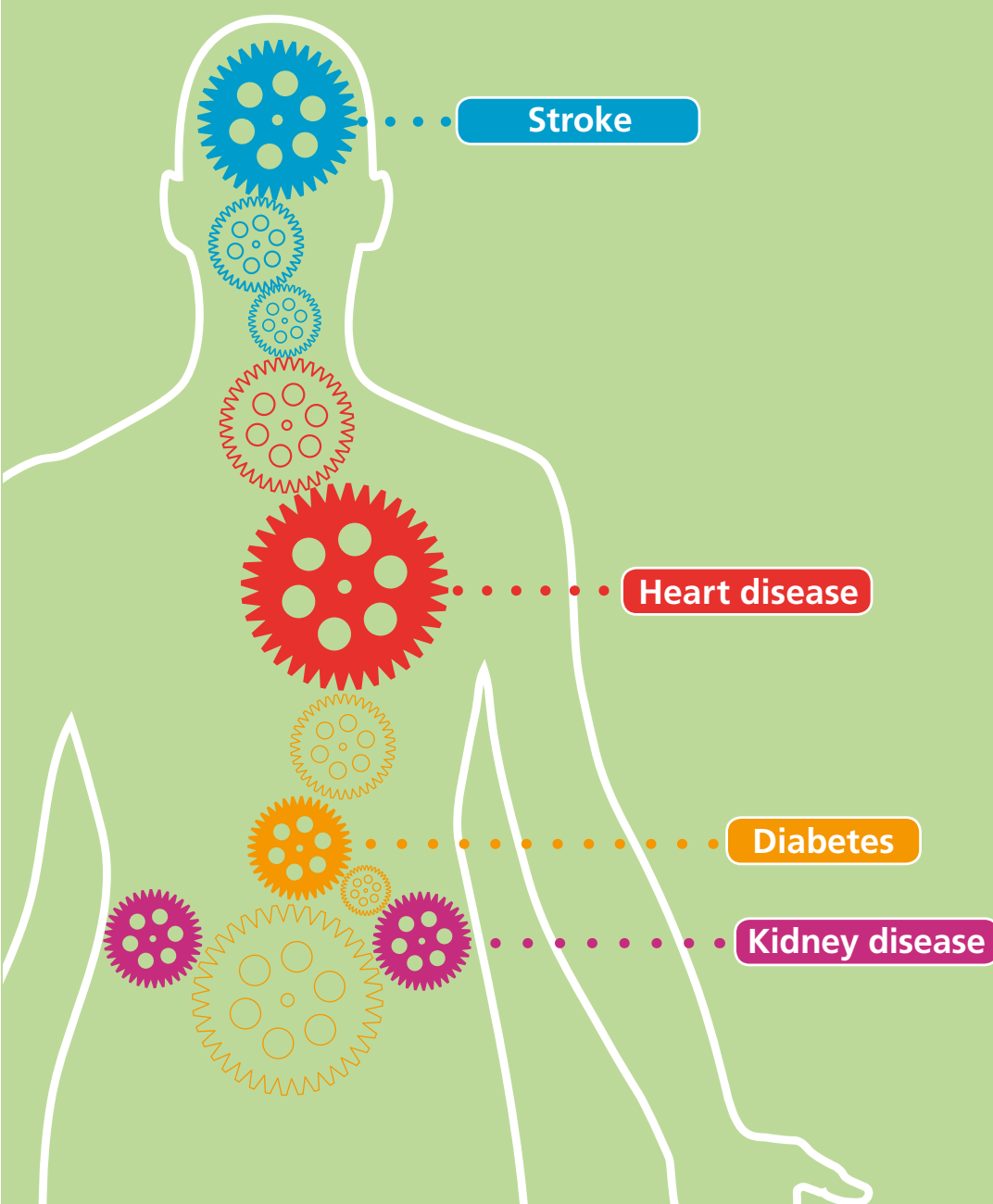


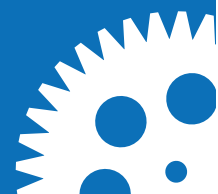
Putting Prevention First

NHS Health Check: Vascular
Risk Assessment and Management
Best Practice Guidance



Free NHS Health Check

Helping you prevent heart disease, stroke,
diabetes and kidney disease.



DH INFORMATION READER BOX

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1. Introduction

The vascular risk assessment and management programme – formerly known as the vascular check programme and now called NHS Health Check – is a national initiative. The tests, measurements and risk management interventions that make up the check can be delivered in different settings and in different ways to suit the needs of local populations. It is however important that the tests and measurements themselves are quality assured. Equally, it is key that the actions taken at certain thresholds are the same where possible, and in line with national guidelines where appropriate, if a systematic approach to the check across England is to be achieved.

This document provides best practice guidance to support primary care trusts (PCTs) in their implementation of the NHS Health Check programme and to help ensure consistency, quality assurance and safety across England.

This is the latest guidance from the Department of Health (DH) relating to the programme, and follows on from the '*Next Steps*' *Guidance for Primary Care Trusts* published on 13 November 2008 (www.dh.gov.uk/vascularchecks, Gateway reference 10729).

Aim

The aim of this document is to help commissioners and those delivering the programme to understand how the check should be undertaken and how certain parameters and data should be measured

and quality assured; and to describe thresholds for the tests which would trigger appropriate follow-up and interventions.

About this document

In this document, we have collated and referred to the current guidance available for each component of the NHS Health Check, which is represented in Figure 1. This document provides best practice advice and supporting references for each element of the check, including how to identify and test those at high risk of diabetes. It also covers when and how someone should be assessed for hypertension and chronic kidney disease.

Supporting individuals to help them manage their risk of developing vascular disease is a critical part of the NHS Health Check programme. Consequently, PCTs need to consider how to commission individually tailored lifestyle advice for everyone having a check, regardless of their risk. Sections on physical activity and weight management interventions, and on NHS stop smoking services referrals, are provided within the guidance to help PCTs in their provision of lifestyle advice.

The risk assessment stage of the NHS Health Check will use a risk engine to calculate a person's 10-year risk of cardiovascular disease. DH takes its advice on these matters from the National Institute for Health and Clinical Excellence (NICE). It has recommended in its lipid modification guidance that Framingham should be used to calculate 10-year risk of cardiovascular

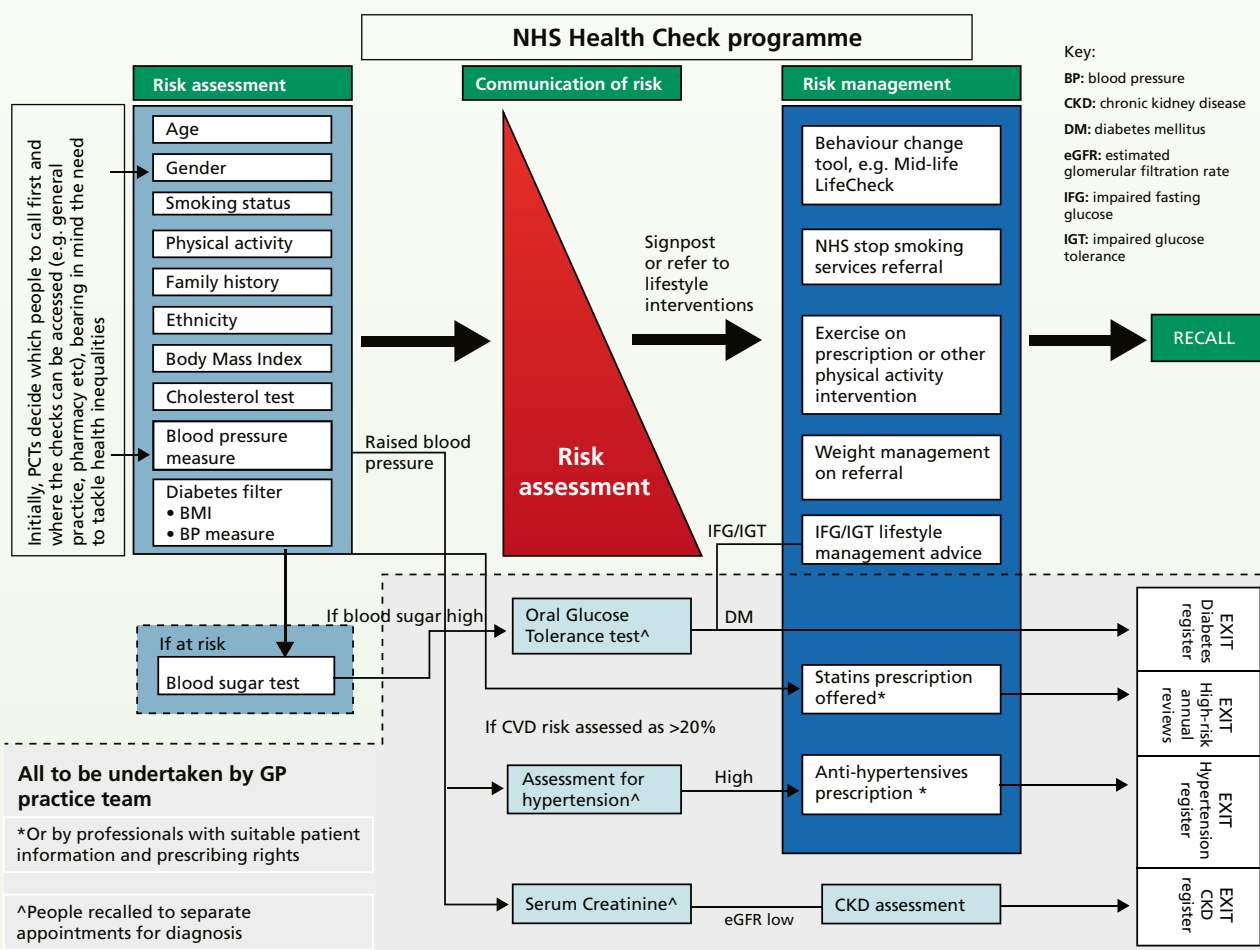
disease. Recently another risk engine called QRISK® 2* has been developed, and this will be used by a major supplier of GP software. There are some variations between these risk engines in terms of the data required, so this guidance provides information on the tests and measurements required for both.

Implementation of the NHS Health Check programme will identify some people with previously unidentified established disease. It is important that these people get the maximum benefit that early diagnosis and treatment will bring. Where appropriate there should be direct referral

procedures for further assessment and management of newly identified long-term conditions. PCTs may therefore wish to take the opportunity to review the provision of the relevant care pathways.

As can be seen from the diagrammatic overview of the NHS Health Check programme in Figure 1, there are elements of the programme that are independent of the risk assessment stage, such as how individuals are invited for their check and the management of an individual's risk. These elements are set out separately.

Figure 1. Diagrammatic overview of the vascular risk assessment and management programme



* QRISK® is a UK registered trademark No.2454356 owned by Egton Medical Information Systems Limited and the University of Nottingham.

2. Who could carry out the check and provide lifestyle management advice?

Unless there are current national guidelines available, the question of who performs the check and provides lifestyle management advice is one for local commissioners.

We have made reference to current NICE guidelines that exist in relation to training and qualifications under the relevant sections.

Where no such current guidelines exist, the person carrying out the check and giving lifestyle management advice should have received adequate training to do so. In addition, they should have all necessary and suitably calibrated equipment to undertake the check, which should take place in appropriate facilities. PCTs will want to consider, given the nature of the services, whether those carrying out the work should be Criminal Record Bureau checked. For those who will be involved in blood collection, vaccination for hepatitis B also needs to be considered.

3. Patient-centred care

Whoever carries out the check, the expectation is that it is carried out face-to-face, in a setting or an area which allows a private conversation. It is envisaged that a face-to-face check will be offered to all those eligible, i.e. those aged between 40 and 74 who do not have existing diagnosed vascular disease. This will help to focus on the individual's needs and preferences and to maximise the support provided to that individual to help them manage their risk and stay well for longer – the ultimate aim of the NHS Health Check programme.

4. Near patient testing and quality control

DH's *'Next Steps' Guidance for Primary Care Trusts* provides some advice for PCTs using, or planning to use, near patient testing (NPT) or point of care testing (POCT) to support their NHS Health Check programme. It provides advice on training, quality assurance, safety and the need for NPT to be properly evaluated before being put into routine use.

Fasting POCT may be suitable for initially filtering out those who are unlikely to have diabetes or non-diabetic hyperglycaemia. However, diagnosis of diabetes or of non-diabetic hyperglycaemia requires a venous blood sample to be tested in the laboratory. See the diagrammatic overview of the testing pathways set out in Figure 2 for further information. In addition, POCT is not considered appropriate for serum creatinine testing.

The guidance document *Management and Use of IVD Point of Care Test Devices* aims to provide advice and guidance on the management and use of POCT *in vitro* diagnostics devices (IVDs). Broadly, an IVD is a device the manufacturer has intended to be used for the examination of specimens derived from the human body including blood and urine, and this guidance may provide a useful resource on:

- the importance of identifying a clinical need before a decision is made to introduce POCT
- clinical governance issues relating to the setting up and management of POCT

- the need for local hospital pathology laboratory involvement in all aspects of a POCT service
- the need for training, updating and monitoring of all staff involved in the POCT service
- quality issues, including:
 - accreditation by an external certification body
 - the need for an appropriate quality control procedure
 - membership of an external quality assessment scheme (where available)
- the importance of health and safety
- the need for standard operating procedures and for regular reviews and updates when necessary.

NPT should only be used by healthcare professionals and staff who have been trained (by a competent trainer) to use the equipment. Safety, both of those taking blood and carrying out the tests, and of the individual who is having their NHS Health Check, is paramount. There is a need for clearly defined procedures for infection control, storage and disposal of clinical waste, needle stick injuries and spillages. As part of this, appropriate hand washing facilities nearby or within any room where blood is taken or handled are required.

References

'Next Steps' Guidance for Primary Care Trusts. Department of Health. November 2008. Gateway reference: 10729.
www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_090277

Management and Use of IVD Point of Care Test Devices. Device Bulletin 2002(03). Medical Devices Agency. March 2002.
www.mhra.gov.uk/Publications/Safetyguidance/DeviceBulletins/CON007333. This bulletin provides extensive guidance, including advice on clinical governance issues relating to the setting up and management of POCT, pathology laboratory involvement, staff training, health and safety, standard operating procedures and quality issues.

Buyers' guide: Blood glucose systems. Purchasing and Supply Agency, Centre for Evidence-based Purchasing. May 2008.
www.pasa.nhs.uk/pasa/Doc.aspx?Path=%5BMN%5D%5BSP%5D/NHSprocurement/CEP/Biochemistry/CEP08008.pdf. An additional buyers' guide for cholesterol testing is in development by the Purchasing and Supply Agency.

5. Quality and Outcomes Framework and locally enhanced services

Although the check is not itself covered in the Quality and Outcomes Framework (QOF), there are a number of QOF entries that relate to certain work undertaken during the course of a NHS Health Check (subject to data entry into electronic records). PCTs may also have locally enhanced services with GPs, pharmacies and other providers which again cover some of the relevant work, e.g. weight management and smoking cessation

services. When agreeing local contracts and payment for work with local providers, commissioners may wish to be aware of this in order to factor it into their arrangements and avoid double payments. Some relevant QOF indicators (including new indicators for cardiovascular disease primary prevention being introduced into QOF in 2009/10) are set out in Table 1.

Table 1. QOF indicators relevant to the NHS Health Check programme

QOF	Summary	Comment
REC 11	The blood pressure of patients aged 45 and over is recorded in the preceding five years for at least 65% of patients.	–
REC 17	The blood pressure of patients aged 45 and over is recorded in the preceding five years for at least 80% of patients.	–
REC 23	The percentage of patients aged over 15 years whose notes record smoking status in the past 27 months.	–
OB 1	The practice can produce a register of patients aged 16 and over with a body mass index (BMI) greater than or equal to 30 in the previous 15 months.	–

QOF	Summary	Comment
PP 1	In those patients with a new diagnosis of hypertension (excluding those with pre-existing coronary heart disease, diabetes, stroke and/or transient ischaemic attack) recorded between the preceding 1 April to 31 March: the percentage of patients who have had a face-to-face cardiovascular risk assessment at the outset of diagnosis (within three months of the initial diagnosis) using an agreed risk assessment treatment tool.	Once individuals have been diagnosed with hypertension, they will not be recalled as part of the vascular risk assessment and management programme.
PP 2	The percentage of people diagnosed with hypertension after 1 April 2009 who are given lifestyle advice in the last 15 months for: increasing physical activity, smoking cessation, safe alcohol consumption* and healthy diet.	Once these individuals have been diagnosed with hypertension, they will not be recalled as part of the vascular risk assessment and management programme.
CKD 6	The percentage of patients on the chronic kidney disease register whose notes have a record of an albumin:creatinine ratio (or protein:creatinine ratio) test in the previous 15 months.	Once individuals have been diagnosed with chronic kidney disease they will not be recalled as part of the vascular risk assessment and management programme.
BP 1	The practice can produce a register of patients with established hypertension.	Individuals on the hypertension register will not be recalled as part of the vascular risk assessment and management programme.
BP 4	The percentage of patients with hypertension in whom there is a record of the blood pressure in the previous nine months.	Once individuals have been diagnosed with hypertension, they will not be recalled as part of the vascular risk assessment and management programme.
BP 5	The percentage of patients with hypertension in whom the last blood pressure (measured in the previous nine months) is 150/90 or less.	Once individuals have been diagnosed with hypertension, they will not be recalled as part of the vascular risk assessment and management programme.

* This refers to the recommended lower risk levels of alcohol consumption.

6. Invitation for the check and information leaflet

Identification of people to invite

The best mechanism for cohort identification will depend upon the needs of the local population and upon what vascular type health checks have previously been implemented. In particular, it will need to take account of health inequalities within the area to ensure that the activity narrows these gaps rather than widens them. Some PCTs are, for example, targeting the most deprived sectors of their population to begin with. For more examples of, and ideas for, cohort identification in current vascular risk assessment programmes, and information on how PCTs have targeted their health inequalities, please see the NHS Improvement Programme vascular checks website (www.improvement.nhs.uk/NHShealthcheck).

DH has also produced and published an equality impact assessment, as part of its overall impact assessment (see www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsLegislation/DH_090351).

'NHS Health Check'

The term 'vascular' is not widely understood. Consequently many PCTs are using the term 'health check' or similar to describe checks of this type. In order to ensure consistency across this national programme, all PCTs are asked to use the term 'NHS Health Check' followed by the strapline 'helping you prevent heart disease, stroke, diabetes and kidney disease'. National promotional materials are being developed, including an

NHS Health Check information leaflet. These will be available from the DH publications orderline (www.orderline.dh.gov.uk).

Invitation letter

An invitation letter template has been developed and tested, and is available to download from the DH publications orderline (www.orderline.dh.gov.uk).

Information leaflet for people invited for a check

People who are invited for a check should be informed about what the check entails. All correspondence should be appropriate to the individual and it is important that all reasonable steps are taken to aid people's understanding – including, for example, those who require assistance because of reading difficulties, who have a disability or who require a translation service.

DH has worked with key stakeholders to develop and test an information leaflet to be sent out with invitations for the check or with a confirmation of appointment.

The NHS Health Check information leaflet is available free of charge to the NHS from the DH publications orderline (www.orderline.dh.gov.uk). Braille, large print and audio versions of the leaflet will be available upon request. Translated versions of the leaflet will be available to download.

Information for people who attend for an NHS Health Check

When a person attends for their check, the person carrying it out is responsible for ensuring that they are informed about the process.

It is important to establish that the person has received, read and understood the patient information leaflet, and for them to be offered an opportunity to ask any questions. All staff carrying out any part of the check need to be able to answer accurately any queries the person may pose, and we have provided a frequently asked questions section on the NHS Choices website (www.nhs.uk/nhshealthcheck) to support them in this task.

7. Cardiovascular risk assessment

Age

Data required: Age is required for Framingham and QRISK® 2. It should be recorded in years.

Thresholds: The age of the person should be between 40 and 74 years (inclusive).

Gender

Data required: The individual's reported gender should be recorded as male or female.

Smoking status

Data required: The Framingham 1991 model defines smoking status as:

- cigarette smoking or quit within the past year
- otherwise (i.e. not smoking currently and/or quit over a year ago).

QRISK® 2 requires data on smoking status as follows:

- current smoker

or

- non-smoker (including ex-smoker).

Related stages of the check: Anyone who is a smoker and wants to quit should be offered a referral for the support of a local NHS Stop Smoking Service.

Key points: Framingham specifically refers to cigarette smoking, but people smoking other tobacco products should also be considered for advice and referral.

NICE Public Health Intervention Guidance no. 1 *Brief interventions and referral for smoking cessation in primary care and other settings* makes a number of practical recommendations on who should receive advice, as well as on who should advise smokers and how.

DH guidance advocates the provision of very brief advice to support smoking cessation and suggests the following three steps:

- Ask and record smoking status.
- Advise patient of health benefits.
- Act on patient's response.

References

Brief interventions and referral for smoking cessation in primary care and other settings. NICE Public Health Intervention Guidance no. 1. March 2006. www.nice.org.uk/PHI001

NHS Stop Smoking Services service and monitoring guidance – 2009/10. March 2009. DH. Gateway reference: 11355. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_096886

Very brief advice (AAA) guide (7000CU). Smokefree Resource Centre. January 2009. <http://smokefree.nhs.uk/resources/resources/product-list/detail.php?code=1353118458>

Family history of coronary heart disease

Data required: Family history of coronary heart disease in first-degree relative under 60 years (this information is required for QRISK® 2 but not for Framingham).

Key points: First-degree relative means father, mother, brother or sister.

Ethnicity

Data required: Self-assigned ethnicity is recorded in QRISK® 2 (white/not recorded, Indian, Pakistani, Bangladeshi, Other Asian, black African, black Caribbean, Chinese, other including mixed). This information is required for QRISK® 2 and for the 1991 Framingham equation.

Key points: Ethnicity is needed for diabetes risk assessment (see Chapter 9). Where possible, ethnicity should be recorded using the Office for National Statistics categories. *A practical guide to ethnic monitoring in the NHS and social care* explains the national standard for ethnic group and related data, and provides a detailed breakdown of the codes.

References

A practical guide to ethnic monitoring in the NHS and social care. DH/Health and Social Care Information Centre/NHS Employers. 29 July 2005. Gateway reference: 5227. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4116839

Body mass index

Data required: BMI provides one approach to identifying those at high risk of developing diabetes or who have existing undiagnosed diabetes, and is required for the assessment of diabetes risk (see Chapter 9).

Thresholds: where the individual's BMI is in the obese range as follows, a blood glucose test is required (see Chapter 9):

- BMI is 27.5 or over in individuals from the Indian, Pakistani, Bangladeshi, Other Asian and Chinese ethnicity categories.

- BMI is 30 or over in other ethnicity categories.

Key points: Where possible, follow the best practice set out in *The Handbook for Vascular Risk Assessment, Risk Reduction and Risk Management* (www.screening.nhs.uk/vascular/VascularRiskAssessment.pdf) – see extracts in the boxes below to measure weight and height. This should be considered alongside any local guidelines or policies already in place.

Box 1. Height measurement (in metric)

- The height should be measured with the base plate on a firm and level surface, preferably with a perpendicular surface to ensure the measure is vertical.
- Ask the individual to remove their shoes and stand on the base plate with their back to the measure.
- If the subject has a ponytail or other hair dressing that may affect the result, ask them to remove it.
- Ask the subject to stand as tall and straight as possible with feet together and arms loosely at the side and shoulders relaxed.
- The head should be placed in the Frankfurt Plane, such that an imaginary line joining the upper margin of the external auditory meatus and the lower border of the eye is horizontal. (Ensure that the subject is looking straight ahead with the back of their head against the plate.)
- Lower the head plate so that it gently rests on the highest part of the subject's head. Press down to flatten hair.
- Read the height measurement from where the arrow points to on the measure to the nearest cm.

Box 2. Weight measurement (in metric)

- The individual should remove their shoes and coat and heavy outerwear for this test.
- Ensure scales have been calibrated/ serviced within the specified time range.
- Set scale to '0'.
- Ask the individual to step on scales.
- Wait for weight to register properly.
- Record weight (in kg).

Cholesterol test

Data required:

- The Framingham 1991 model specifies cholesterol to be measured as total serum cholesterol and high density lipid cholesterol.
- QRISK® 2 specifies cholesterol to be measured as the ratio of total serum cholesterol to high density lipoprotein cholesterol.

Threshold: There is no specific threshold for the vascular risk assessment and management programme or for primary prevention of vascular disease. However, if an individual's total cholesterol is **>7.5 mmol/l** it is important to consider familial hypercholesterolaemia – a genetic condition that causes a high cholesterol concentration in the blood – as set out in the NICE clinical guideline 71.

Related stages of the check: Cholesterol is a major modifiable risk factor of vascular disease, and can be reduced by dietary change, physical activity and drugs. The specific reduction measures taken will depend on the overall risk score of the individual. If the 10-year risk is 20% or greater, statin therapy should be offered by a GP or professional with suitable information and prescribing responsibilities. People found

to have raised cholesterol should be managed according to the PCT's policy. If the NHS Health Check is undertaken by an alternative provider, the individual should be referred to their GP for further assessment and management. Unless they are diagnosed with diabetes, hypertension or chronic kidney disease, people with elevated cholesterol should not be excluded from the NHS Health Check programme and should continue to be invited for a check every five years.

Key points: A random (not fasting) cholesterol test is required under the NHS Health Check programme to help ensure maximum take-up. Before lipid modification therapy is offered for primary prevention, assessment should include a fasting cholesterol test. The results of the fasting test may, in a few cases, drop the individual's previous risk score below 20%.

References

Lipid modification: Cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease. NICE clinical guideline 67. May 2008. www.nice.org.uk/CG067

Statins for the prevention of cardiovascular events. NICE Technology Appraisal 94. January 2006. www.nice.org.uk/page.aspx?o=TA094guidance

Putting prevention first. Vascular Checks: risk assessment and management. 'Next Steps' Guidance for Primary Care Trusts. DH. November 2008. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_090277

Identification and management of familial hypercholesterolaemia. NICE clinical guideline 71. August 2008. www.nice.org.uk/nicemedia/pdf/CG071FullGuideline.pdf

Point of Care Testing – Cholesterol Testing: Top 10 Tips. Medicines and Healthcare products Regulatory Agency. August 2005. www.mhra.gov.uk/Publications/Postersandleaflets/CON2015501

Management and Use of IVD Point of Care Test Devices. Device Bulletin 2002(03). Medical Devices Agency. March 2002. www.mhra.gov.uk/Publications/Safetyguidance/DeviceBulletins/CON007333. This bulletin provides extensive guidance, including advice on clinical governance issues relating to the setting up and management of POCT, pathology laboratory involvement, staff training, health and safety, standard operating procedures and quality issues.

Systolic and diastolic blood pressure

Data required: Both Systolic (SBP) and Diastolic Blood Pressure (DBP) are required for the diabetes filter, and for assessment for chronic kidney disease and hypertension.

Threshold: At, or above, 140/90mmHg.

Related stages of the vascular check:

If the individual has a blood pressure at, or above, 140/90mmHg, or where the SBP or DBP exceeds 140mmHg or 90mmHg respectively, the individual requires:

- an assessment for hypertension (see Chapter 8)
- a fasting plasma glucose (FPG) or HbA_{1c} test (see Chapter 9) and
- an assessment for chronic kidney disease (see Chapter 10).

Key points: Where possible, follow the relevant key points and best practice set out in NICE clinical guideline 34 on management of hypertension and the supporting quick reference guide. Some of the recommendations within it are summarised below:

- Healthcare professionals taking blood pressure measurements need adequate initial training and periodic review of their performance.
- Devices for measuring blood pressure must be properly validated and maintained, and regularly recalibrated according to manufacturers' instructions.
- Where possible, standardise the environment when measuring blood pressure: the environment should be relaxed, quiet and warm, and the patient seated with their arm outstretched and supported.
- The principles of good technique for measuring blood pressure are presented in Box 3.
- If the first measurement exceeds 140/90mmHg, take a second confirmatory reading at the end of the consultation if possible.

References

The Handbook for Vascular Risk Assessment, Risk Reduction and Risk Management.

A report prepared for the UK National Screening Committee. University of Leicester. March 2008. Pages 120–122.

www.screening.nhs.uk/vascular/VascularRiskAssessment.pdf. Provides additional advice on how to measure blood pressure using a standard mercury sphygmomanometer, or a semi-automated device and electronic device.

Hypertension: management of hypertension in adults in primary care. NICE clinical guideline CG34: quick reference guide.

June 2006. www.nice.org.uk/nicemedia/pdf/cg034quickrefguide.pdf

Hypertension: Management of hypertension in adults in primary care. NICE clinical guideline 34. June 2006. www.nice.org.uk/CG034

Buyers' guide – Low cost non-invasive blood pressure monitors. CEP 08035. Purchasing and Supply Agency, Centre for Evidence-based Purchasing. September 2008.
www.pasa.nhs.uk/pasa/Doc.aspx?Path=%5BMN%5D%5BSP%5D/NHSprocurement/CEP/POC/CEP08035.pdf

Box 3. Estimation of blood pressure by auscultation

- Standardise the environment as much as possible:
 - relaxed temperate setting, with the patient seated
 - arm outstretched, in line with mid-sternum, and supported.
- Correctly wrap a cuff containing an appropriately sized bladder around the upper arm and connect to a manometer. Cuffs should be marked to indicate the range of permissible arm circumferences; these marks should be easily seen when the cuff is being applied to an arm.
- Palpate the brachial pulse in the antecubital fossa of that arm.
- Rapidly inflate the cuff to 20mmHg above the point where the brachial pulse disappears.
- Deflate the cuff and note the pressure at which the pulse reappears: the approximate systolic pressure.
- Reinflate the cuff to 20mmHg above the point at which the brachial pulse disappears.
- Using one hand, place the stethoscope over the brachial artery, ensuring complete skin contact with no clothing in between.
- Slowly deflate the cuff at 2–3mmHg per second, listening for Korotkoff sounds:
 - Phase I: the first appearance of faint repetitive clear tapping sounds gradually increasing in intensity and lasting for at least two consecutive beats: note the systolic pressure
 - Phase II: a brief period may follow when the sounds soften or 'swish'
- Auscultatory gap: in some patients, the sounds may disappear altogether
 - Phase III: the return of sharper sounds becoming crisper for a short time
 - Phase IV: the distinct, abrupt muffling of sounds, becoming soft and blowing in quality
 - Phase V: the point at which all sounds disappear completely: note the diastolic pressure.
- When the sounds have disappeared, quickly deflate the cuff completely if repeating the measurement.
- When possible, take readings at the beginning and end of consultations.

8. Hypertension risk assessment

Data required: SBP and DBP.

Threshold: $\geq 140/90\text{mmHg}$. If the individual has a blood pressure at, or above, 140/90mmHg, or where the SBP or DBP exceeds 140mmHg or 90mmHg respectively, the individual requires an assessment for hypertension by the GP practice team.

Assessment for hypertension

Key points: To identify hypertension (persistent raised blood pressure, above 140/90mmHg), ask the patient to return for at least two more appointments; check blood pressure twice on each occasion, under the best conditions available.

Related stages of the check: Individuals diagnosed with hypertension should be added to the hypertension register and treated through existing care pathways. They should be reviewed in line with existing NICE clinical guidelines and should not be recalled as part of the NHS Health Check programme.

Discussions with these people about possible hypertension diagnosis and management may raise questions about the relationship between lifestyle and blood pressure management. Such discussion will normally take place as part of the further hypertension assessment or once a patient is placed on the hypertension register. It will however be useful for practitioners to be aware of the current advice on lifestyle interventions in the NICE guideline on hypertension, summarised as follows:

- Ask patients about their diet and exercise patterns, and offer guidance and written or audiovisual information (see Chapter 13, parts III and IV of this document).
- Ask about alcohol consumption and encourage patients to cut down if they drink excessively (see Chapter 13, part V).
- Discourage excessive consumption of coffee and other caffeine-rich products.
- Encourage patients to reduce their salt intake or use a substitute.
- Offer smokers advice and help to stop smoking (see Chapter 13, part II).
- Tell patients about local initiatives (for example, initiatives run by healthcare teams or patient organisations) that provide support and promote lifestyle change.

References

Hypertension: management of hypertension in adults in primary care. NICE clinical guideline CG34: quick reference guide. June 2006. www.nice.org.uk/nicemedia/pdf/cg034quickrefguide.pdf

Hypertension: Management of hypertension in adults in primary care. NICE clinical guideline 34. June 2006. www.nice.org.uk/CG034

9. Diabetes risk assessment

Key points: In DH's 'Next Steps' *Guidance for Primary Care Trusts*, the Department stated that further advice on testing for diabetes and impaired glucose tolerance would follow. This section provides guidance on how to identify those at high risk of developing and having diabetes, and also on undertaking the necessary blood glucose test – either by an FPG test or an HbA_{1c} test.

There is no single accepted way of identifying people who are at risk of diabetes or who have existing undiagnosed diabetes, and discussions are ongoing internationally. There are a number of ways of determining who is at high risk of diabetes, and some of these are set out on page 32 of the UK National Screening Committee's 2008 document *The Handbook for Vascular Risk Assessment, Risk Reduction and Risk Management* (www.screening.nhs.uk/vascular/VascularRiskAssessment.pdf).

This guidance describes two main approaches, using BMI (adjusted for ethnicity) and blood pressure to identify people at high risk. Using these factors as a filter, one can identify who in the population may be at high risk and should go on to receive a blood glucose test. These people then receive a blood test to establish how best they can be managed. Figure 2 provides a diagrammatic overview of these approaches, as well as additional testing and treatment pathways.

The thresholds specified below will not pick up everyone at risk of diabetes, but this approach achieves a balance between sensitivity (i.e. finding as accurately as possible those people at risk of diabetes) and feasibility (i.e. the practicalities involved in delivering the check). It means that just under half of people put through the filter nationally will go on to have a blood glucose test. Putting more people through to a blood test would identify more people at high risk of diabetes, but would disproportionately increase workload in general practice and in laboratories.

Data required: Ethnicity, BMI and blood pressure are required for the diabetes risk assessment.

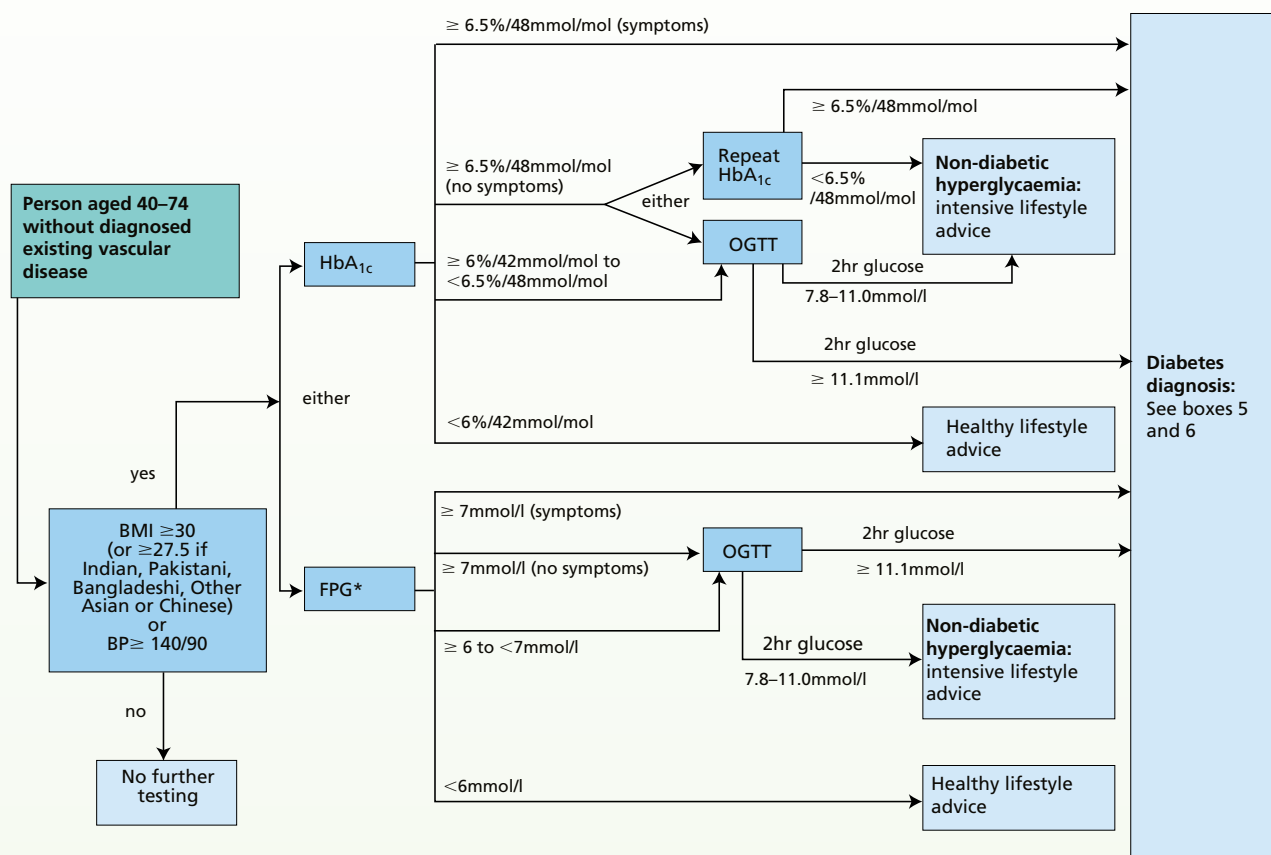
Ethnicity

Key points: Where possible, ethnicity should be recorded using the Office for National Statistics categories. *A practical guide to ethnic monitoring in the NHS and social care* explains the national standard for ethnic group and its code, and provides a detailed breakdown of the codes.

References

A practical guide to ethnic monitoring in the NHS and social care. DH/Health and Social Care Information Centre/NHS Employers. 29 July 2005. Gateway reference: 5227. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4116839

Figure 2. Diagrammatic overview for identifying people at high risk of having or developing diabetes, showing additional testing and treatment pathways



*The values in the diagram are for laboratory tests. For FPG POCT, use a value of less than 5.5mmol/l to proceed to healthy lifestyle advice. If the FPG POCT value is 5.5mmol/l or above, repeat using a venous blood sample for laboratory testing and follow the diagram according to the results.

Body mass index

Data required: BMI is required to assess the risk of someone developing or having diabetes.

Thresholds: Where the individual's BMI is in the obese range as follows, a blood glucose test is required (see below):

- BMI is 27.5 or over in individuals from Indian, Pakistani, Bangladeshi, Other Asian and Chinese ethnicity categories.
- BMI is 30 or over in other ethnicity categories.

Key points: See key points on BMI in Chapter 7 on cardiovascular risk assessment.

Systolic and diastolic blood pressure

Data required: Both SBP and DBP are required for the assessment of risk of someone having or developing diabetes (as well as the risk assessment of chronic kidney disease and hypertension).

Threshold: at, or above, 140/90mmHg.

If the individual has a blood pressure at, or above, 140/90mmHg, or where the SBP or DBP exceeds 140mmHg or 90mmHg respectively, the individual requires a blood glucose test.

Key points: See key points on blood pressure in Chapter 7 on cardiovascular risk assessment.

Box 4. The diabetes filter

Blood glucose test if: **BMI** is in the obese range (**30** or over, or **27.5** or over in individuals from the Indian, Pakistani, Bangladeshi, Other Asian and Chinese ethnicity categories)

or

Blood pressure is at or above **140/90mmHg**, or where the SBP or DBP exceeds 140mmHg or 90mmHg respectively.

Where possible, follow the relevant key points and best practice set out in NICE clinical guideline 34 on management of hypertension and the supporting quick reference guide. The recommendations within it are summarised on page 16.

Blood glucose testing

Related stages: As stated in the above BMI and blood pressure data collection sections, individuals who have a BMI in the obese range (30 or over, or 27.5 or over in individuals from the Indian, Pakistani, Bangladeshi, Other Asian and Chinese ethnicity categories) or with a blood pressure at or above 140/90mmHg, or where the SBP or DBP exceeds 140mmHG or 90mmHg respectively, should have a blood glucose test as described below.

It is important to consider the situation of the individual person, as some people who do not fall into the categories above will still be at significant risk. This includes:

- people with first-degree relatives with type 2 diabetes or heart disease
- people with tissue damage known to be associated with diabetes, such as retinopathy, kidney disease or neuropathy
- women with past gestational diabetes
- those with conditions or illnesses known to be associated with diabetes (e.g. polycystic ovarian syndrome or severe mental health disorders)
- those on current medication known to be associated with diabetes (e.g. oral corticosteroids).

Key points: As with the other tests in the check, it is important that those people who do not go on for further testing understand that everyone has some level of risk. They should also be made aware of the risk factors for diabetes as part of general lifestyle advice.

There is no single universally recognised way of testing blood for high risk of diabetes or for diabetes itself. Random tests are used in many areas, but are so influenced by food that large numbers of people need further tests, many of whom turn out not to have, or be at risk of, diabetes after all. Random tests have not been modelled as part of the vascular risk assessment and management programme so cannot be advocated on clinical and cost-effectiveness grounds.

Fasting blood glucose tests, while less convenient, are a better method, although they will still miss some people at high risk and some with diabetes. An HbA_{1c} test can also be used. Following one of these options, some patients will then require a more detailed test – an oral glucose tolerance test (OGTT) – which is currently regarded as the gold standard. The procedure to undertake an OGTT is set out in Annex A. Annex A also covers the treatment of people with non-diabetic hyperglycaemia and those diagnosed with diabetes.

Two main approaches for testing blood glucose levels – FPG and HbA_{1c} – are set out below.

Thresholds:

Box 5. Acting on FPG* results

- ≥ 7mmol/l:** Probable diabetes. Follow up with an OGTT in a subsequent appointment if diabetic symptoms are not present. Those diagnosed with diabetes should be offered an appointment with an appropriate professional within 1 week; symptomatic individuals should be offered an appointment the same day
- (Important:** if diabetic symptoms are present, a single FPG result of 7mmol/l or greater can diagnose diabetes. In the absence of symptoms a further confirmatory test is required. It is important that all staff involved in the delivery of the check are aware of the symptoms of diabetes: extreme tiredness, weight loss, polyuria (frequent urination), polydipsia (excessive thirst), blurred vision and frequent bouts of thrush. An FPG of ≥ 7mmol/l with these or other symptoms indicates the need for same-day referral to the GP. Vomiting patients should be sent to A&E.)
- ≥ 6 to < 7mmol/l:** Non-diabetic hyperglycaemia. Follow up with an OGTT in a subsequent appointment.
- (Alternatively, follow up with an HbA_{1c} test. If result is <6%, proceed as below. If ≥6% and <6.5%, proceed to OGTT. If ≥6.5%, proceed as above ('probable diabetes'). This approach will reduce the number of OGTTs required.)
- If result does not diagnose diabetes, the individual should be told that they have a high risk of diabetes in the future, and should be given intensive lifestyle management advice and be recalled in two years' time.
- < 6mmol/l:*** No further testing. However, it is vital that the individual understands that they are at risk of diabetes and receives appropriate lifestyle advice that addresses any individual risk factors.

*These values are for laboratory tests. For FPG POCT, use a value of less than 5.5mmol/l to proceed to healthy lifestyle advice. If the FPG POCT value is 5.5mmol/l or above, repeat using a venous blood sample for laboratory testing and follow Figure 2 according to the results.

Fasting plasma glucose

Key points: An FPG test is recognised as an acceptable first test to identify those with potential diabetes or at high risk.

To undertake an FPG test, the person being tested should be informed of the fasting requirement in writing or over the phone, and if possible the appointment should be scheduled for 11am or earlier to make fasting easier.

HbA_{1c} (glycated haemoglobin)

Key points: HbA_{1c} is formed when glucose binds to haemoglobin in red blood cells. The higher the blood glucose over the past two months, the higher the HbA_{1c}. Although not yet mainstream practice, the use of HbA_{1c} as a diabetes diagnostic test is currently being debated. It will be the subject of an international consensus document and is likely to become an acceptable alternative diagnostic test. Even within the non-diabetic range, HbA_{1c} has been shown to be a risk marker for vascular events and can be used to assess risk of diabetes.

Thresholds:

Box 6. Acting on HbA_{1c} results (in % of total haemoglobin and mmol/mol)

≥ 6.5%, or ≥ 48 mmol/mol:

Probable diabetes. Confirm diagnosis using current diagnostic criteria. Those diagnosed with diabetes should be offered an appointment with an appropriate professional within 1 week; symptomatic individuals should be offered an appointment the same day

(Important: if diabetic symptoms are present, a single HbA_{1c} of 6.5% or greater can diagnose diabetes. In the absence of symptoms a further confirmatory test is required. It is important that all staff involved in the delivery of the checks are aware of the symptoms of diabetes: extreme tiredness, weight loss, polyuria (frequent urination), polydypsia (excessive thirst), blurred vision and frequent bouts of thrush. An HbA_{1c} ≥ 6% with these or any other symptoms indicates the need for same-day referral to the GP. Vomiting patients should be sent to A&E.)

≥ 6 to < 6.5%, or ≥ 42 to 48 mmol/mol:

Non-diabetic hyperglycaemia. Follow up with an OGTT in a subsequent appointment.

If result does not diagnose diabetes but confirms abnormal glucose levels, the individual should be told that they have a high risk of diabetes in the future, and should be given intensive lifestyle management advice and be recalled in two years' time.

<6%, or < 42 mmol/mol:

No further testing. However, it is vital that the individual understands that they are at high risk of diabetes and receives appropriate lifestyle advice that addresses any individual risk factors.

HbA_{1c} is currently measured as a percentage of total haemoglobin, but from June 2009 will also be reported as International Federation of Clinical Chemistry and Laboratory Medicine units (mmol/mol). HbA_{1c} testing does not require fasting, and should therefore be used where fasting is not possible. Blood can be tested from the same thumb prick sample as the cholesterol test, or can be taken venously.

References

The Handbook for Vascular Risk Assessment, Risk Reduction and Risk Management. A report prepared for the UK National Screening Committee. University of Leicester. March 2008. Pages 120–122.

www.screening.nhs.uk/vascular/VascularRiskAssessment.pdf. Provides additional advice on how to measure blood pressure using a standard mercury sphygmomanometer, or a semi-automated device and electronic device.

Hypertension: management of hypertension in adults in primary care. NICE clinical guideline CG34: quick reference guide. June 2006. www.nice.org.uk/nicemedia/pdf/cg034quickrefguide.pdf

Hypertension: Management of hypertension in adults in primary care. NICE clinical guideline 34. June 2006. www.nice.org.uk/CG034

10. Chronic kidney disease risk assessment

Risk filter for chronic kidney disease

Data required: SBP and DBP.

Threshold: $\geq 140/90\text{mmHg}$. If the individual has a blood pressure at or above 140/90mmHg, or where the SBP or DBP exceeds 140mmHg or 90mmHg respectively, the individual requires an assessment for chronic kidney disease by a GP.

Assessment for chronic kidney disease

Data required: The results of the serum creatinine test should be used to calculate the estimated glomerular filtration rate (eGFR) in order to assess the level of kidney function, and recorded on the individual's patient record.

Threshold: $\text{eGFR} < 60\text{ml}/\text{min}/1.73\text{m}^2$

$\geq 60\text{ml}/\text{min}/1.73\text{m}^2$

Where eGFR is **above or equal to 60ml/min/1.73m²**, no further assessment is required, unless the individual is diagnosed with hypertension or diabetes mellitus. In this case, their risk of kidney disease will be monitored as part of the management of their hypertension and/or diabetes.

$< 60\text{ml}/\text{min}/1.73\text{m}^2$

Where eGFR is **below 60ml/min/1.73m²**, management and assessment for chronic kidney disease is required in line with NICE clinical guideline 73 on chronic kidney disease. This will include an assessment of the urine albumin:creatinine ratio (ACR) to identify and detect proteinuria. Further management will depend on the ACR results.

Key points: A venous blood sample is required for this test. NPT is not considered appropriate. A serum creatinine test should be requested from the laboratory. This can be requested at the same time as a cholesterol test from the laboratory (if NPT is not used to assess cholesterol).

References

Chronic kidney disease: National clinical guideline for early identification and management in adults in primary and secondary care. NICE clinical guideline 73. 24 September 2008. www.nice.org.uk/Guidance/CG73/Guidance/pdf/English

Hypertension: management of hypertension in adults in primary care. NICE clinical guideline CG34: quick reference guide. June 2006. www.nice.org.uk/nicemedia/pdf/cg034quickrefguide.pdf

Hypertension: Management of hypertension in adults in primary care. NICE clinical guideline 34. June 2006. www.nice.org.uk/CG034

11. Other data required for the NHS Health Check programme

Key points: This section sets out additional data which may not be required for the cardiovascular, diabetes and chronic kidney disease risk assessments, but is required for the Framingham or QRISK® 2 risk engines. This data may also be required to support decisions on appropriate lifestyle interventions.

For Framingham the following data is required.

Electrocardiogram left ventricular hypertrophy

Data required: If there has been no definite previous diagnosis of left ventricular hypertrophy by electrocardiogram, then record '0'.

Key points: Any previous diagnosis by electrocardiogram of left ventricular hypertrophy is required by Framingham but is not a requirement of the NHS Health Check programme.

Diabetes

Data required: Record '1' if the person has diabetes, and '0' otherwise.

Key points: As this is a preventative programme, people with diagnosed diabetes should not be invited for an NHS Health Check and the entry should be 'no'. If the individual has diabetes they should already be on a diabetes register and being actively managed for their condition.

For QRISK® 2 the following data is required.

Townsend deprivation score

Data required: The Townsend score associated with the output area of the individual's postcode based on the 2001 census data.

References

Health and deprivation: inequalities and the north. Townsend, P, Phillimore, P and Beattie, A. Croom Helm, 1988. [ISBN 0-7099-4352-0]

Postcode

Data required: The individual's postcode. This can be missing if the Townsend score is provided.

Previous medical history

Data required:

- history of treated hypertension (diagnosis of hypertension and at least one current prescription of at least one antihypertensive agent)
- history of rheumatoid arthritis
- history of chronic renal disease
- history of atrial fibrillation
- history of diabetes – any previous diagnosis.

Key points: The data required relates to an existing GP diagnosis of rheumatoid arthritis, chronic renal disease and atrial fibrillation. There is no need to check for atrial

fibrillation in order to complete the necessary field.

As stipulated above, QRISK® 2 requires data on whether the person has diabetes or chronic renal disease. As this is a preventative programme, people with diagnosed diabetes or chronic renal disease should not be invited for a NHS Health Check and the entry should be 'no'. If the individual has diabetes or chronic renal disease they should already be actively managed for their condition.

Physical activity levels

Data required: The 2006 NICE physical activity public health intervention guidance recommends that primary care practitioners should take the opportunity, whenever possible, to identify inactive adults and advise them to aim for 30 minutes of moderate activity on five days of the week (or more), and to offer adults who are less than active a Brief Intervention in Physical Activity.

Key points: Advocated by NICE, the GP Physical Activity Questionnaire (GPPAQ) measures adult (16–74) physical activity levels, classifying them into active, moderately active, moderately inactive and inactive. The tool uses a validated correlation between inactivity and cardiovascular disease risk.

A brief intervention is most appropriate for the majority of patients who are classified by GPPAQ as less than active. Only patients who require supervised sessions due to their level of risk should be considered for an exercise on referral or condition-specific exercise programme.

References

Four commonly used methods to increase physical activity: brief interventions in primary care, exercise referral schemes, pedometers and community-based exercise programmes for walking and cycling. NICE Public Health Intervention Guidance PHI002. March 2006. www.nice.org.uk/PHI002

General Practice Physical Activity Questionnaire: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_063812

DH Statement on Exercise Referral. DH. March 2007. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_072689

12. Communication of risk

Everyone who undergoes a check should have their results and their NHS Health Check assessment of vascular risk conveyed to them. Everyone will be at some level of risk and this needs to be clearly explained. The communication of risk and what it means for the individual is of paramount importance to the programme meeting its objective of helping people stay well for longer. Levels of risk need to be discussed alongside what each individual can do to manage their risk, such as taking regular exercise, eating a healthy diet, reducing their calorie and alcohol intake as a way of managing their weight, and stopping smoking.

Appropriate training is an essential part of being able to convey an individual's risk of developing vascular disease in a way that can help motivate them to change, while not being alarmist. NICE clinical guideline 67 provides some pointers on communication of risk in the context of cardiovascular risk assessment. Examples of how some PCTs are communicating risk, and the materials they are using, can be found on the NHS Improvement Programme vascular checks website (www.improvement.nhs.uk/nhshealthcheck).

References

Lipid modification: Cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease. NICE clinical guideline 67. May 2008. www.nice.org.uk/CG067

13. Risk management and lifestyle interventions

Key points: The NHS Health Check programme is a preventative programme which is intended to help people stay healthy for longer. *Everyone* who has a NHS Health Check, regardless of their risk score, should be given lifestyle advice, where clinically appropriate, to help them manage and reduce their risk. That means that, unless it is deemed clinically unsafe to do so, *everyone* having the check should be provided with individually tailored advice that will help motivate them and support the necessary lifestyle changes to manage their risk.

Depending on the workforce model in place, those providing this advice may not be the same as those who have undertaken the risk assessment part of the check. It is therefore important for continuity, and to help ensure a positive experience for the person having the check, that information such as smoking status, blood pressure, levels of activity and history of vascular disease in the family is transferred in written form between individuals and within the team as necessary.

I. Behaviour change tool – NHS Mid-life LifeCheck

Key points: The NHS Mid-life LifeCheck is an online health assessment tool initially piloting with people aged 45–60. The aim is for this tool to become available in the summer of 2009 (www.nhs.uk/lifecheck). It could be used by those providing lifestyle advice to help encourage behaviour change in those attending their check. It focuses on

factors including smoking, healthy eating, alcohol, physical activity and emotional well-being.

NHS Mid-life LifeCheck analyses the information people provide and then presents them with detailed feedback. The service identifies causes for concern and helps people plan for lifestyle change, giving ideas, information and support. Users will be able to set personal goals and request helpful reminders.

II. NHS Stop Smoking Services referral

Key points: Anyone who is a smoker and wants to quit should be offered the support of a local NHS Stop Smoking Service.

NICE Public Health Intervention Guidance no. 1 *Brief interventions and referral for smoking cessation in primary care and other settings* makes a number of practical recommendations on who should receive advice, as well as on who should advise smokers and how.

DH guidance advocates the provision of very brief advice to help support smoking cessation, and consists of the following three steps:

- Ask and record smoking status.
- Advise patient of health benefits.
- Act on patient's response.

References

Brief interventions and referral for smoking cessation in primary care and other settings. NICE Public Health Intervention Guidance no. 1. March 2006. www.nice.org.uk/PHI001

NHS Stop Smoking Services service and monitoring guidance – 2009/10. March 2009. Gateway reference: 11355. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_096886

III. Physical activity interventions

Thresholds: The Chief Medical Officer recommends that for general health benefits adults should take a total of 30 minutes a day of at least moderately intense physical activity on five or more days a week. The recommended levels of activity can be achieved either by doing all the daily activity in one session, or through several shorter bouts of activity of 10 minutes or more. The activity can be lifestyle activity or structured exercise or sport, or a combination of these.

Key points: If, through DH's validated tool GPPAQ, the individual is identified as less than active, practitioners should offer a brief intervention in physical activity as follows:

- When providing physical activity advice, primary care practitioners should take into account the individual's needs, preferences and circumstances.
- They should agree goals with them. They should also provide written information about the benefits of activity and the local opportunities to be active.
- Where appropriate, offer a referral to a condition-specific or exercise on referral programme, if these exist in the area.
- The individual should be followed up at appropriate intervals over a three to six-month period.

References

Four commonly used methods to increase physical activity: brief interventions in primary care, exercise referral schemes, pedometers and community-based exercise programmes for walking and cycling. NICE Public Health Intervention Guidance PHI002. March 2006. www.nice.org.uk/PHI002

General Practice Physical Activity Questionnaire: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_063812

DH Statement on Exercise Referral. DH. March 2007. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_072689

IV. Weight management

Key points: Preventing and managing overweight and obesity are complex problems, with no easy answers. Where an individual's weight status is a key risk factor, advice or onward referral should be provided in line with the NICE clinical guideline CG43 on the prevention, identification, assessment and management of overweight and obesity. Where the individual's weight status is not a risk factor, it is nonetheless an opportunity to reinforce the benefits of healthy eating and being physically active.

When providing advice around weight management or referring individuals on to more sustained interventions, it will be important to take a personalised approach. This may require consideration of factors including the individual's:

- overall readiness to commit to making lifestyle changes
- particular barriers to lifestyle change
- self-esteem
- life stage
- cultural preferences.

Local areas are developing their own care pathways for overweight and obesity in adults. Commissioners may wish to ensure that different tiers of support are available for each individual depending on their weight status, and that there are choices for individuals to reflect their personal circumstances and preferences.

Any advice or more sustained interventions around weight management provided as part of the risk management element of the check should comply with the NICE guidance.

In addition, the individual's alcohol intake could be considered as part of any discussion about energy intake, and the opportunity used to highlight links between alcohol intake and obesity with liver disease.

References

Obesity: guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. NICE guideline CG43. December 2006. www.nice.org.uk/nicemedia/pdf/CG43NICEGuideline.pdf

Obesity: Guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. Quick reference guide 2 for the NHS. NICE guideline CG43. December 2006. www.nice.org.uk/guidance/index.jsp?action=download&o=30364

Healthy Weight, Healthy Lives: A toolkit for developing local strategies. National Heart Forum et al. October 2008. This is a specific DH tool to help PCTs and local authorities plan, coordinate and implement comprehensive strategies to prevent and manage overweight and obesity. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_088968

V. Alcohol use interventions

Thresholds: The Chief Medical Officer recommends for lower-risk drinking that men should not drink on a regular basis more than three to four units per day, and that women should not drink on a regular basis more than two to three units a day (with 'regular' here meaning most days or every day of the week).

Key points: Providing information and brief advice on lower risk drinking is not an intervention required within the NHS Health Check programme. However, it is recommended as part of the guidance on lifestyle interventions within the NICE clinical guideline on hypertension. It is also a topic likely to be raised in discussing lifestyle issues as part of this programme. The following information and references are provided for information, for those providing lifestyle advice as part of this programme, and to signpost practitioners to nationally developed online training and resource materials on delivering alcohol brief advice in primary care.

Current DH guidance (see Primary Care Service Framework reference below) on alcohol identification and brief advice recommends that healthcare practitioners advise patients who are drinking alcohol above lower risk levels to reduce their alcohol use. Those wanting to stop drinking who are experiencing difficulty should be considered for referral to specialist services using locally agreed referral methods.

DH guidance based on international evidence and expert consensus advocates the provision of brief advice to assist individuals drinking above lower risk levels to achieve reduced consumption (see Primary Care Service Framework reference below, including access to support materials; and see e-Learning reference for DH online training).

Brief advice can take as little as five minutes and consists of the three basic topics:

- understanding alcohol units
- understanding alcohol consumption risk levels and knowing where they sit on the risk scale
- understanding benefits of cutting down and tips for cutting down.

References

Hypertension: management of hypertension in adults in primary care. NICE clinical guideline CG34: quick reference guide. June 2006. www.nice.org.uk/nicemedia/pdf/cg034quickrefguide.pdf

Hypertension: Management of hypertension in adults in primary care. NICE clinical guideline 34. June 2006. www.nice.org.uk/CG034

Primary Care Service Framework: Alcohol Services in Primary Care. NHS. May 2008. www.pcc.nhs.uk/204.php

Alcohol Identification and Brief Advice e-Learning course: www.alcohollearningcentre.org.uk/eLearning/IBA/

14. Recall

The aim of the NHS Health Check programme is for everyone between the ages of 40 and 74 who does not have existing diagnosed vascular disease to be called and recalled every five years for their NHS Health Check. Those who are diagnosed with vascular disease as a result of the check will not be required to attend further checks as part of this programme, as they will be managed on the relevant disease care pathway.

While DH is developing the call and recall system, PCTs will need to decide locally how best to invite people for their check, while remembering the need to avoid widening the health inequalities gap. It is important that the systems adopted by PCTs to provide interim call/recall for the NHS Health Check programme are fit for purpose and have appropriate failsafe and quality assurance systems.

15. References and guidelines

Alcohol

Alcohol Identification and Brief Advice e-Learning course:
www.alcohollearningcentre.org.uk/eLearning/IBA/

Primary Care Service Framework: Alcohol Services in Primary Care. NHS. May 2008.
www.pcc.nhs.uk/204.php

Ethnic monitoring

A practical guide to ethnic monitoring in the NHS and social care. DH/Health and Social Care Information Centre/NHS Employers. 29 July 2005. Gateway reference: 5227.
www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4116839

General

'Next Steps' Guidance for Primary Care Trusts. DH. November 2008. Gateway reference: 10729.
www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_090277

Putting prevention first. Vascular Checks: risk assessment and management. 'Next Steps' Guidance for Primary Care Trusts. DH. November 2008. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_090277

The Handbook for Vascular Risk Assessment, Risk Reduction and Risk Management. A report prepared for the UK National Screening Committee. University of Leicester. March 2008. Pages 120–122.
www.screening.nhs.uk/vascular/VascularRiskAssessment.pdf. Provides additional advice on how to measure blood pressure using a standard mercury sphygmomanometer, or a semi-automated device and electronic device.

Near patient testing

Buyers' guide: Blood glucose systems. Purchasing and Supply Agency, Centre for Evidence-based Purchasing. May 2008.
www.pasa.nhs.uk/pasa/Doc.aspx?Path=%5BMN%5D%5BSP%5D/NHSprocurement/CEP/Biochemistry/CEP08008.pdf. An additional buyers' guide for cholesterol testing is in development by the Purchasing and Supply Agency.

Buyers' guide – Low cost non-invasive blood pressure monitors. CEP 08035. Purchasing and Supply Agency, Centre for Evidence-based Purchasing. September 2008.
www.pasa.nhs.uk/pasa/Doc.aspx?Path=%5BMN%5D%5BSP%5D/NHSprocurement/CEP/POC/CEP08035.pdf

Point of Care Testing – Cholesterol Testing: Top 10 Tips. Medicines and Healthcare products Regulatory Agency. August 2005.
www.mhra.gov.uk/Publications/Postersandleaflets/CON2015501

Management and Use of IVD Point of Care Test Devices. Device Bulletin 2002(03). Medical Devices Agency. March 2002. www.mhra.gov.uk/Publications/Safetyguidance/DeviceBulletins/CON007333. This bulletin provides extensive guidance, including advice on clinical governance issues relating to the setting up and management of POCT, pathology laboratory, staff training, health and safety, standard operating procedures and quality issues.

NICE guidelines and technology appraisals

Chronic kidney disease: National clinical guideline for early identification and management in adults in primary and secondary care. NICE clinical guideline 73. 24 September 2008. www.nice.org.uk/Guidance/CG73/Guidance/pdf/English

Hypertension: management of hypertension in adults in primary care. NICE clinical guideline CG34: quick reference guide. June 2006. www.nice.org.uk/nicemedia/pdf/cg034quickrefguide.pdf

Hypertension: Management of hypertension in adults in primary care. NICE clinical guideline 34. June 2006. www.nice.org.uk/CG034

Identification and management of familial hypercholesterolaemia. NICE clinical guideline 71. August 2008. www.nice.org.uk/nicemedia/pdf/CG071FullGuideline.pdf

Lipid modification: Cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease. NICE clinical guideline 67. May 2008. www.nice.org.uk/CG067

Statins for the prevention of cardiovascular events. NICE Technology Appraisal 94. January 2006. www.nice.org.uk/page.aspx?o=TA094guidance

Obesity

Healthy Weight, Healthy Lives: A toolkit for developing local strategies. National Heart Forum et al. October 2008. This is a specific DH tool to help PCTs and local authorities plan, coordinate and implement comprehensive strategies to prevent and manage overweight and obesity. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_088968

Obesity: guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. NICE guideline CG43. December 2006. www.nice.org.uk/nicemedia/pdf/CG43NICEGuideline.pdf

Obesity: Guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. Quick reference guide 2 for the NHS. NICE guideline CG43. December 2006. www.nice.org.uk/guidance/index.jsp?action=download&o=30364

Other

Health and deprivation: inequalities and the north. Townsend, P, Phillimore, P and Beattie, A. Croom Helm, 1988.

Physical activity

DH Statement on Exercise Referral. DH. March 2007. www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_072689

Four commonly used methods to increase physical activity: brief interventions in primary care, exercise referral schemes, pedometers and community-based exercise programmes for walking and cycling. NICE Public Health Intervention Guidance PHI002. March 2006. www.nice.org.uk/PHI002

General Practice Physical Activity Questionnaire: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_063812

Smoking

Brief interventions and referral for smoking cessation in primary care and other settings.
NICE Public Health Intervention Guidance
no. 1. March 2006. www.nice.org.uk/PHI001

NHS Stop Smoking Services service and monitoring guidance – 2009/10.
March 2009. Gateway reference: 11355.
[www.dh.gov.uk/en/Publicationsandstatistics/
Publications/PublicationsPolicyAndGuidance/
DH_096886](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_096886)

Very brief advice (AAA) guide (7000CU).
Smokefree Resource Centre. January 2009.
[http://smokefree.nhs.uk/resources/resources/
product-list/detail.php?code=1353118458](http://smokefree.nhs.uk/resources/resources/product-list/detail.php?code=1353118458)

Annex A. Oral glucose tolerance testing

Thresholds: As described in Chapter 9 on diabetes risk assessment, some people will need an oral glucose tolerance test (OGTT). The FPG and HbA_{1c} thresholds which should lead to an OGTT are specified in Chapter 9.

Key points: Details of how to carry out an OGTT are included on page 111 of the *Handbook for Vascular Risk Assessment, Risk Reduction and Risk Management*, with thresholds for diagnosis on page 29. The key steps for carrying out an OGTT are set out below:

- Prepare blood bottle and syringe following health and safety and clinical governance guidelines.
- Perform venepuncture and label the blood bottle with time taken and patient details. Complete blood test request form according to local guidelines.
- Ask patient to drink Lucozade (394ml of current preparation) within five minutes or an equivalent source of 75gms of anhydrous glucose. Note the time the subject starts the glucose.
- The subject should sit in the waiting room for two hours. Advise the subject not to leave the waiting room as any form of exercise can have a detrimental effect on the test.

- After precisely two hours from the subject starting to drink the Lucozade, take the second blood test and again label the bottle, including the timing of sample (i.e. second in series), and complete a blood test request form according to local guidelines.

References

The Handbook for Vascular Risk Assessment, Risk Reduction and Risk Management. A report prepared for the UK National Screening Committee. University of Leicester. March 2008. www.screening.nhs.uk/vascular/VascularRiskAssessment.pdf. Details of how to carry out an OGTT are included on page 111 with thresholds for diagnosis on page 29.

Treatment of people with non-diabetic hyperglycaemia

Key points: Those given an OGTT but not diagnosed with diabetes are likely to have non-diabetic hyperglycaemia (i.e. impaired fasting glucose or impaired glucose tolerance). This is a risk factor both for future diabetes and for vascular disease. These patients should be given information about the symptoms of diabetes (and contact their GP straight away if these develop) and should be recalled for an appointment that includes a blood glucose test every year where possible or at least every two years.

Related stages: Individuals with, or likely to have, non-diabetic hyperglycaemia need to be given the appropriate lifestyle advice set out in Chapter 13 to help them eat healthily, optimise their weight, increase their physical activity and reduce other vascular disease risk factors.

Annex B. Treatment of people diagnosed with diabetes

Key points: Although the aim of the NHS Health Check programme is not to find existing disease, we do expect that the checks will identify some people who have undiagnosed vascular disease, particularly diabetes. It is vital that those people who are diagnosed with diabetes by a GP or general practice team through the NHS Health Check programme are given the best possible advice and treatment to help them manage the condition. This should include:

- information about diabetes, and an offer of structured education
- individualised nutritional advice
- an annual review, which includes measurements of BMI, waist, HbA_{1c}, blood pressure, cholesterol and triglycerides, smoking status, retinopathy, peripheral pulses, microalbuminuria and eGFR
- agreement of target HbA_{1c} and the appropriate treatment and support to achieve it
- contact details for patient groups such as Diabetes UK, and a copy of its leaflet *What diabetes care to expect* (<https://www.diabetes.org.uk/OnlineShop/New-to-Diabetes/What-diabetes-care-to-expect/>)

- Management of blood pressure, blood lipids, anti-thrombotic therapy, kidney damage, eye screening, neuropathic pain and other neuropathic complications according to NICE clinical guideline 66 *The management of type 2 diabetes*.

References

Type 2 diabetes: The management of type 2 diabetes. NICE clinical guideline 66. December 2008. www.nice.org.uk/nicemedia/pdf/CG066NICEGuidelineCorrectedDec08.pdf



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