric surgery).

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
	significant health condition that could be improved if they lost weight (see box 2 for examples) and • agree to the necessary long-term follow up after surgery (for example, lifelong annual reviews).		• have received optimal non-surgical weight-management treatment • have a BMI greater than 35 kg/m^2, or 32.5 kg/m^2 where heritage includes South Asian, Chinese, other Asian, Middle Eastern, Black African, African-Caribbean or Arab family background • agree to the necessary long-term follow up after surgery (for example, lifelong annual reviews).	Terminology changed to bariatric and metabolic surgery in response to peer review comments. Arab added to minority ethnic groups following evidence review.
KQ6 R2	Consider referral for people of South Asian, Chinese, other Asian, Middle Eastern, Black African or African-Caribbean family background using a lower BMI threshold (reduced by 2.5 kg/m2) than in recommendation 1.10.1 to account for the fact that these groups are prone to central adiposity and their cardiometabolic risk occurs at a lower BMI.	NICE CG189, 1.10.2	–	Incorporated into recommendation KQ6 R1.
KQ6 R3	Offer an expedited assessment for bariatric surgery to people: • with a BMI of 35 kg/m2 or more who have recent-onset (diagnosed	NICE CG189, 1.10.3	–	Incorporated into recommendation KQ6 R1.

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
	within the past 10 years) type 2 diabetes and • as long as they are also receiving, or will receive, assessment in a specialist weight management service.			
KQ6 R4	Consider an expedited assessment for bariatric surgery for people: • with a BMI of 30 kg/m2 to 34.9 kg/m2 who have recent-onset (diagnosed within the past 10 years) type 2 diabetes and • who are also receiving, or will receive, assessment in a specialist weight management service.	NICE CG189, 1.10.4	–	Excluded at consensus as not acceptable.
KQ6 R5	Consider an expedited assessment for bariatric surgery for people of South Asian, Chinese, other Asian, Middle Eastern, Black African or African-Caribbean family background using a lower BMI threshold (reduced by 2.5 kg/m2) than in recommendation 1.10.4, to account for the fact that these groups are prone to central adiposity and their cardiometabolic risk occurs at a lower BMI.	NICE CG189, 1.10.5	–	Excluded at consensus as not acceptable.
KQ6 R6	Ensure the multidisciplinary team within a specialist weight management service includes or has access to health and social care professionals who have expertise in conducting medical, nutritional,	NICE CG189, 1.10.6	–	Incorporated into recommendation KQ6 R7.

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
	psychological and surgical assessments in people living with obesity and are able to assess whether surgery is suitable.			
KQ6 R7	Carry out a comprehensive, multidisciplinary assessment for bariatric surgery based on the person's needs. As part of this, assess: • the person's medical needs (for example, existing comorbidities) • their nutritional status (for example, dietary intake, and eating habits and behaviours) • any psychological needs that, if addressed, would help ensure surgery is suitable and support adherence to postoperative care requirements • their previous attempts to manage their weight, and any past response to a weight management intervention (such as one provided by a specialist weight management service) • any other factors that may affect their response after surgery (for example, language barriers, learning disabilities and neurodevelopmental conditions, deprivation and other factors related to health inequalities)	NICE CG189, 1.10.7	Carry out a comprehensive, multidisciplinary assessment for bariatric and metabolic surgery based on the individual's needs. Ensure the multidisciplinary team within a specialist weight management service includes or has access to health and social care professionals who have expertise in conducting medical, nutritional, psychological and surgical assessments in people living with obesity and type 2 diabetes and are able to assess whether surgery is suitable.	Edited to reflect that this sits within weight management services for the prevention of type 2 diabetes. Edited to keep more general. Terminology changed to bariatric and metabolic surgery in response to peer review comments.

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
	• whether any individual arrangements need to be made before the day of the surgery (for example, if they need additional dietary or psychological support, or support to manage existing or new comorbidities) • fitness for anaesthesia and surgery.			
KQ6 R8	Give the person information on: appropriate dietary intake after the bariatric procedure monitoring their macronutrient and micronutrient status patient support groups individualised nutritional supplementation, and sources of support and guidance for long-term weight loss and weight maintenance.	NICE CG189, 1.10.10	–	The principle of this recommendation has been edited into a good practice point that emphasises long-term follow-up care and monitoring remission status.
KQ6 R9	Drug treatments may be used to maintain or reduce weight before surgery for people who have been recommended surgery, if the waiting time is excessive.	NICE CG189, 1.10.12	Patient care should be optimised while waiting for surgery in the tier 4 bariatric and metabolic surgery pathway. Optimisation could include drug treatments to maintain or reduce weight.	Edited to reflect that drug treatments are not necessarily the first resort to optimising care when waiting for surgery and other options may be considered. Terminology changed to bariatric and metabolic surgery in

Identifier from consensus	Original recommendation	Source	Adapted recommendation	Rationale
				response to peer review comments.
KQ6 R10	Offer people who have had bariatric surgery a follow-up care package for a minimum of 2 years within the bariatric service. This should include: • monitoring nutritional intake (including protein and vitamins) and mineral deficiencies • monitoring for comorbidities • medication review • dietary and nutritional assessment, advice and support • physical activity advice and support • psychological support tailored to the individual • information about professionally led or peer-support groups.	NICE CG189, 1.11.1	–	The principle of this recommendation has been edited into a good practice point that emphasises long-term follow-up care and monitoring remission status.