Appendix 11

Table of extracted evidence statements on ethnicity from the 40 international systematic reviews

Source	Overarching statement
Cochrane	
Bala *et al.* 2008[121]	No consistent relationship seen between campaign effectiveness and age, education, ethnicity or gender
	Highest smoking prevalence reported for African Americans
Brunner *et al.* 2007[232]	Dietary change may depend as much on wider determinants (access and availability of foods) as on information and motivation
	Reduction in fat intake shown for minority ethnic group in one trial
Dobbins *et al.* 2009[180]	Additional subgroup analysis of differences in physical activity by gender, age and ethnicity is required
	Research is needed to assess impact of strategies to increase physical activity that account for barriers and facilitators among children and adolescents of various ethnicities
Foster *et al.* 2005[204]	Included studies that did not examine the effect of intervention on participants from various ethnic groups (effectiveness of interventions in ethnic groups unknown)
Stead *et al.* 2006[136]	Targeted advertising may increase calls to smoking quit lines from ethnic groups
	Did not detect a significant increased benefit from either counselling or materials designed for African Americans
Database of Abstracts of Reviews of Effects	
Adams and White 2003[196]	Innovative strategies are required to recruit and retain hard-to-reach participants, such as those from ethnic minority groups
Ammerman *et al.* 2001[229]	Few studies were designed to allow for examination of the efficacy of intervention for ethnic subgroups (limited)
	Lacking good-quality research on dietary interventions for minority populations
	Few studies designed to be culturally or ethnically specific
	Studies that were designed to be culturally or ethnically specific (five studies) reported significant decreases in fat intake compared with studies that were not culturally or ethnically specific (magnitude unknown as insufficient number of studies to explore this)
Ammerman *et al.* 2002[230]	Sodium intake reduction interventions show greater effects in African Americans
Blue and Black 2005[211]	Discusses the importance of cultural tailoring and how culture influences people's health experiences and choices and calls for greater attention to account for these differences when interventions are designed. Intervention choices should include factors such as 'settings, culture, spirituality/religion affiliations and primary language'
	Discuss one included study aimed at native Hawaiians which did undertake cultural tailoring
	Reported that there were differential findings of interventions according to demographic factors including race in those studies which undertake this examination
	Focusing on particular demographic segments of the populations including racial/ethnic groups may also help to minimise attrition
Breckon *et al.* 2008[188]	Trials with 'perfect fidelity' for physical activity may not be adaptable across different cultures and therefore lack applicability in clinical practice
Brunton *et al.* 2003[179]	Ethnicity was not often reported compared with age and sex of children for physical activity interventions
	Views of children from minority ethnic groups are needed
	Little is known about how different social factors, such as gender, social class and ethnicity, interact and where and how to intervene successfully
	Girls and children from minority ethnic groups more restricted in their use of public space
Clemmens *et al.* 2004[198]	Interventions should be culturally sensitive and more context specific to the population
	Largest effect on reduction of television viewing hours was among African American girls (for reduction in obesity)

Source	Overarching statement
Contento *et al.* 1995[218]	More research needed to reach disadvantaged groups, e.g. non-white, with regard to diet
	Nutrition education should be tailored to the audience; segmentation should take into account under-represented populations, e.g. African Americans, Asian Americans
	Offering bilingual programmes may be effective; in some cases more extensive cultural adaptation may be necessary
	Ethnic and cultural differences in motivators need more investigation to build a culturally competent agenda
Coruh *et al.* 2005[227]	African Americans who attend church once a week have a greater life expectancy
	Faith-based collaborations may improve health outcomes in the African American community, e.g. fruit and vegetable intake
DeMattia *et al.* 2007[209]	Ethnicity was adjusted in determining intervention effect (statistical adjustment) (intervention to limit sedentary behaviours)
Dishman and Buckworth 1996[199]	Racial and ethnic minorities are under-represented in past research studies on physical activity
Dobbins *et al.* 2001[181]	Research is needed to assess the impact of physical activity strategies among children and adolescents, particularly those from various ethnic backgrounds
	Black girls found to be less active than white girls
Faith *et al.* 2007[217]	The availability of a supermarket in African American communities was associated with meeting dietary recommendations for fruit and vegetable intake, total fat intake and saturated fat intake
Foster and Hillsdon 2004[175]	Ethnicity may mediate the observed effect on stair use in one of the included studies
Hillsdon and Thorogood 1996[194]	Brisk walking holds potential for increasing activity levels as it is most likely to be adopted by a range of ethnic groups
Holtzman *et al.* 2004[215]	Questions of the review specifically considered to what extent these interventions had been delivered to ethnic minority populations, whether or not the efficacy differed for these populations and what factors mediated the effectiveness
	Included studies which compared ethnic minority and general population participants
	Quality assessment included whether or not the studies described the population participating well, including race/ethnicity; commented that in the studies where it was reported, all but two of the studies had majority white populations
	Advised that improved reporting of who the participants were, including their race/ethnicity, would help greatly in assessing the external validity of the results
	Proposed a model where cultural factors can be one of three targets for creating behaviour change
Hopkins *et al.* 2001[118]	Florida campaign provided evidence on the effectiveness of mass media campaigns among black populations
	Two studies found black adolescents more responsive to produce pricing (smoking)
Howerton *et al.* 2007[219]	Statistically adjusted for race, sex and duration of intervention
Jago and Baranowski 2004[178]	Five-a-day achievement badges led to increase in fruit and vegetable intake among African American boy scouts
Kroeze *et al.* 2006[207]	No significant differences in effects between different tailored interventions for African Americans
Kuhn *et al.* 1999[122]	Work with minority groups may require coalitions as a prerequisite for delivering health promotion strategies for smoking cessation
	Failure to work with community advisory groups can leave the community feeling that the project is not relevant to their culture and context
McArthur 1998[221]	Lack of research focused on ethnic minorities
	African Americans are at a greater risk than Caucasians for CVD
Morgan 2005[182]	Few studies collected information on ethnicity; results unlikely to apply to all populations. Some groups (e.g. Muslim women) may need different opportunities or settings for exercise
Müller-Riemenschneider *et al.* 2008[189]	Cultural adaptation of materials seems to increase effectiveness
Pomerleau *et al.* 2005[228]	Studies targeting smaller, specific communities including African American churches had larger effects on fruit and vegetable intake than general population interventions
	One intervention showed that culturally sensitive multicomponent self-help materials plus telephone motivational interviewing was more effective than standard nutrition education materials
Roe *et al.* 1997[222]	Limited evidence of interventions targeted at ethnic minority groups
	Further effort needed to develop and evaluate healthy eating interventions in ethnic minority populations in different settings
Salmon *et al.* 2007[210]	Further tailoring of physical activity for children from different ethnic backgrounds may be necessary

Source	Overarching statement
Seymour *et al.* 2004[216]	One study showed increased fruit and vegetable intake for members of African American churches in a multicomponent intervention
Thomas *et al.* 2003[223]	Children from ethnic minority groups were not well represented in healthy eating studies looking at barriers and facilitators
	Studies said little about reducing health inequalities
	Results not reported according to different subgroups
	This represents an area for further research
	Unclear how findings can be applicable to children from ethnic minority groups because of lack of reporting on ethnicity
	Relative impact of interventions unknown because not reported on in primary studies
Thomas *et al.* 2004[214]	Noted that few studies report the effect of factors, including culture, on the outcomes of interventions and acknowledges that these factors can result in differential outcomes
	Recommends that all studies should include analysis according to contextual factors, including culture, when determining their impact
van Sluijs *et al.* 2007[177]	No intervention effect was found for interventions targeting girls or ethnic minority groups
	Inconsistent evidence on association between ethnicity and physical activity in children, even though a third of the studies were targeted at ethnic groups
	Levels of physical activity tend to be lower in non-white ethnic groups, yet no interventions were identified that targeted adolescents from minority ethnic groups
	Research should focus on filling the gaps, i.e. the lack of studies among adolescent ethnic minority populations and preschool children, and interventions outside the school setting
Wall *et al.* 2006[237]	No studies to date have assessed the effects of incentives on dietary behaviour according to ethnic group, or measured cost-effectiveness
	Need for further RCTs to measure effectiveness of pricing strategies for dietary modification in ethnically diverse populations (who often experience higher rates of nutrition-related diseases)
Wilcox *et al.* 2001[183]	Interventions targeted to a population can produce significant effects
	More studies need to address the effectiveness of physical activity and dietary counselling delivered in health-care settings with ethnically diverse individuals
Williams *et al.* 2008[187]	Comparable results were found between an individually tailored, theory-based intervention and one that was not individually tailored among racial ethnic minority women
National Institute for Health Research Health Technology Assessment database	
Hellenius 2007[201]	Future research should take into consideration the ethical and social aspects, including the relationship between gender and ethnic background and physical activity
	No study has been designed to detect differences in effect with regard to ethnicity and the different methods suited to promote physical activity with various ethnic groups
Ranney *et al.* 2006[153]	Smokers from members of minority groups achieved higher rates of abstinence with a nasal spray
	A review of interventions specifically designed for particular racial or ethnic groups demonstrated the efficacy of a variety of smoking cessation interventions for minority populations
	Members of racial and ethnic minorities should be provided with effective treatments as an earlier review showed that smoking cessation treatments are effective across different racial and ethnic minorities

CVD, cardiovascular disease; RCT, randomised controlled trial.