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Promotion of physical activity among adults

Evidence into practice briefing

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This work was undertaken by the Public Health Collaborating Centre on Physical Activity on behalf of the Health Development Agency (HDA), but published after the functions of the HDA were transferred to the National Institute for Health and Clinical Excellence (NICE) on 1 April 2005. This document does not represent NICE guidance.

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Foreword

This evidence into practice briefing represents the culmination of work commissioned by the former Health Development Agency (HDA). It presents a series of evidence-based actions for promoting physical activity among adults. These have been formulated through the integration of published scientific literature with practitioner expertise and experience. The briefing includes characteristics of effective programmes for specific settings and population sub-groups, barriers to implementation and suggestions for action.

The HDA was established in 2000 to build the evidence base in public health with an emphasis on getting what works into practice. As part of its Evidence into Practice (EIP) work, the HDA commissioned several collaborating centres, including the Public Health Collaborating Centre (PHCC) on Physical Activity, to review the evidence and, through fieldwork with practitioners, present it in a meaningful and useful way to other practitioners, commissioners, managers and researchers. This briefing is the outcome of that process.

The work was undertaken by the PHCC on Physical Activity on behalf of the HDA. However, it was published after the HDA's functions were transferred to the National Institute for Clinical Excellence to form the National Institute for Health and Clinical Excellence (NICE). This document does not represent NICE guidance. Related fieldwork and technical reports are also available from NICE or from the PHCC on Physical Activity on request.

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Summary

This evidence into practice briefing aims to help increase and maintain the uptake of physical activity among adults. It is for professionals working in the statutory, voluntary and private sectors with roles and responsibilities for physical activity. A summary of suggested actions identified by the process are set out below.

Suggested actions for primary care

- Primary care is an extremely important setting for the promotion of physical activity. Interventions can be effective in both the short and medium term, and the important contribution of GPs needs to be combined with the expertise of exercise and behaviour change specialists to offer in-depth and continued support.
- A 'systems approach' is needed to integrate the promotion of physical activity into general practice rather than it being seen as an 'add on'. Incentives are needed to encourage primary care staff to work on 'lifestyle' issues such as physical activity. Currently, other priorities compete for attention.
- There need to be joined-up approaches, including pooled budgets.
- There are clear training needs for GPs and other professionals for promoting physical activity (and to some extent counselling for other lifestyle issues).

Suggested actions for community interventions

- Interventions targeting individuals in community settings are effective in increasing physical activity, and are likely to be effective in producing mid- to long-term changes in physical activity.
- The design and components of projects should be based on behavioural theories. Projects should tailor their options for activity on the needs of their participants and offer a range of moderate physical activities, especially walking.
- Projects should contain:
  – tailored and targeted programmes to reach inactive individuals
  – regular support and contact with project staff
  – promotion of home-based walking and other moderate-intensity physical activities
  – a choice of local opportunities to be active
  – access to local specialists
  – physical activity advice and supervision for project staff and participants.

However, there is a gap between the evidence from academic reviews of interventions and the experiences (and needs) of practitioners. Most of the review-level evidence is from relatively small-scale interventions targeting individuals in community settings. These small schemes are often carried out in relatively artificial research situations that cannot readily be translated into true community-wide interventions. However, physical activity practitioners have a need for community approaches that can have an impact at the population level.

A key challenge is to design and implement community programmes that operate at the scale needed to make a population-level impact.

Commissioners of community physical activity projects should develop guidance for local physical activity promoters on the requirements for project evaluation. These guidelines should include the extent and type of evaluation required by funding bodies.

Suggested actions for older people

- Physical activity programmes for older people can be popular, well-attended and effective in increasing physical activity, but they need to be designed to meet the needs of the participants.

- Programmes should be targeted as much as possible according to the age group of the participants and their capacity to exercise, levels of independence and stated preferences for types of physical activity.
- Commissioners of physical activity programmes for older people should consider the following components:
  - exercise counselling and instruction
  - structured class or group-based physical activity sessions
  - home-based physical activities, particularly walking
  - telephone and written contact and support
  - computer-generated feedback and messages
  - informal group meetings and events
  - use of exercise log books
- Where possible, programmes should be designed to incorporate existing networks and facilities that older people use, and should be organised by a partnership of health and voluntary sector agencies.

Introduction

What is this evidence into practice briefing about?

This briefing provides a series of suggestions for evidence-based actions for physical activity interventions that can help increase and maintain the uptake of physical activity among adults. It integrates published scientific literature with practitioner expertise and experience, including advice on how to overcome typical barriers and obstacles to effective practice.

Who is the briefing for?

The suggestions for action in this briefing are for any professionals working in the public, private and voluntary sectors who have either a direct or indirect role and/or responsibility for physical activity. This includes directors of public health, public health advisors, commissioners of services, walking and cycling officers, sustainable travel managers, school travel advisors, exercise and leisure professionals, primary healthcare professionals, health trainers, and community development workers.

How was the briefing developed?

This briefing builds on work commissioned by the former Health Development Agency (HDA). It is based on an evidence briefing on the effectiveness of public health interventions for increasing physical activity among adults (Hillsdon et al. 2005) and a series of fieldwork meetings with experienced practitioners (report available on request).

Six 'plausible' actions that could be taken to promote physical activity were extracted from the findings of the evidence briefing. These were subjected to practitioner appraisal during a series of fieldwork meetings in autumn 2004. This process was undertaken to draw on the knowledge and experience of physical activity practitioners to determine the likelihood of success of these evidence-based actions in practice.

The complete findings from the fieldwork meetings can be found in the *Evidence into practice: Fieldwork report* (Cavill et al. 2006), which is available on request; the methodology for the process is described in the *Evidence into practice: Technical report* (Buxton et al. 2006), also available on request.

Why focus on physical activity?

The Chief Medical Officer (CMO) has stated that adults who are physically active have a 20-30% reduced risk of premature mortality and up to 50% reduced risk of developing several major chronic diseases such as coronary heart disease, stroke, diabetes and cancers (Department of Health 2004).

The CMO's report provides a concise summary of the relationship between physical inactivity and socio-economic status. Population surveys have reported that the prevalence of physical inactivity is higher in:

- some ethnic minority groups
- people in low-income households
- those in lower social classes
- people with low levels of education.

Therefore, encouraging the most disadvantaged groups in society to become more active has the greatest potential to reduce health inequalities.

What is the policy context?

Encouraging physical activity is a component of many aspects of government policy. Cross-government action on physical activity was brought together by the Department of Health in *Choosing activity: a physical activity action plan* (Department of Health 2005). This sets out the government's plans to encourage and coordinate the action of a range of departments and organisations to promote increased participation in physical activity across England.

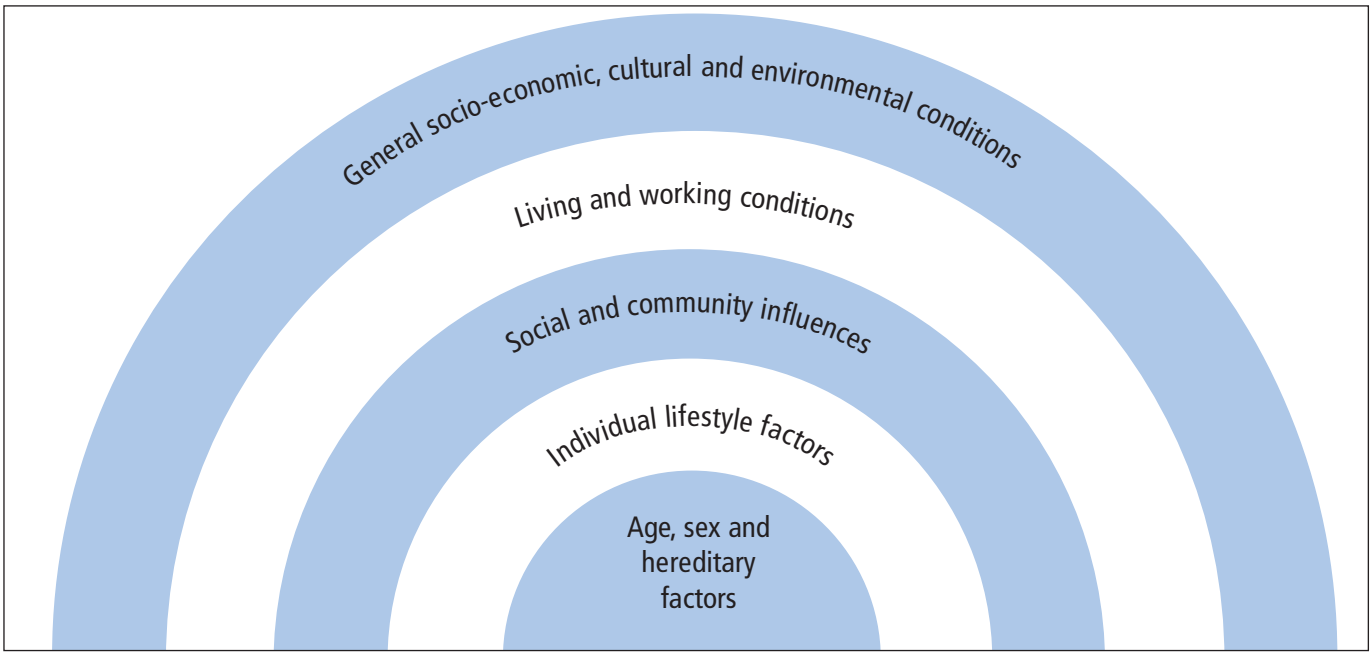
Factors that influence participation in physical activity

The health of individuals and populations is influenced, positively or negatively, by a wide range of inter-related factors. These factors, also referred to as determinants of health, are presented in Figure 1 below as layers of influence, starting with the individual and moving to wider society.

Individuals' health behaviours are influenced by intrapersonal, socio-cultural, policy and physical-environmental factors. These variables are likely to interact, and multiple levels of environmental variables, such as living and working conditions, and community characteristics are relevant for understanding and changing health behaviours (Sallis and Owen 2002).

- At the intrapersonal level, consistent associations have been found with biological, psychological, cognitive and emotional factors, such as age, personal confidence, education, social class, and behavioural attributes and skills.
- At the socio-cultural level, several factors have consistent positive associations with physical activity. These include social support from peers, social support from one's spouse or family, and influence of a general practitioner.
- At the physical-environmental level, a wide range of influences on physical activity have been proposed. These include climate and seasonal factors, access to physical programmes and facilities, aspects of urban design such as residential density, and land use mix.

Figure 1: Determinants of health (Dahlgren and Whitehead 1991)



Key stakeholders and the roles of different professionals

Physical activity is relevant to many aspects of national, regional and local public policy. The promotion of physical activity interventions requires active involvement of many sectors, including multi-agency governmental departments, public health, healthcare, the fitness industry, parks and recreation, criminal justice, transportation agencies, schools, employers, sports organisations, urban planners, architects, mass media and voluntary agencies.

In specific settings, it is important to tailor the composition of multi-sectoral action to the situation. For example, in primary care, programmes can involve GPs, practice nurses and receptionists, health trainers, health-walks coordinators, local authorities and private leisure service providers.

The evidence base for effective interventions: review-level findings

Introduction

This section presents the evidence base for effective interventions for physical activity promotion among adults. These findings are based on a 'review of reviews'. This approach involves identifying and synthesizing the findings from published reviews of research within specific fields of physical activity. Each review paper meets set criteria and in turn has identified and selected individual studies for inclusion. Review-level evidence presents a systematic appraisal of findings from existing review papers. This review-level evidence has been published as an HDA evidence briefing (Hillsdon et al. 2005).

The advantage of this approach is that it allows a synthesis of findings from a large body of literature to enable interventions to be built on a strong supporting evidence base. However, the limitations are that reviews tend to focus on a relatively narrow spectrum of potential evidence and define precisely the context and actions of their included studies. The summary of findings in a 'review of reviews' can sometimes reduce the applicability of this synthesis to everyday practice.

Evidence of effectiveness on interventions aimed at promoting physical activity was found for a variety of approaches with different target groups or in different settings. These fall into three main categories: interventions in healthcare and community settings, and interventions among older people. The evidence of effectiveness is restricted to interventions focused on adults.

Interventions in healthcare settings

Review-level evidence suggests:

- brief advice from a health professional, supported by written materials, is likely to be effective in producing a modest, short-term (6–12 weeks) effect on physical activity
- referral to an exercise specialist based in the community can lead to longer-term (> 8 months) changes in physical activity
- short-term effectiveness of primary prevention interventions is associated with single-factor interventions (physical activity only) that focus on the promotion of moderate-intensity physical activity (typically walking) in a sedentary population.

Interventions in community settings

Review-level evidence suggests:

- interventions targeting individuals in community settings are effective in producing short-term changes in physical activity and are likely to be effective in producing mid- to long-term changes in physical activity
- interventions based on theories of behaviour change, which teach behavioural skills and are tailored to individual needs, are associated with longer-term changes in behaviour than interventions without a theoretical base
- interventions that promote moderate-intensity physical activity, particularly walking, and are not facility dependent, are also associated with longer-term changes in behaviour
- studies that incorporate regular contact with an exercise specialist tend to report sustained changes in physical activity.

Interventions among older people

Review-level evidence suggests:

- interventions restricted to adults aged 50 and older are effective in producing short-term changes in physical activity, and there is limited evidence that they can be effective in producing mid- to long-term changes in physical activity
- a range of intervention strategies is associated with increases in physical activity with no one approach consistently and significantly superior
- interventions that use individual-based or group-based behavioural or cognitive approaches with a combination of group- and home-based exercise sessions are equally effective in producing changes in physical activity
- interventions that promote moderate intensity and non-endurance physical activities (eg flexibility exercises) are associated with changes in physical activity
- interventions that provide support and follow-up are also associated with changes in physical activity.

Attributes of effective interventions

Review-level evidence suggests that effective interventions tend to share a number of common attributes:

- individualised advice and counselling for behaviour change with supporting written physical activity materials. These contacts include the chance for the participant to examine their beliefs, experiences and confidence about physical activity. It also includes goal setting, self-monitoring and identifying social support
- regular follow-up and re-assessment of progress
- encouragement to self-select moderate-intensity physical activity that can be taken from the home, particularly walking
- the option to participate in supervised and unsupervised programmes of physical activities including aerobics, walking and cycling.

Gaps in the evidence base

Inconsistent review-level evidence was found on the effectiveness of interventions in the workplace. One review found no statistically significant increases in physical activity or fitness (Dishman et al. 1998) while another reported 'strong evidence' of the effectiveness of workplace interventions (Proper et al. 2003).

Very few studies have been conducted with people from black and minority ethnic groups, and it is not currently possible to provide review-level evidence of effectiveness of interventions focusing on these groups.

One review looked at interventions among people with physical limitations but this did not provide evidence of effectiveness of interventions focusing on people with a disability (Taylor et al. 1998).

None of the reviews specifically explored the effectiveness of physical activity interventions in disadvantaged groups. Population surveys have reported that the prevalence of physical inactivity is higher in some black and minority ethnic groups, in people in low-income households, in lower social classes and in people with low levels of education. The absence of evidence of effectiveness for physical activity interventions with disadvantaged groups must be considered carefully by managers, policy makers and commissioners of services. New physical activity projects may inadvertently increase the gradient of mortality and morbidity if projects have a differential impact on social groups.

By far the majority of intervention studies identified in the evidence briefing (Hillsdon et al. 2005) have been targeted at the individual level and limited to a specific setting or definition used in a particular review. This type of intervention, at very best, will have a limited impact on population levels of physical activity. Examples of population-based approaches to promote physical activity using legislation or the physical and social environment were not examined by the reviews, as they tend to be limited to primary studies with experimental or quasi-experimental study designs. Evidence briefings therefore exclude a substantial amount of literature from consideration.

Consequently, no review-level evidence is available on the effectiveness of physical activity interventions where policy or the environment is changed. Crucially, although

there is no review-level evidence to support a certain intervention or programme, it does not mean there is absolutely no evidence of its effectiveness, just that no evidence was found from reviews that met the inclusion criteria.

Results of the fieldwork meetings: evidence-based actions

This section presents a series of evidence-based actions that can be taken to promote physical activity. The shaded boxes set out evidence-based actions, based on the review-level evidence statements from the evidence briefing (Hillsdon et al. 2005 – see also previous section). Each is followed by points raised by practitioners gathered from fieldwork meetings held across England in autumn 2004. These give supporting context for each action and pointers to the characteristics of effective programmes and barriers to implementation. Full details of this methodology are set out in the *Evidence into practice: Fieldwork report* (available on request).

Healthcare settings – suggested actions for primary care staff and allied health professionals

Evidence-based action 1

GPs and other health professionals should provide brief advice about physical activity to all inactive patients, supported by written materials.

- GPs are seen as having a potentially important role in the process of promoting physical activity but there are limitations to their role. These include:
  - level of personal beliefs
  - GPs' own level of exercise
  - GPs' knowledge and understanding of 'current messages' on physical activity
  - lack of time within the consultation
  - lack of perceived importance of physical activity.
- Health professionals other than GPs are sometimes better placed to deliver counselling and ongoing support. Their role and potentially greater scope should not be overlooked.

Evidence-based action 2

Systems should be developed in primary care to promote access to community exercise specialists or behaviour change specialists who can offer ongoing support and advice to inactive people.

- Promotion of physical activity needs to be integrated into general practice systems to avoid it being seen as an 'add on'.
- Referral to practitioners with dedicated time and the right skills enables them to dedicate more time to focus on physical activity with each patient.

Evidence-based action 3

Healthcare professionals should target inactive patients with single-factor interventions where possible. These should focus on moderate-intensity physical activity, particularly walking.

- While there is evidence to support a focus on single-factor interventions, in practice there are many situations where physical activity needs to be promoted in conjunction with other health behaviours. This is particularly important when dealing with obese patients, or when patients see physical activity as part of a holistic 'lifestyle' issue.
- A narrow and prescriptive approach to promoting physical activity should be avoided. It is important to make sure that patients are offered choice and ongoing support.
- It is important to be able to adapt the approach taken according to the characteristics – and expressed needs – of the patient. This includes other types or intensity of activity that may be preferred by the patient, or that may be more appropriate.

Characteristics of effective programmes

- Referral to well-trained staff who can draw on a range of experience and training including behaviour change theory; physical activity expertise; experience in working with people with specific conditions.
- Programmes offering a choice of activity and/or a choice of venue.
- Programmes offering ongoing support in the community, ideally linked to a supportive environment for physical activity.
- Programmes run in conjunction with partners – often from the local authority or voluntary sector.

Barriers to implementation

- Roles or capabilities of individual health professionals.
- Lack of necessary systems in place within primary care, which limits the ongoing and systematic promotion of physical activity.
- Lack of a 'prevention culture' within primary care.
- Lack of clarity and consistency on what constitutes an 'exercise specialist'.
- Few incentives to promote physical activity within primary care systems.
- A pressure to demonstrate cost effectiveness.

Summary – suggested actions for primary care

Primary care is an extremely important setting for the promotion of physical activity. Interventions can be effective in both the short and medium term, and the important contribution of GPs needs to be combined with the expertise of exercise and behaviour change specialists to offer in-depth and continued support.

A 'systems approach' is needed to integrate promotion of physical activity into general practice rather than it being seen as an 'add on'. Incentives are needed to encourage primary care staff to work on 'lifestyle' issues such as physical activity. Currently, other priorities compete for attention.

There need to be joined-up approaches, including pooled budgets.

There are clear training needs for GPs and other professionals for promoting physical activity (and to some extent counselling for other lifestyle issues).

Community settings – suggested actions for commissioners and service providers

There is wide variation in interpreting the term 'community setting'. The reviews included in the evidence briefing tend to define a community intervention as one that did not occur within another setting such as healthcare or the workplace, or where the recruitment of participants was from the community, using newspaper advertisements or existing community organisations. These definitions are less broad than many of the approaches described by participants in the fieldwork meetings, which tended to be more pragmatic and focused on engaging priority communities.

Evidence-based action 1

Community interventions should be developed using theories of behaviour change, offering tailored and targeted programmes to inactive individuals, backed up with ongoing support.

- Community approaches to physical activity promotion should focus on delivering well targeted, individual-based interventions.

Evidence-based action 2

Programmes should promote home-based walking and other moderate-intensity physical activities and offer participants the choice of using a range of local opportunities to be active.

- Although the review-level evidence supports the promotion of walking in preference to activities that can be carried out from a facility, in practice there are many people who may prefer activities other than walking.

Characteristics of effective programmes

- Local partnerships for implementation are essential and have the added benefit of offering adults choice of where and how to be active.
- Local opportunities to be active should match the expressed needs of that community.
- Encouraging the social aspects of community programmes that provide social support for behaviour change.

- Developing strong links with the local community and using lay volunteers to encourage programme participants.

Barriers to implementation

- Concerns about the lack of impact at a population level of many of the community approaches being implemented.
- Short-term and inadequate budgets.
- Difficulties in accessing priority groups in the community.
- Insufficient staff trained at sufficient levels.
- Lack of confidence in using behaviour theory in programme design.
- Uncertainty of the type and scope of evaluations required by local funding bodies.
- Uncertainty about evaluating local physical activity projects.
- Population-based approaches to physical activity promotion remain underdeveloped and unevaluated at a community level.

Summary – suggested actions for community-based interventions

Interventions targeting individuals in community settings are effective in increasing physical activity, and are likely to be effective in producing mid- to long-term changes in physical activity.

The design and components of projects should be based on behavioural theories. Projects should tailor their options for activity on the needs of their participants and offer a range of moderate physical activities, especially walking.

Projects should contain:

- tailored and targeted programmes to reach inactive individuals
- regular support and contact with project staff
- promotion of home-based walking and other moderate-intensity physical activities
- a choice of local opportunities to be active
- access to local specialists
- physical activity advice and supervision for project staff and participants.

However, there is a gap between the evidence from academic reviews of interventions and the experiences (and needs) of practitioners. Most of the review-level evidence is from relatively small-scale interventions targeting individuals in community settings. These small schemes are often carried out in relatively artificial research situations that cannot readily be translated into true community-wide interventions. However, physical activity practitioners have a need for community approaches that can have an impact at the population level.

A key challenge is to design and implement community programmes that operate at the scale needed to make a population-level impact.

Commissioners of community physical activity projects should develop guidance for local physical activity promoters on the requirements for project evaluation. These guidelines should include the extent and type of evaluation required by funding bodies.

Older adults – suggested actions for commissioners and service providers

Although the following suggestions for action are made for interventions aimed at the broad group of older adults defined as aged 50 and over, in practice care should be taken to further segment this target group wherever possible. The needs and motivations of the over 50s are diverse, and effective interventions need to cater for this diversity.

Evidence-based action

A range of physical activity programmes should be developed that target adults aged 50 and over. These should include a combination of individual and group approaches using either group-based or home-based exercise sessions with support and follow-up.

- Programmes should be designed specifically for each age group and targeted very closely to their needs, including their level of current exercise and degree of independence.
- The social component of physical activity is important for older people, which may make group activities preferable.

Characteristics of effective programmes

- Choice of activities offered to older people.
- Joined-up services between health and other partners, particularly the voluntary sector.
- Existing networks and facilities for older people used.
- Ongoing support offered to participants.

Barriers to implementation

- Short-term and inadequate budgets.
- Local authority services may be inappropriate to the needs of older people.
- Difficulties in reaching certain groups in under-represented communities.
- An unsupportive environment for physical activity – including the internal environment in residential homes.
- A perception that physical activity may be 'too risky' for older people.
- A lack of well-targeted training for people working with older people.

Summary – suggested actions for older people

Physical activity programmes for older people can be popular, well-attended and effective in increasing physical activity, but they need to be designed to meet the needs of the participants.

Programmes should be targeted as much as possible according to the age group of the participants and their capacity to exercise, levels of independence and stated preferences for types of physical activity.

Commissioners of physical activity programmes for older people should consider the following components:

- exercise counselling and instruction
- structured class or group-based physical activity sessions
- home-based physical activities, particularly walking
- telephone and written contact and support
- computer-generated feedback and messages
- informal group meetings and events
- use of exercise log books.

Where possible, programmes should be designed using existing networks and facilities that older people use, and should be organised by a partnership of health and voluntary sector agencies.

Workplace

The evidence found inconsistent findings on the effectiveness of interventions in the workplace so it is not possible to suggest evidence-based actions for practice. However, practitioners who have experience in promoting physical activity in the workplace identify a number of themes.

- The workplace is seen to offer great potential for the promotion of physical activity, although there is little firm evidence for the effectiveness of physical activity promotion in the workplace.
- The collection of evidence is problematic for most people engaged with workplace physical activity promotion.
- Case studies of workplace health promotion interventions are both positive and negative.
- More successful programmes have some common components: a project 'champion', consultation and choice of activities.
- Barriers to workplace health promotion are mainly a lack of time and investment in the subject.

Black and minority ethnic groups

Very few physical activity intervention studies have been conducted with people from black and minority ethnic groups, and there are no published reviews. It is therefore not possible to suggest review-level evidence-based actions for interventions focusing on these groups.

However, practitioners who have experience in promoting physical activity among black and minority ethnic groups identified a number of themes.

- Programmes targeting black and minority ethnic groups are seen to be an important aspect of a comprehensive approach to physical activity promotion. However, there is little evidence for the effectiveness of interventions among black and minority ethnic groups.
- There are, however, many anecdotal reports of successful programmes working with black and minority ethnic groups. These share some common characteristics: strong consultation, culturally appropriate activities, building projects on existing community structures, and paying attention to language and cultural issues.

- Key barriers to effective promotion of physical activity among people from black and minority ethnic groups include a lack of understanding of cultural issues, problems in accessing mainstream services and debates about integration.

People with a disability

To date, there is only one review of interventions on physical activity among people with physical limitations and this did not provide evidence of effectiveness of interventions focusing on people with a disability (Taylor et al. 1998). It is therefore not possible to suggest review-level evidence-based actions for interventions focusing on people with a disability.

However, practitioners who have experience in promoting physical activity among people with a disability identified a number of themes.

- Many practitioners have a great deal of varied experience in promoting physical activity to people with a disability, and many schemes are seen to be quite successful. However, as with many other subjects, there is little in the way of firm evidence.
- There is a clear need for assistance with evaluation.
- Key issues are offering a choice of 'mainstream' or special provision, increasing the amount of disability awareness training, and studying the implications of the Disability Discrimination Act.
- Key barriers are:
  - political opposition to spending money on people with a disability
  - logistical issues, especially staff and staff training
  - lack of capacity to provide a comprehensive service
  - physical barriers in the built and natural environment
  - societal barriers to disability and the attitudes of providers and funders.

Evidence into practice

This section presents options for commissioners and service providers of physical activity to translate the suggestions for effective action into developing and implementing programmes and projects.

This translation reflects the findings from the evidence briefing (research) – see p7 – and evidence-based actions (research and practice) – see p10 – within the three main areas: healthcare, community and older people. This approach parallels the approaches outlined in *Choosing activity: a physical activity action plan* (Department of Health 2005), which sets out proposals for 'Active healthcare systems' and 'Active communities'. Both areas include specific actions for older people.

PROGRAMME DEVELOPMENT

	Active healthcare system	Active communities	Active older people
What are the key policies?	– *Choosing activity: a physical activity action plan* – National Service Frameworks for CHD, diabetes, mental health – PCT Local Delivery Plans	– *Choosing activity: a physical activity action plan* – PCT Local Delivery Plans – ODPM Communities Plan – Regional Sports Board plans – DCMS public service agreement	– *Choosing activity: a physical activity action plan* – PCT Local Delivery Plans – National Service Framework for older people
What are the goals of this work?	Health professionals increasing the provision of advice to patients on lifestyle, particularly of physical activity both routinely and opportunistically Services developed within the healthcare system to provide ongoing support to achieve sustainable behaviour change NHS providers and PCTs working more closely with local government and private and voluntary sectors to create access to opportunities for physical activity	Identifying sedentary individuals and groups and designing tailored and targeted programmes to meet their needs Creating and promoting a range of local opportunities to take part in walking and other types of physical activity Developing programmes that offer ongoing support to people in appropriate community settings	Health professionals working in alliance with others (notably the voluntary sector) to design physical activity programmes specifically for older people Offering group- and home-based exercise sessions with support and follow-up Offering programmes as targeted as possible, according to the specific age group of the participants, and their capacity to exercise, levels of independence and stated preferences for types of physical activity
Who are the key partners?	Public Health Groups (PHGs), regional physical activity coordinators, strategic health authorities, PCTs, local councils, leisure service providers	Public Health Groups (PHGs), regional physical activity coordinators, local councils, leisure service providers, park wardens and country park rangers, voluntary sector agencies, private sector including slimming clubs	Public Health Groups (PHGs), regional physical activity coordinators, PCTs, local councils, leisure service providers, voluntary sector including ageing organisations, wardens in residential accommodation or sheltered housing
Where is the funding?	– PCT main allocation – Physical Activity Promotion Fund – Additional funding as part of Local Delivery Plans – Local partners	– PCT main allocation – Physical Activity Promotion Fund – Local authority leisure services	– PCT main allocation – Physical Activity Promotion Fund – Local authority leisure services – Age Concern and other agencies

PROJECT IMPLEMENTATION

	Active healthcare system	Active communities	Active older people
What interventions can be suggested?	GPs and other health professionals should provide brief advice about physical activity to all inactive patients, supported by written materials. Systems should be developed in primary care to promote access to community exercise specialists or behaviour change specialists who can offer ongoing support and advice to inactive people. Healthcare professionals should target inactive patients where possible with single-factor interventions that focus on moderate-intensity physical activity, particularly walking	Community interventions should be developed using theories of behaviour change, offering tailored and targeted programmes to inactive individuals, backed up with ongoing support Programmes should promote home-based walking and other moderate-intensity physical activities and offer participants the choice of using a range of local opportunities to be active	A range of physical activity programmes should be developed that target adults aged 50 and over. These should include a combination of individual or group approaches using either group-based or home-based exercise sessions with support and follow-up
What are the characteristics of evidence-based working?	Assessment of physical activity using primary care physical activity measure Referral to staff who can draw on a range of experience and training including behaviour change theory, physical activity expertise, and experience in working with people with specific conditions Programmes offering a choice of activity and/or a choice of venue Programmes offering ongoing support in the community, ideally linked to a supportive environment for physical activity Programmes run in conjunction with partners – often from the local authority or voluntary sector	Local partnerships to extend adults' choice of where and how to be active Local opportunities to be active based on the expressed needs of that community Encouragement of the social component of community programmes to maintain support for behaviour change Developing strong links with the local community and using lay volunteers to encourage programme participants	Offering choice of activities to older people Joining-up services between health and other partners, particularly the voluntary sector Using existing networks and facilities for older people Offering ongoing support to participants

SUPPORTING ACTIVITY

	Active healthcare system	Active communities	Active older people
How to increase the capacity for local level physical activity promotion?	Improve systems of physical activity promotion in healthcare settings Improve training for GPs and other professionals in physical activity promotion (and to some extent counselling for other lifestyle issues) Develop specialist physical activity promoters particularly able to deal with obesity and integrate existing physical activity promotion schemes into care pathways for obesity Ensure physical activity advice is a part of the knowledge base of health trainers Provide evaluation training for project workers and managers	Improve training for health promotion and relevant local authority staff in behaviour change theory and practical application Forge strong multi-disciplinary partnerships to ensure broad community programmes Ensure that programmes are designed around the needs of the community Provide evaluation training for project workers and managers	Create strong partnerships between PCTs, local authority social services and voluntary sector agencies Design programmes using existing networks and facilities that older people use Seek the help of volunteers Provide evaluation training for project workers and managers
How to evaluate the effectiveness of interventions and programmes?	Any physical activity promotion initiative should have three components: planning, implementation and evaluation Evaluation is the key to good project management and is just as important as setting clear aims and objectives for the project Evaluation should be planned as part of overall project planning and ideally it should start before implementation of the project Evaluation does not need to be expensive but the World Health Organization recommends that evaluation should take up at least 10% of the budget for any new health promotion project (World Health Organization 1999) Assistance and guidance on evaluation is available from a number of sources, and independent evaluation can be commissioned from academic centres or from public health departments		

References and further information

HDA evidence briefing

Hillsdon M, Foster C, Cavill N et al. (2005) *The effectiveness of public health interventions for increasing physical activity among adults: a review of reviews.* 2nd Edition. London: Health Development Agency.

Individual reviews (identified in Hillsdon et al. 2005, and in order of publication date by year)

Hillsdon M, Thorogood, M (1996). A systematic review of physical activity promotion strategies. *British Journal of Sports Medicine* 30:84–9.

Ashenden R, Silagy C, Weller D (1997) A systematic review of the effectiveness of promoting lifestyle change in general practice. *Family Practice* 14:160–76.

Dishman RK, Oldenburg B, O'Neal H et al. (1998) Worksite physical activity interventions. *American Journal of Preventive Medicine* 15:344–61.

Dunn AL, Andersen RE, Jakicic JM (1998) Lifestyle physical activity interventions. History, short- and long-term effects, and recommendations. *American Journal of Preventive Medicine* 15:398–412.

Eaton CB, Menard LM (1998) A systematic review of physical activity promotion in primary care office settings. *British Journal of Sports Medicine* 32:11–6.

King AC, Rejeski WJ, Buchner DM (1998) Physical activity interventions targeting older adults. A critical review and recommendations. *American Journal of Preventive Medicine* 15:316–33.

Simons-Morton DG, Calfas KJ, Oldenburg B et al. (1998) Effects of interventions in health care settings on physical activity or cardiorespiratory fitness. *American Journal of Preventive Medicine* 15:413–30.

Taylor WC, Baranowski T, Young DR (1998) Physical activity interventions in low-income, ethnic minority, and populations with disability. *American Journal of Preventive Medicine* 15:334–43.

Eakin EG, Glasgow RE, Riley KM (2000) Review of primary care-based physical activity intervention studies: effectiveness and implications for practice and future research. *Journal of Family Practice* 49:158–68.

Lawlor DA, Hanratty B (2001) The effect of physical activity advice given in routine primary care consultations: a systematic review. *Journal of Public Health Medicine* 23:219–26.

Eden KB, Orleans T, Mulrow C et al. (2002) Does counselling by clinicians improve physical activity? A summary for the US Prevention Services Task Force. *Annals of Internal Medicine* 137:208–15.

Petrella RJ, Lattanzio CN (2002) Does counselling help patients get active? Systematic review of the literature. *Canadian Family Physician* 48:72–80.

Smith BJ, Merom D, Harris P et al. (2002) *Do primary care interventions to promote physical activity work? A systematic review of the literature*. Sydney: NSW Centre for Physical Activity and Health.

Van der Bij AK, Laurant MG, Wensing M (2002) Effectiveness of physical activity interventions for older adults: a review. *American Journal of Preventive Medicine* 22:120–33.

Conn VS, Minor MA, Burks KJ et al. (2003) Integrative review of physical activity intervention research with aging adults. *Journal of American Geriatrics Society* 51:1159–68.

Proper KI, Koning M, van de Beek AJ et al. (2003) The effectiveness of worksite physical activity programs on physical activity, physical fitness, and health. *Clinical Journal of Sports Medicine* 13:106–17.

Other references

Dahlgren G, Whitehead M (1991) *Policies and strategies to promote social equity in health*. Stockholm: Institute for Futures Studies.

Department of Health (2004) *At least five a week: evidence on the impact of physical activity and its relationship to health*. A report from the Chief Medical Officer. London: Department of Health.

Department of Health (2005) *Choosing activity: a physical activity action plan*. London: Department of Health.

Sallis JF, Owen N (2002) Ecological models of health behaviour. In: Glanz K, Rimer BK, Lewis FM, editors. *Health Behaviour and Health Education: Theory, Research and Practice*. Third edition. San Francisco: Jossey-Bass.

World Health Organization (1999) *Health promotion evaluation: recommendations to policy-makers*. Report of the WHO European Working Group on Health Promotion Evaluation. Page 10. Copenhagen: WHO Regional Office for Europe.

Technical report

The methodology for the process is described in the following report, which is available on request.

Buxton K, Almond L, Bull F et al. (2006, unpublished) Evidence into practice: Technical report. London: National Institute for Health and Clinical Excellence.

Fieldwork meetings

The fieldwork meetings were held in late 2004 in Loughborough, Taunton, Cambridge, Darlington and Wigan. The authors of this briefing extend special thanks to all the workshop participants who gave up their time and offered an invaluable insight into their expertise and experiences in promoting physical activity. The complete findings from the fieldwork meetings can be found in the following report, which is available on request.

Cavill N, Almond L, Bull F et al, (2006, unpublished) Evidence into practice: Fieldwork report. London: National Institute for Health and Clinical Excellence.

Case studies

A number of case studies have been collated and are available on request from NICE.