UNIVERSITY OF CAMBRIDGE
Institute of Public Health

DISABILITY, DEMENTIA AND FRAILTY IN LATER LIFE – MID-LIFE APPROACHES TO PREVENT OR DELAY THE ONSET OF THESE CONDITIONS

REVIEW 3 – Effectiveness and cost-effectiveness of midlife interventions for increasing the uptake and maintenance of healthy lifestyle behaviours and the prevention or delay of dementia, disability, frailty and non-communicable chronic diseases related to modifiable lifestyle risk factors.

APPENDICES B-I

Produced by Cambridge Institute of Public Health, University of Cambridge

http://www.iph.cam.ac.uk

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Date 8th July 2014

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APPENDIX B1. Quality assessment for primary studies

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Author (Year)	A1	A2	A3	A3b	B1	B2	B3	B3b	C1	C2	C3	C3b	D1	D2	D3	D4	D5	D5b	Overall	Rating
Anderssen (2007)	Yes	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	Yes	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Arbour (2004)	N/A	Unclear	Yes	Unclear	Yes	No	No	Unclear	Yes	Yes	Yes	Low	No	Yes	Yes	No	No	Unclear	Unclear	+
Begh (2011)	Yes	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	No	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Blankers (2011)	Yes	Yes	Yes	Low	Yes	Yes	Yes	Low	Yes	Yes	Yes	Low	No	Yes	Yes	Yes	Yes	Low	Low	++
Boon (2011)	Yes	No	Yes	Low	Yes	No	Unclear	Unclear	Yes	Yes	Yes	Low	No	Yes	Yes	Unclear	No	Unclear	Low	++
Bowen (2006)	Unclear	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Unclear	Yes	Unclear	Yes	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Brown (2012)	N/A	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	No	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Cussler (2008)	Yes	Yes	Yes	Low	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	Yes	Yes	Yes	Unclear	Unclear	Unclear	Low	++
Elavsky (2009)	Yes	Unclear	Yes	Low	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	Yes	Yes	Yes	Unclear	Unclear	Unclear	Low	++
Ferney (2009)	Yes	Yes	No	Unclear	Yes	Unclear	Yes	Low	Yes	Yes	Yes	Low	No	Yes	Yes	Yes	Unclear	Low	Low	++
Gaston (2007)	N/A	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Unclear	Unclear Colesar	Unclear	Yes	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Hageman (2005)	N/A	Unclear	Yes	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	No	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Hall (2003)	Yes	Unclear	Yes	Low	Yes	Unclear	Unclear	Unclear	Unclear	Yes	Yes	Low	Unclear	No	No	Unclear	Unclear	Unclear	Low	++
Hall (2007)	Yes	No	Yes	Low	Yes	Uncle	Uncle	Uncle	Yes	Yes	Yes	Low	No	Yes	Yes	Uncle	Uncle	Uncle	Low	++

						ar	ar	ar								ar	ar	ar		
Hall (2009)	Yes	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	Yes	Yes	Yes	Unclear	Unclear	Low	Low	++
Halpin (2006)	Unclear	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	Yes	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Hardcastle (2013)	Yes	Yes	Yes	Low	Yes	Unclear	Yes	Low	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Unclear	Unclear	Unclear	Low	++
Hjerkinn (2004)	Unclear	Unclear	No	Unclear	No	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Hollis (2007)	Unclear	Yes	Yes	Low	Yes	Unclear	Yes	Low	Yes	Yes	Yes	Low	Yes	Yes	Yes	Yes	Yes	Low	Low	++
Hotting (2012)	Unclear	Unclear	Yes	Unclear	Yes	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Kamada (2013)	Yes	Yes	Yes	Low	Yes	Yes	Yes	Low	Yes	Yes	Yes	Low	Unclear	Yes	Yes	Unclear	Unclear	Unclear	Low	++
King (2008)	Unclear	Unclear	Yes	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	No	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
King (2013)	Yes	Unclear	Yes	Low	Yes	Unclear	Unclear	Unclear	Unclear	Yes	Yes	Low	Unclear	Yes	Yes	Unclear	Unclear	Unclear	Low	++
Lakerveld (2013)	Yes	Yes	Yes	Low	Yes	Unclear	Yes	Low	Yes	Yes	Yes	Low	Yes	Yes	Yes	Yes	Yes	Low	Low	++
Lee (2010)	Yes	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Unclear	Unclear	Yes	Unclear	No	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Lee (2012)	N/A	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	No	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Lock (2006)	Yes	Unclear	Yes	Low	Yes	Yes	Unclear	Low	Yes	Yes	Yes	Low	Yes	Yes	Yes	Unclear	Unclear	Unclear	Low	++
McDermott (2011)	Yes	Unclear	Yes	Low	Yes	Unclear	Unclear	Unclear	Unclear	Yes	Yes	Low	No	Yes	Yes	Unclear	Unclear	Unclear	Low	++
Maiorana (2001)	Unclear	Yes	Unclear	Unclear	Yes	Unclear	Yes	Low	Yes	Yes	Yes	Low	No	Yes	Yes	Yes	Unclear	Low	Low	++
Marteau (2012)	Yes	No	Yes	Low	Yes	No	No	High	Yes	Yes	Yes	Low	Unclear	Yes	Yes	No	No	Unclear	Unclear	+
Moustaka (2012)	N/A	Unclear	Unclear	Unclear	Yes	No	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Palumbo (2012)	Unclear	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	No	Yes	Yes	No	No	High	Unclear	+
Pratley (2000)	N/A	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	Yes	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Ramos-Jiminez (2009)	No	No	N/A	High	N/A	No	No	High	Yes	N/A	N/A	Unclear	No	Yes	Yes	Unclear	Unclear	Unclear	Unclear	-

Sheeran (2013)	Yes	Yes	Unclear	Low	Yes	Yes	Unclear	Low	Yes	Yes	Yes	Low	Unclear	Yes	Yes	Unclear	Yes	Low	Low	++
Stadler (2009)	Yes	Unclear	Yes	Low	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	No	Yes	Yes	Unclear	Unclear	Unclear	Low	++
Turner (2003)	N/A	N/A	N/A	High	N/A	N/A	N/A	High	N/A	N/A	N/A	High	Unclear	No	Yes	N/A	N/A	High	High	-
Ueda (2004)	Unclear	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	No	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Vogt (2012)	Unclear	Unclear	Yes	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	Yes	Yes	Yes	Unclear	Unclear	Low	Low	++
Williams (2010)	Unclear	Unclear	Unclear	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	Yes	Yes	Yes	Unclear	Unclear	Low	Low	++
Wright (2011)	Yes	Yes	No	Unclear	Yes	No	No	Unclear	Yes	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	No	No	Unclear	+
Yoshikawa (2009)	No	Unclear	Yes	Unclear	Yes	Unclear	Unclear	Unclear	Yes	Yes	Yes	Low	No	Yes	Yes	Unclear	Unclear	Unclear	Unclear	+
Zautra (2012)	Unclear	Unclear	Unclear	Unclear	Yes	No	Yes	Low	Yes	Yes	Yes	Low	No	Yes	Yes	Unclear	Unclear	Unclear	Low	++

APPENDIX B2. Quality assessment of systematic reviews (AMSTAR)

Key: 1. 'a priori design; 2. Duplicate study selection and data extraction?; 3. Comprehensive literature search; 4. Status of publication as an inclusion criterion?; 5. List of studies (included and excluded provided)?; 6. Characteristics of the included studies provided? 7. Scientific quality of the included studies assessed and documented?; 8. Scientific quality of the included studies considered in formulating conclusions?; 9. Appropriate method to combine findings; 10. Publication bias; 11. Conflict of interest. **See tool on Appendix H.4**

Ranking: key questions are 2, 3, 6, 7, 8. If yes to all 5, then review ranked ++; if scores 3-4 then +; if scores 1-2 then -

AMSTAR													
			Items										
Author (Year)	Code	Study design	1	2	3	4	5	6	7	8	9	10	11	Ranking
Armstrong (2011)	R3 WL	Systematic review	C/A	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	++
Esposito (2011)	R3 WL	Systematic review	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	++
Zbikowski (2012)	R3 SMO	Systematic review	No	C/A	No	Yes	No	No	C/A	C/A	No	No	No	-
Lindson (2010)	R3 SMO	Systematic review	Yes	No	Yes	C/A	Yes	Yes	Yes	Yes	Yes	Yes	No	+
Rees (2013A)	R3 DIET	Systematic review	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	++
Rees (2013B)	R3 DIET	Systematic review	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	++
Hooper (2012)	R3 DIET	Systematic review	Yes	Yes	Yes	C/A	Yes	Yes	C/A	C/A	Yes	Yes	No	+
Rioux (2013)	R3 PA mm	Systematic review	No	C/A	No	No	No	Yes	Yes	Yes	No	No	No	+
Leavey (2011)	R3 PA mm	Systematic review	No	C/A	Yes	Yes	No	No	No	No	No	No	No	-
Foster (2013 Coch)	R3 PA mm	Systematic review	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	++
Foster (2013 Coch B)	R3 PA mm	Systematic review	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	++
Foster (2013 Coch C)	R3 PA mm	Systematic review	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	++
Davies (2012)	R3 PA mm	Systematic review	No	C/A	Yes	No	No	Yes	Yes	Yes	No	Yes	No	+
Conn (2011)	R3 PA mm	Systematic review	C/A	Yes	Yes	Yes	No	Yes	C/A	C/A	Yes	No	No	+
Abioye (2013)	R3 PA mm	Systematic review	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	++
Aalbers (20110	R3 LC	Systematic review	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	No	+
Bolam (2013)	R3 PA	Systematic review	No	Yes	Yes	No	No	Yes	Yes	Yes	No	No	No	++
Cavill (2012)	R3 PA	Systematic review	No	C/A	Yes	No	No	Yes	No	C/A	No	No	No	-
Ferreira (2012)	R3 PA	Systematic review	Yes	Yes	Yes	Yes	Yes	No	C/A	No	Yes	No	C/A	-

Hobbs (2013)	R3 PA	Systematic review	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	++
Cleland (2013)	R3 DG	Systematic review	No	Yes	Yes	C/A	No	Yes	Yes	Yes	Yes	Yes	No	++
Chapman (2013)	R3 DG	Systematic review	No	Yes	Yes	C/A	No	Yes	C/A	Yes	Yes	C/A	No	+
Ali (2012)	R3 LC mm	Systematic review	No	Yes	Yes	C/A	No	No	Yes	C/A	Yes	Yes	No	+
Ebrahim (2011)	R3 LC mm	Systematic review	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	++
Hopper (2011)	R3 LC mm	Systematic review	No	Yes	No	No	No	Yes	C/A	C/A	Yes	Yes	No	-
Wu (2011)	R3 CE	Systematic review	No	Yes	Yes	Yes	No	C/A	Yes	Yes	No	C/A	Yes	+
Webb (2010)	R3 DG	Systematic review	No	C/A	Yes	Yes	No	C/A	C/A	Yes	Yes	No	No	-
Coles (2012)	R3 DG	Systematic review	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	No	++
Conn (2012)	R3 DG	Systematic review	No	C/A	Yes	Yes	No	No	C/A	Yes	Yes	Yes	No	-
Cleland (2012)	R3 DG	Systematic review	No	C/A	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	+
Ickes (2012)	R3 DG	Systematic review	No	Yes	Yes	Yes	No	Yes	No	No	No	No	No	+
Ossei-Assibey (2010)	R3 DG	Systematic review	No	C/A	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	+

CODES

R3 CE = Review 3 Cost-effectiveness
R3 DG = Review 3 Disadvantaged Groups
R3 DIET = Review 3 Diet
R3 LC = Review 3 Lifestyle Combined
R3 LC mm = Review 3 Lifestyle Combined Mainly Midlife
R3 PA = Review 3 Physically Active
R3 PA mm = Review 3 Physically Active Mainly Midlife
R3 SMO = Review 3 Smoking
R3 WL = Review 3 Weight Loss

APPENDIX B3. Quality assessment for economic and cost-effectiveness studies

Key to headings – Section 1: Applicability 1.1 Is the study population appropriate? 1.2 Are the interventions and services appropriate? 1.3 Is the healthcare system sufficiently similar to the current UK NHS context? 1.4 Are costs measured from the NHS and personal social services perspective? 1.5 Are non-direct health effects on individuals excluded? 1.6 Are both costs and health effects discounted at an annual rate of 3.5%? 1.7 Is the value of health effects expressed in terms of quality-adjusted life years? 1.8 Are changes in health-related quality of life reported directly? 1.9 Is the valuation of changes in HRQoL representative of the general public? Section 2: Study limitations 2.1 Does the model structure adequately reflect health condition? 2.2 Is the time horizon sufficiently long? 2.3 Are all important and relevant health outcomes included? 2.4 Are the estimates of baseline health outcomes from the best available source? 2.5 Are the estimates of relative treatment effects from the best available source? 2.6 Are all important and relevant costs included? 2.7 Are the estimates of resource use from the best available source? 2.8 Are the unit costs of resources from the best available source? 2.9 Is an appropriate incremental analysis presented? 2.10 Are all important parameters subjected to appropriate sensitivity analysis? 2.11 Is there no potential conflict of interest? **See tool in Appendix H.5**

Economic Quality Assessment																				
Reference	**1.1**	**1.2**	**1.3**	**1.4**	**1.5**	**1.6**	**1.7**	**1.8**	**1.9**	**2.1**	**2.2**	**2.3**	**2.4**	**2.5**	**2.6**	**2.7**	**2.8**	**2.9**	**2.10**	**2.11**	**Total**
Annemans (2007)	yes	No	yes	yes	no	yes	yes	yes	no	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	+
Anokye (2011)	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	++
Begh (2011)	yes	yes	yes	no	yes	yes	yes	no	no	yes	yes	yes	yes	yes	??	??	??	yes	no	yes	+
Blankers (2011b)	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	++
Bós (2011)	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	++
Dalziel (2006)	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	??	yes	++
Smith (2011)	yes	yes	no	no	no	na	no	yes	na	yes	*yes*	yes	yes	yes	yes	yes	yes	yes	ok	yes	+

**Note: ***All studies in obese participants. Included for information only.

APPENDIX C. Review Team

C1. Expertise

Professor Carol Brayne – Professor Carol Brayne is Professor of Public Health Medicine in Department of Public Health and Primary Care in the University of Cambridge, Director of the Cambridge Institute of Public Health, and Lead of the Dementia, Frailty and End of Life theme in CLAHRC East of England[1] and the NIHR School of Public Health Research (SPHR) Ageing Well Programme. Professor Brayne is a medically qualified epidemiologist and public health academic. Since the mid-1980s her main research area has been longitudinal studies of older people following changes over time in cognition, dementia natural history and associated features with a public health perspective. She is lead principal investigator in the group of MRC Cognitive function and Ageing Study (CFAS), which has informed and will continue to inform national policy and scientific understanding of dementia in whole populations. Her group's relevant achievements include the definitive systematic reviews of: the diagnosis of mild cognitive impairment; the effect of stroke on incident dementia; and the effect of statins on the prevention of vascular dementia. Ongoing work includes Alzheimer's Society-funded systematic reviews of early non-pharmacological intervention for dementia and population screening for dementia; NIHR Cochrane programme of reviews of diagnostic test accuracy for dementia, and work on diabetes and dementia with the Alzheimer's Society Vascular Dementia Systematic Review group.

Dr Louise Lafortune – Dr Lafortune is a Senior Research Associate for the Public Health and the Dementia, Frailty and End of Life theme in CLAHRC East of England, and the scientific coordinator of the NIHR SPHR Ageing Well Programme, which aims are to strengthen the evidence base for cost-effective and equitable public health interventions for older populations. Louise is specialised in Public Health and Ageing, and has nine years of industry experience in clinical trial, health economics and outcomes research. She has been involved in several projects aimed at improving care for frail older people (e.g. helped developed the joint strategic needs assessment (JSNA) for older people; support the ongoing development of integrated care for older people). In particular, she leads a programme of systematic reviews on population screening for dementia; co-lead the NIHR Cochrane programme of diagnostic test accuracy reviews for dementia; a review of systematic reviews looking at non-pharmacological interventions for behavioural problems, and a wide scope review of the literature looking at outcomes and quality of non-pharmacological interventions in early dementia. Her research interests encompass the development, evaluation and implementation of interventions and service delivery models aimed at improving care for individuals with complex health and social care needs, namely frail older people. Concerned

[1] CLAHRC CP: Collaboratives for Leadership in Applied Heatlh Research and Care for East of England (

with the practical application of research findings for patient benefits, her responsibilities include knowledge synthesis, public health analysis and evaluation of changes in services configuration and delivery resulting from the use of research.

Dr Sarah Kelly – Dr Kelly is an experienced systematic reviewer. Sarah was lead reviewer on a systematic review for the World Health Organisation Nutrition Guideline development group on the evidence for a relationship between sugar consumption and dental caries that was used to develop World Health Organisation (WHO) guideline recommendations. Dr Kelly was project coordinator and information specialist for a systematic review of the diet, nutrition and physical activity determinants of obesity for the World Cancer Research Fund (WCRF) that contributed to the major WCRF publication 'Diet, Nutrition and Physical Activity determinants of Cancer (2007)'. She is lead reviewer on two Cochrane systematic reviews relating to nutrition and coronary heart disease and has contributed to a number of other Cochrane reviews about childhood obesity. She was also a reviewer on 2 systematic reviews on tracking of lifestyle behaviours from childhood to adulthood. Sarah has recently completed working on the Dementia Priority Setting Partnership with the James Lind Alliance and the Alzheimer's Society. The project aimed to identify research priorities for dementia from a stakeholder survey including healthcare professionals, patients, carers, relatives of people with dementia that involved data management, formatting and checking of research questions against the existing evidence base for dementia and development of an evidence based research framework for dementia. Sarah has extensive experience in designing and drafting protocols, database searching and systematic search strategies, study selection and data-extraction, quality assessment, analyses and drafting of reviews.

Steven Martin – Mr Martin is an experienced Research Associate at the Cambridge Institute of Public Health (CIPH). During his time at the CIPH Steven has contributed to a number of research programmes around dementia and old age. In particular he has worked as the main systematic reviewer on a wide scoping systematic review looking at non-pharmacological interventions in early dementia and a qualitative review looking at attitudes and preferences with regards to screening for dementia. He is experienced at writing search strategies, undertaking data extraction, quality assessment and synthesis of qualitative, quantitative and mixed-methods research. Steven's interests include the design, interpretation and synthesis of epidemiological evidence, with a particular focus on methodology and translational research aimed at improving health outcomes for vulnerable communities in society.

Isla Kuhn – Ms Khun is Reader Services Librarian at the University of Cambridge Clinical School supporting the review team. Isla is an experienced librarian and has work with the

team on all their evidence synthesis projects across a range of topics, specially ageing well and dementia.

Dr Nadja Smailagic – Dr Smailagic is a full time systematic reviewer on a NIHR funded Cochrane Collaboration programme of fifteen diagnostic test accuracy reviews for dementia. Nadja has extensive experience in designing and drafting protocols, study selection and data-extraction, quality assessment, analyses and drafting of reviews. Nadja is a GP with a background in mental health. In her previous role, she was responsible for developing the research agenda for a Mental Health Services for Older People (MHSOP) at the Nottinghamshire Healthcare NHS Trust. That involved negotiation with the Clinical Effectiveness and Clinical Governance for MHSOP, which led to the development of the 'MHSOP Evidence into Practice Group'. Nadja also co-lead the Dementia 'Managed Innovation Network.

C2. Role in the review process

Core Staff	Roles & responsibilities
Principal investigators • Louise Lafortune (LL) • Carol Brayne (CB)	• Scientific & clinical oversight of the project • Approval of reports before sending to NICE
Scientific coordinator / project management / Third reviewer Louise Lafortune (LL)	• Direct contact for NICE • Project management • Technical support for development of protocols, searches, quality assessment tools, data extraction forms • Third reviewer for selection of studies • Quality assessment and analysis • Writing of draft report, final editing and approval • Main presenter at PHAC meetings (supported by SK)
First Systematic Reviewer • Sarah Kelly (SK)	• Drafting of protocols, search strategies, running searches (with support from Clinical School librarian), scanning titles, selecting full text, quality assessment, analysis and writing of draft reports • Main presenter at PHAC meetings (supported by LL)
Second Systematic Reviewer • Steven Martin (SM)	• Support first & third reviewers with listed tasks
Admin/Technical Support • Andy Cowan (AC)	• Ordering, printing, scanning, listing, sorting articles; preparing reference lists & bibliographies (using word, excel and Endnote mainly) • Keeping all project files in order (according to structure agreed with NICE & official processes etc.)

	• Chasing authors for information • Helping with formatting reports, tables, presentations, etc. (according to NICE manuals)
Extended team	
Nadja Smailagic	• Third reviewer (where/when necessary as arbitrator will resolve disagreements) (e.g. inclusion of studies, quality assessment, analysis) • Technical support (e.g. on quality assessment, data extraction, analysis)

C3. Conflicts of interest

Dr Louise Lafortune, who co-led the project with Professor Brayne, is a topic expert on the new PHAC in relation to the topic of Disability, Dementia and Frailty**.**

The potential conflict of interest (CoI) is with drafting of new recommendations based on evidence that originates from the reviews her team has produced. She has no conflict regarding evidence from other sources, nor in commenting / advising on recommendations based on evidence from any source once they have been drafted. This potential CoI was handled as follows:

- For meetings - and parts of meetings - where evidence that has not come from her team was considered, she worked as a full PHAC member.
- In meetings (or the parts of meetings) where evidence reviews from her team was presented and discussed, she stepped back from the PHAC role and became a presenter / advisor to the committee. She discussed her team's reviews and advise the committee on how to interpret / use the evidence they contain, however she did not then take an active part in drafting new recommendations based on those reviews.

The other members of the team have no conflict of interest to declare.

APPENDIX D. Search strategies

D1. Sample search strategy used to identify systematic reviews

Sample search: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) <1946 to Present>

Note: Searches terms were modified were necessary when searching other databases.

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1 (prevent* or barrier* or facilitat* or hinder* or block* or obstacle* or restrict* or restrain* or obstruct* or inhibit* or impede* or delay* or constrain* or hindrance* or uptake or "take up" or increas* or decreas* or reduc* or impact* or effect* or improve* or enhance* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisfaction or compliance or comply or complie* or refus* or availabl* or provision* or provid* or offer or incentive* or utiliz* or utilis*).ti,ab. (11817672)

2 ((health* adj3 (behavior* or behaviour*))

or ((ageing or aging) adj3 (well or success* or positive* or active* or healthy))
or (food* adj3 choice*) or dieting or (diet* adj3 (health* or balance* or fat* or salt* or sugar* or mediterranean or choice* or improv* or unhealthy))
or ((fruit* or vegetable* or salt* or fat* or sugar*) adj3 (intake* or consum* or eat* or ate))
or (undernutrition or undernourish* or under-nutrition* or under-nourish*)
or (multimicronutrient* or multi-micronutrient* or micronutrient* or micro-nutrient* or multinutrient* or multi-nutrient*)
or ("five a day" or "5 a day")
or ("health check" or "check-up")
or "health MOT*"
or ((eye* or sight* or vision* or visual* or hearing) adj3 (test* or check* or screen*))
or (smok* or tobacco or cigar* or nicotine)
or ((alcohol* or drunk* or drink*) adj3 (consum* or misuse* or abuse* or intoxicat* or harmful or excess* or binge* or hazardous* or heavy or temperance or abstinence))
or temperan*
or teetotal*
or (lonely or lonli*)
or (socialis* or socializ*)
or (social* adj3 (isolat* or network* or contac* or alien*))
or (cognitive adj2 stimulat*)
or (sedentary or exercis* or sport*)
or "physical condition*"
or (balance* and (exercis* or retrain* or re-train* or reeducat* or re-educat*))
or inactiv*
or (walk* or run* or jog* or swim* or danc* or garden* or cycl* or bicycl* or bike* or recreation*)
or ("resistance training" or "acquatic exercis*" or "wellness centre*" or "wellness center*")
or ("weight gain*" or "weight los*" or "overweight" or "over weight") or (obesity and "related behavio*")
or (overeat* or "over eat")
or (waist* adj3 (circumference* or measur*))
or ((bmi or "body mass index") adj3 (gain* or loss* or lose* or lost or change*))
or (weight adj2 (cycling or reduc* or los* or maint* or decreas* or increas* or watch* or control*))
or "weight change*"
or ((behavio?r* or lifestyle or "life style") adj3 (change* or changing or modification or

modify or modifying or therapy or therapies or program* or intervention* or counsel*)) or ((physical* or keep* or cardio* or aerobic or fitness) adj3 (fit* or activ* or train*)) or ((physical* or game* or leisure* or fitness) adj5 (event* or setting* or sector* or program* or venue* or site* or center* or centre*)) adj3 (prevent* or barrier* or facilitat* or hinder* or block* or obstacle* or restrict* or restrain* or obstruct* or inhibit* or impede* or delay* or constrain* or hindrance* or uptake or "take up" or increas* or decreas* or reduc* or impact* or effect* or improve* or enhance* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisfaction or compliance or comply or complie* or refus* or availabl* or provision* or provid* or offer or incentive* or utiliz* or utilis*)).ti,ab. (11815615)

3 exp health behavior/ (99406)

4 exp risk reduction behavior/ (7429)

5 exp health promotion/ (54839)

6 exp primary prevention/ (114054)

7 exp preventive medicine/ (32336)

8 exp life style/ (64645)

9 exp food habits/ (21115)

10 exp food preferences/ (10035)

11 exp nutrition therapy/ (80294)

12 exp vision tests/ (80635)

13 exp hearing tests/ (37970)

14 exp smoking/ (124015)

15 exp smoking cessation/ (20976)

16 exp "tobacco use disorder"/ (8399)

17 exp "tobacco use cessation"/ (21675)

18 exp tobacco smoke pollution/ (10679)

19 exp alcohol drinking/ (52735)

20 exp alcohol deterrents/ (4190)

21 exp drinking behavior/ (58207)

22 exp temperance/ (2609)

23 exp loneliness/ (2167)

24 exp exercise/ (111288)

25 exp sports/ (110890)

26 exp exercise therapy/ (29819)

27 exp physical exertion/ (52630)

28 exp physical fitness/ (21873)

29 exp "physical education and training"/ (13326)

30 exp exercise test/ (50193)

31 exp walking/ (19952)

32 exp running/ (13374)

33 exp jogging/ (690)

34 exp bicycling/ (7564)

35 exp swimming/ (18600)

36 exp dancing/ (1824)

37 exp gardening/ (462)

38 exp fitness centers/ (336)

39 exp sedentary lifestyle/ (2461)

40 or/3-39 (982650)

41 1 and 40 (624194)

42 2 or 41 (927623)

43 meta-analysis as topic/ (14016)

44 meta-analys*.tw. (61279)

45 metaanaly*.tw. (1363)

46 Meta-Analysis/ (50578)

47 (systematic adj (review*1 or overview*1)).tw. (52517)

48 exp Review Literature as Topic/ (7590)

49 or/43-48 (123666)

50 Comment/ (570485)

51 Letter/ (823596)

52 Editorial/ (347012)

53 animal/ (5460677)

54 human/ (13571801)

55 53 not (53 and 54) (3939518)

56 50 or 51 or 52 or 55 (5192193)

57 49 not 56 (115029)

58 exp middle age/ (3327213)

59 (middle adj age*).ti,ab. (33553)

60 (baby adj2 boomer*).ti,ab. (755)

61 (midlife or "mid life" or midlives or "mid lives").ti,ab. (3816)

62 or/58-61 (3339411)

63 adult*.ti,ab. (820544)

64 exp Young Adult/ (345598)

65 exp Adult/ (5579820)

66 or/63-65 (5994172)

67 "single parent*".ti,ab. (1849)

68 minorit*.ti,ab. (44436)

69 "free school meal*".ti,ab. (51)

70 ((low* or work*) adj4 class*).ti,ab. (18291)

71 unemployed*.ti,ab. (5351)

72 (low* adj3 (income* or wage* or pay*)).ti,ab. (28835)

73 ("income support*" or "housing benefit*" or "child support*" or "unemployment benefit*").ti,ab. (537)

74 poverty.ti,ab. (15360)

75 (deprive* or deprivation*).ti,ab. (63372)

76 ethnic*.ti,ab. (88627)

77 ((vulnerable or disadvantaged or "at risk" or "high risk" or "low socioeconomic status" or neglect* or affected or marginal* or forgotten or non-associative or nonassociative or unengaged or hidden or excluded or transient or inaccessible or underserved or stigma* or inequitable) and (people or population* or communit* or neighbourhood*1 or neighborhood*1 or group* or area*1 or demograph* or patient* or social*)).ti,ab. (740630)

78 (immigrant* or migrant* or asylum or refugee* or undocumented).ti,ab. (33474)

79 (born adj2 overseas).ti,ab. (217)

80 (displaced and (people or person*1)).ti,ab. (904)

81 (homeless or vagrant*).ti,ab. (5618)

82 (((language* or communicat*) and (barrier* or understand* or strateg* or proficien*)) or translat* or interpret* or (cultur* and competen*)).ti,ab. (527336)

83 (illiteracy or illiterate*).ti,ab. (3622)

84 (traveller*1 or Gypsies or Gypsy or Gipsy or Gipsies or Romany or Romanies or Romani or Romanis or Romani or Romanis or Roma).ti,ab. (6115)

85 exp Poverty/ (31438)

86 exp Ethnic Groups/ or exp Minority Groups/ (121433)

87 exp Unemployment/ (5168)

88 exp Single Parent/ (1044)

89 exp Homeless Persons/ (6489)

90 (homeless* or vagrant* or tramp or tramps or "street person" or "street people" or (sleep* adj3 rough)).ti,ab. (7739)

91 exp "Emigration and Immigration"/ (23559)

92 exp "Emigrants and Immigrants"/ (5643)

93 exp refugees/ (6697)

94 exp Communication Barriers/ (4818)

95 Language/ (27562)

96 exp gypsies/ (617)

97 exp bisexuality/ or exp homosexuality/ or exp homosexuality, female/ or exp homosexuality, male/ (22600)

98 exp Transgendered Persons/ (103)

99 (lesbian* or gay* or homosexual* or bisexual* or transgender* or trans-gender* or trans-sexual* or transsexual* or transexual* or "men who have sex with men" or "same-sex" or queer*).ti,ab. (29659)

100 exp Transsexualism/ (2855)

101 exp Poverty Areas/ (4608)

102 exp Vulnerable populations/ (5723)

103 exp Social Stigma/ (1349)

104 exp shame/ (1506)

105 exp Prejudice/ (23558)

106 exp Socioeconomic Factors/ (341937)

107 or/67-106 (1865530)

108 107 and 66 (766030)

109 62 or 108 (3646065)

110 42 and 57 and 109 (2800)

111 42 and 57 and 109 (2800)

112 limit 111 to yr="2000 -Current" (2582) SRs Midlife or disadvantaged adults healthy behavior barriers

113 42 and 57 and 62 (1950)

114 limit 113 to yr="2000 -Current" (1757) SRs of midlife healthy behavior barriers

115 42 and 57 and 108 (1363)

116 42 and 57 and 108 (1363)

117 limit 116 to yr="2000 -Current" (1299) SRs of disadvantaged adults' healthy behavior barriers

118 42 and 109 (269040) Midlife or disadvantaged adults healthy behavior barriers

119 118 not 110 (266240)

120 limit 119 to yr="2000 -Current" (178577) non-SRs of Midlife or disadvantaged adults healthy behavior barriers

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D2. Sample search strategy used to identify primary studies

Sample search: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) <1946 to Present>

Note: Searches terms were modified were necessary when searching other databases.

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1 (((health* adj3 (behavior* or behaviour*)) or ((ageing or aging) adj3 (well or success* or positive* or active* or healthy)) or (food* adj3 choice*) or dieting or (diet* adj3 (health* or balance* or fat* or salt* or sugar* or mediterranean or choice* or improv* or unhealthy)) or ((fruit* or vegetable* or salt* or fat* or sugar*) adj3 (intake* or consum* or eat* or ate)) or (undernutrition or undernourish* or under-nutrition* or under-nourish*) or (multimicronutrient* or multi-micronutrient* or micronutrient* or micro-nutrient* or multinutrient* or multi-nutrient*) or ("five a day" or "5 a day") or ("health check" or "check-up") or "health MOT*" or ((eye* or sight* or vision* or visual* or hearing) adj3 (test* or check* or screen*)) or (smok* or tobacco or cigar* or nicotine) or ((alcohol* or drunk* or drink*) adj3 (consum* or misuse* or abuse* or intoxicat* or harmful or excess* or binge* or hazardous* or heavy or temperance or abstinence)) or temperan* or teetotal* or (lonely or lonli*) or (socialis* or socializ*) or (social* adj3 (isolat* or network* or contac* or alien*)) or ((cognitive or mental*) adj2 stimulat*) or (sedentary or exercis* or sport*) or "physical condition*" or (balance* and (exercis* or retrain* or re-train* or reeducat* or re-educat*)) or inactiv* or (walk* or run* or jog* or swim* or danc* or garden* or cycl* or bicycl* or bike* or recreation*) or ("resistance training" or "acquatic exercis*" or "wellness centre*" or "wellness center*") or ("weight gain*" or "weight los*" or "overweight" or "over weight") or (obesity and "related behavio*") or (overeat* or "over eat") or (waist* adj3 (circumference* or measur*)) or ((bmi or "body mass index") adj3 (gain* or loss* or lose* or lost or change*)) or (weight adj2 (cycling or reduc* or los* or maint* or decreas* or increas* or watch* or control*)) or "weight change*" or ((behavio?r* or lifestyle or "life style") adj3 (change* or changing or modification or modify or modifying or therapy or therapies or program* or intervention* or counsel*)) or ((physical* or keep* or cardio* or aerobic or fitness) adj3 (fit* or activ* or train*)) or ((physical* or game* or leisure* or fitness) adj5 (event* or setting* or sector* or program* or venue* or site* or center* or centre*))) adj3 (prevent* or barrier* or facilitat* or hinder* or block* or obstacle* or restrict* or restrain* or obstruct* or inhibit* or impede* or delay* or constrain* or hindrance* or uptake or "take up" or increas* or decreas* or reduc* or impact* or effect* or improve* or enhance* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisfaction or compliance or comply or complie* or refus* or availabl* or provision* or provid* or offer or incentive* or utiliz* or utilis*)).ti,ab. (446597)

2 (prevent* or barrier* or facilitat* or hinder* or block* or obstacle* or restrict* or restrain* or obstruct* or inhibit* or impede* or delay* or constrain* or hindrance* or uptake or "take up" or increas* or decreas* or reduc* or impact* or effect* or improve* or enhance* or encourag* or support* or promot* or optimiz* or optimis* or adher* or access* or motivat* or accept* or satisfaction or compliance or comply or complie* or refus* or availabl* or provision* or provid* or offer or incentive* or utiliz* or utilis*).ti,ab. (11910955)

3 exp health behavior/ (100016)

4 exp risk reduction behavior/ (7539)

5 exp health promotion/ (55103)

6 exp primary prevention/ (114407)

7 exp preventive medicine/ (32402)

8 exp life style/ (65061)

9 exp food habits/ (21286)

10 exp food preferences/ (10111)

11 exp nutrition therapy/ (80646)

12 exp vision tests/ (80919)

13 exp hearing tests/ (38091)

14 exp smoking/ (124725)

15 exp smoking cessation/ (21110)

16 exp "tobacco use disorder"/ (8455)

17 exp "tobacco use cessation"/ (21814)

18 exp tobacco smoke pollution/ (10742)

19 exp alcohol drinking/ (53034)

20 exp alcohol deterrents/ (4205)

21 exp drinking behavior/ (58520)

22 exp temperance/ (2625)

23 exp loneliness/ (2175)

24 exp exercise/ (114811)

25 exp sports/ (113459)

26 exp exercise therapy/ (30184)

27 exp physical exertion/ (54932)

28 exp physical fitness/ (22421)

29 exp "physical education and training"/ (13706)

30 exp exercise test/ (51046)

31 exp walking/ (20209)

32 exp running/ (13881)

33 exp jogging/ (697)

34 exp bicycling/ (7886)

35 exp swimming/ (18935)

36 exp dancing/ (1843)

37 exp gardening/ (466)

38 exp fitness centers/ (338)

39 exp sedentary lifestyle/ (2551)

40 or/3-39 (992780)

41 2 and 40 (632416)

42 1 or 41 (939031)

43 meta-analysis as topic/ (14071)

44 meta-analys*.tw. (62370)

45 metaanaly*.tw. (1373)

46 Meta-Analysis/ (51199)

47 (systematic adj (review*1 or overview*1)).tw. (53469)

48 exp Review Literature as Topic/ (7628)

49 or/43-48 (125460)

50 Comment/ (577154)

51 Letter/ (829297)

52 Editorial/ (350296)

53 animal/ (5488706)

54 human/ (13639147)

55 53 not (53 and 54) (3959628)

56 ((middle adj age*) or (midlife* or "mid life*" or midlives or "mid lives") or (baby adj2 boomer*)).ti. (11512)

57 exp *Middle age/ (844)

58 49 or 50 or 51 or 52 or 55 (5339612)

59 56 or 57 (12088)

60 42 and 59 (2659)

61 60 not 58 (2560)

62 limit 61 to yr="2000 -Current" (1772)

63 exp Middle age/ (3344360)

64 56 or 63 (3346787)

65 42 and 64 (234019)

66 65 not 58 (230787)

67 limit 66 to yr="2000 -Current" (152412)

****

D3. Sample targeted search for primary studies (where no systematic reviews)

Sample search: targeted vision and disadvantage populations or adults IN TITLES using Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) <1946 to Present>

Note: Searches terms were modified were necessary when searching other databases.

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1 adult*.ti,ab. (827307)

2 exp Young Adult/ (351950)

3 exp Adult/ (5611750)

4 or/1-3 (6029894)

5 "single parent*".ti. (219)

6 minorit*.ti. (5689)

7 "free school meal*".ti. (5)

8 ((low* or work*) adj4 class*).ti. (1279)

9 unemployed*.ti. (423)

10 (low* adj3 (income* or wage* or pay*)).ti. (5984)

11 ("income support*" or "housing benefit*" or "child support*" or "unemployment benefit*").ti. (138)

12 poverty.ti. (3044)

13 (deprive* or deprivation*).ti. (17067)

14 ethnic*.ti. (18691)

15 ((vulnerable or disadvantaged or "at risk" or "high risk" or "low socioeconomic status" or neglect* or affected or marginal* or forgotten or non-associative or nonassociative or unengaged or hidden or excluded or transient or inaccessible or underserved or stigma* or inequitable) and (people or population* or communit* or neighbourhood*1 or neighborhood*1 or group* or area*1 or demograph* or patient* or social*)).ti. (25665)

16 (immigrant* or migrant* or asylum or refugee* or undocumented).ti. (15142)

17 (born adj2 overseas).ti. (10)

18 (displaced and (people or person*1)).ti. (163)

19 (homeless or vagrant*).ti. (3367)

20 (((language* or communicat*) and (barrier* or understand* or strateg* or proficien*)) or translat* or interpret* or (cultur* and competen*)).ti. (62987)

21 (illiteracy or illiterate*).ti. (279)

22 (traveller*1 or Gypsies or Gypsy or Gipsy or Gipsies or Romany or Romanies or Romani or Romanis or Romani or Romanis or Roma).ti. (2929)

23 (homeless* or vagrant* or tramp or tramps or "street person" or "street people" or (sleep* adj3 rough)).ti. (4271)

24 (lesbian* or gay* or homosexual* or bisexual* or transgender* or trans-gender* or trans-sexual* or transsexual* or transexual* or "men who have sex with men" or "same-sex" or queer*).ti. (13886)

25 (shame* or stigma* or socioeconomic or socio-economic or prejudic*).ti. (18591)

26 or/5-25 (190725)

27 4 and 26 (70318)

28 ((middle adj age*) or (baby adj2 boomer*) or (midlife or "mid life" or midlives or "mid lives")).ti. (11505)

29 exp *Middle Aged/ (844)

30 28 or 29 (12081)

31 27 or 30 (82144)

32 ((eye or eyes or eyesight or sight* or vision* or visual* or hearing) adj3 (test* or check* or screen*)).ti,ab. (21305)

33 exp vision tests/ or exp hearing tests/ (118748)

34 32 or 33 (131886)

35 31 and 34 (458)

36 meta-analysis as topic/ (14071)

37 meta-analys*.tw. (62302)

38 metaanaly*.tw. (1372)

39 Meta-Analysis/ (51199)

40 (systematic adj (review*1 or overview*1)).tw. (53390)

41 exp Review Literature as Topic/ (7628)

42 or/36-41 (125334)

43 Comment/ (576830)

44 Letter/ (828887)

45 Editorial/ (350125)

46 animal/ (5488705)

47 human/ (13639146)

48 46 not (46 and 47) (3959628)

49 43 or 44 or 45 or 48 (5222217)

50 35 not 49 (427)

51 50 and 42 (2)

52 35 not 51 (456)

53 limit 52 to yr="2000 -Current" (274)

APPENDIX E – Search results

Table E1. Databases searches – Systematic reviews

Database name	Search date	# records retrieved	After de duplication
MEDLINE/in-process MEDLINE	24.09.13 04.03.14	2564 264	2021 253
EMBASE	24.09.13 04.03.14	1386 245	1365 244
PsychINFO	25.09.13 04.03.14	509 64	507 64
CINAHL	27.09.13 04.03.14	1273 229	1267 229
Health Management Information Consortium (HMIC)	27.09.13 04.03.14	40 6	39 6
Cochrane	02.10.13 04.03.14	1608 432	1601 432
Web of Knowledge	03.10.13 04.03.14	2254 922	2252 916
ASSIA	04.03.14	51	51
	Total	11847	11247

Table E2. Databases searches – Primary studies

Database name	Search date	# records retrieved	After de duplication
MEDLINE/in-process MEDLINE	30.10.13 05.03.14	1533 176	1533 170
EMBASE	30.10.13 05.03.14	2499 5691	2496 5669
PsychINFO	30.10.13 05.03.14	472 50	472 50
CINAHL	30.10.13 05.03.14	873 77	873 77
Health Management Information Consortium (HMIC)	30.10.13 05.03.14	304 23	304 23
HTA	30.10.13	1	1
Trials	30.10.13	345	345
ASSIA	05.03.14	52	46

Cochrane	05.03.14	50	50
Web of Knowledge	05.03.14	320	320
	Total	12466	12429

Table E3. Websites searched

Database name	Search date	# records retrieved
Action on Hearing Loss	22.10.13	10
Alzheimer's Society	22.10.13	56
Beth Johnson Foundation	22.10.13	33
British Library	12.09.13	4
Campbell Collaboration	12.09.13	18
Cochrane Collaboration	28.01.14	35
Department of Health	12.09.13 03.02.14	1 8
E-Print Network	12.09.13	11
Fight for Sight	22.10.13	5
Google Scholar	12.09.13 27.01.14	6 89
Grey Literature Report	12.09.13	10
Health Evidence Canada	15.10.13 28.01.14	80 56
Lenus	12.09.13	1
NHS Evidence Search	14.10.13 29.01.14	167 101
OAIster	12.09.13	85
Open Grey	15.10.13 03.02.14	20 3
Public Health Europe	12.09.13	2
Public Health Observatories	15.10.13	50
RAND Health	12.09.13	7
RNIB	22.10.13	31
Scirus	12.09.13	1
World Health Organisation	12.09.13 28.01.14	6 5
	Total	901

APPENDIX F – Breakdown of search results

F1. NICE Appendix Cs for systematic reviews

Table F1.1. Medline

Database name	Medline and In-Process Medline
Database host	OVID
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	24.09.13
Search strategy checked by	Sarah Kelly
Number of records retrieved	2582
Name of Endnote library	Rev1v2update_Medline_SR24092013
Number of records located in Endnote library	2582
Ref numbers of records in Endnote library	1-2582
Number of records after de-duplication	2021

Database name	Medline and In-Process Medline
Database host	OVID
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	04.03.14
Search strategy checked by	Sarah Kelly
Number of records retrieved	264
Name of Endnote library	Rev3update_Medline_SR04032014
Number of records located in Endnote library	264
Ref numbers of records in Endnote library	1-264
Number of records after de-duplication	253

Table F1.2. Embase

Database name	Embase
Database host	OVIDsp
Database coverage dates	1974-2013
Searcher	Isla Kuhn
Search date	24.09.13
Search strategy checked by	Sarah Kelly
Number of records retrieved	1386
Name of Endnote library	Rev1v2_EmbaseSR24092013
Number of records located in Endnote library	1386
Ref numbers of records in Endnote library	2583 - 3969
Number of records after de-duplication	1365

Database name	Embase
Database host	OVIDsp
Database coverage dates	1974-2014
Searcher	Isla Kuhn
Search date	04.03.14
Search strategy checked by	Sarah Kelly

Number of records retrieved	245
Name of Endnote library	Rev3update_Embase_SR04032014
Number of records located in Endnote library	245
Ref numbers of records in Endnote library	265-509
Number of records after de-duplication	244

Table F1.3. PsychInfo

Database name	HMIC
Database host	OVIDsp
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	25.09.13
Search strategy checked by	Sarah Kelly
Number of records retrieved	509
Name of Endnote library	Rev1v2_PsycInfo_SR25092013
Number of records located in Endnote library	509
Ref numbers of records in Endnote library	3970 - 4479
Number of records after de-duplication	507

Database name	HMIC
Database host	OVIDsp
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	04.03.14
Search strategy checked by	Sarah Kelly
Number of records retrieved	64
Name of Endnote library	Rev3update_PsychInfo_SR04032014
Number of records located in Endnote library	64
Ref numbers of records in Endnote library	510-573
Number of records after de-duplication	64

Table F1.4. CINAHL

Database name	Cinahl
Database host	Ebsco
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	27.09.13
Search strategy checked by	Sarah Kelly
Number of records retrieved	1273
Name of Endnote library	Rev1v2_Cinahl_SR27092013
Number of records located in Endnote library	1273
Ref numbers of records in Endnote library	4480 - 5753
Number of records after de-duplication	1267

Database name	Cinahl
Database host	Ebsco
Database coverage dates	2000-2014
Searcher	Isla Kuhn

Search date	04.03.14
Search strategy checked by	Sarah Kelly
Number of records retrieved	1273
Name of Endnote library	Rev3update_Cinahl_SR04032014
Number of records located in Endnote library	229
Ref numbers of records in Endnote library	574-802
Number of records after de-duplication	229

Table F1.5. Health Management Inormation Consortium (HMIC)

Database name	HMIC
Database host	OVIDsp
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	27.09.13
Search strategy checked by	Sarah Kelly
Number of records retrieved	40
Name of Endnote library	Rev1v2_HMICSR27092013
Number of records located in Endnote library	40
Ref numbers of records in Endnote library	5754 - 5794
Number of records after de-duplication	39

Database name	HMIC
Database host	OVIDsp
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	04.03.14
Search strategy checked by	Sarah Kelly
Number of records retrieved	6
Name of Endnote library	Rev3update_HMIC_SR04032014
Number of records located in Endnote library	6
Ref numbers of records in Endnote library	803-808
Number of records after de-duplication	6

Table F1.6. Cochrane

Database name	Cochrane
Database host	www.thecochranelibrary.com
Database coverage dates	1986-2013
Searcher	Isla Kuhn
Search date	02.10.13
Search strategy checked by	Sarah Kelly
Number of records retrieved	1608
Name of Endnote library	Rev1v2Cochranehalf_SR02102013
Number of records located in Endnote library	1608
Ref numbers of records in Endnote library	5795 - 7403
Number of records after de-duplication	1601

Database name	Cochrane
Database host	www.thecochranelibrary.com
Database coverage dates	1986-2014
Searcher	Isla Kuhn
Search date	04.03.14
Search strategy checked by	Sarah Kelly
Number of records retrieved	432
Name of Endnote library	Rev3update_Cochrane_SR04032014
Number of records located in Endnote library	432
Ref numbers of records in Endnote library	809-1240
Number of records after de-duplication	432

Table F1.7. Web of Knowledge

Database name	WOK
Database host	SSCI
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	03.10.13
Search strategy checked by	Sarah Kelly
Number of records retrieved	2254
Name of Endnote library	Rev1v2_WOK_SR03102013
Number of records located in Endnote library	2254
Ref numbers of records in Endnote library	7404 - 9658
Number of records after de-duplication	2252

Database name	WOK
Database host	SSCI
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	04.03.14
Search strategy checked by	Sarah Kelly
Number of records retrieved	922
Name of Endnote library	Rev3update_WOK_SR04032014
Number of records located in Endnote library	922
Ref numbers of records in Endnote library	1241-2162
Number of records after de-duplication	916

Table F1.8. ASSIA

Database name	ASSIA
Database host	ProQuest
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	04.03.14
Search strategy checked by	Sarah Kelly
Number of records retrieved	51
Name of Endnote library	Rev3update_ASSIA_SR04032014
Number of records located in Endnote library	51
Ref numbers of records in Endnote library	2163-2213
Number of records after de-duplication	51

F2. NICE Appendix Cs for primary studies

Table F2.1 Medline

Database name	Medline
Database host	OVID
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	30.10.2013
Search strategy checked by	Sarah Kelly
Number of records retrieved	1533
Name of Endnote library	Rev1v2_MedlineI_30102013
Number of records located in Endnote library	1533
Ref numbers of records in Endnote library	3678-5210
Number of records after de-duplication	1533

Database name	Medline
Database host	OVID
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	05.03.2014
Search strategy checked by	Sarah Kelly
Number of records retrieved	176
Name of Endnote library	Rev3update_Medline_05032014
Number of records located in Endnote library	176
Ref numbers of records in Endnote library	2214-2389
Number of records after de-duplication	170

Table F2.2. Embase

Database name	Embase
Database host	OVID
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	30.10.2013
Search strategy checked by	Sarah Kelly
Number of records retrieved	2499
Name of Endnote library	Rev1v2_Embase_30102013
Number of records located in Endnote library	2499
Ref numbers of records in Endnote library	0874-3372
Number of records after de-duplication	2496

Database name	Embase
Database host	OVID
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	05.03.2014

Search strategy checked by	Sarah Kelly
Number of records retrieved	5691
Name of Endnote library	Rev3update_Embase_05032014
Number of records located in Endnote library	5691
Ref numbers of records in Endnote library	2390-8080
Number of records after de-duplication	5669

Table F2.3. PsychInfo

Database name	PsychInfo
Database host	OVID
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	30.10.2013
Search strategy checked by	Sarah Kelly
Number of records retrieved	472
Name of Endnote library	Rev1v2_PsychInfo_30102013
Number of records located in Endnote library	472
Ref numbers of records in Endnote library	5211-5682
Number of records after de-duplication	472

Database name	PsychInfo
Database host	OVID
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	05.03.2014
Search strategy checked by	Sarah Kelly
Number of records retrieved	50
Name of Endnote library	Rev3update_PsychInfo_05032014
Number of records located in Endnote library	50
Ref numbers of records in Endnote library	8081-8130
Number of records after de-duplication	50

Table F2.4. CINAHL

Database name	Cinahl
Database host	Ebsco
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	30.10.2013
Search strategy checked by	Sarah Kelly
Number of records retrieved	873
Name of Endnote library	Rev1v2_Cinahl_30102013
Number of records located in Endnote library	873
Ref numbers of records in Endnote library	0001-0873
Number of records after de-duplication	873

Database name	Cinahl
Database host	Ebsco

Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	05.03.2014
Search strategy checked by	Sarah Kelly
Number of records retrieved	77
Name of Endnote library	Rev3update_CINAHL_05032014
Number of records located in Endnote library	77
Ref numbers of records in Endnote library	8131-8207
Number of records after de-duplication	77

Table F2.5. Health Management Inormation Consortium (HMIC)

Database name	HMIC
Database host	OVID
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	30.10.2013
Search strategy checked by	Sarah Kelly
Number of records retrieved	304
Name of Endnote library	Rev1v2_HMIC_30102013
Number of records located in Endnote library	304
Ref numbers of records in Endnote library	3373-3676
Number of records after de-duplication	304

Database name	HMIC
Database host	OVID
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	05.03.2014
Search strategy checked by	Sarah Kelly
Number of records retrieved	23
Name of Endnote library	Rev3update_HMIC_05032014
Number of records located in Endnote library	23
Ref numbers of records in Endnote library	8208-8230
Number of records after de-duplication	23

Table F2.6. Trials

Database name	Trials
Database host	www.thecochranelibrary.com
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	30.10.2013
Search strategy checked by	Sarah Kelly
Number of records retrieved	345
Name of Endnote library	Rev1v2_Trials_30102013
Number of records located in Endnote library	345
Ref numbers of records in Endnote library	5683-6027
Number of records after de-duplication	345

Table F2.7. HTA

Database name	HTA
Database host	www.thecochranelibrary.com
Database coverage dates	2000-2013
Searcher	Isla Kuhn
Search date	30.10.2013
Search strategy checked by	Sarah Kelly
Number of records retrieved	1
Name of Endnote library	Rev1v2_HTA_30102013
Number of records located in Endnote library	1
Ref numbers of records in Endnote library	3677-3677
Number of records after de-duplication	1

Table F2.8. ASSIA

Database name	ASSIA
Database host	ProQuest
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	05.03.2014
Search strategy checked by	Sarah Kelly
Number of records retrieved	52
Name of Endnote library	Rev3update_ASSIA_05032014
Number of records located in Endnote library	52
Ref numbers of records in Endnote library	8231-8282
Number of records after de-duplication	46

Table F2.9. Cochrane

Database name	Cochrane
Database host	www.thecochranelibrary.com
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	05.03.2014
Search strategy checked by	Sarah Kelly
Number of records retrieved	50
Name of Endnote library	Rev3update_Cochrane_05032014
Number of records located in Endnote library	50
Ref numbers of records in Endnote library	8283-8332
Number of records after de-duplication	50

Table F2.10. Web of Knowledge

Database name	Web of Knowledge
Database host	SSCI
Database coverage dates	2000-2014
Searcher	Isla Kuhn
Search date	05.03.2014
Search strategy checked by	Sarah Kelly
Number of records retrieved	320
Name of Endnote library	Rev3update_WOK_05032014

Number of records located in Endnote library	320
Ref numbers of records in Endnote library	8333-8652
Number of records after de-duplication	320

APPENDIX G. Excluded studies and reason for exclusion

G1. Systematic reviews

Reference	Reason excluded
Adeniyi FB, Young T. (2012) Weight loss interventions for chronic asthma. Cochrane Database of Systematic Reviews: CD009339.	Weight loss for asthma
Aggarwal B, Liao M, Mosca L. (2010) Predictors of Physical Activity at 1 Year in a Randomized Controlled Trial of Family Members of Patients With Cardiovascular Disease. Journal of Cardiovascular Nursing 25(6): 444-449.	RCT, in people with existing CVD
Ahlskog JE. (2011) Does vigorous exercise have a neuroprotective effect in Parkinson disease? Neurology 77(3): 288-294.	Review not SR
Akers JD, Estabrooks PA, Davy BM. (2010) Translational research: bridging the gap between long-term weight loss maintenance research and practice. Journal of the American Dietetic Association 110(10): 1511-1522.	Assessment of suff info for external implementation
Allen JC, Lewis JB, Tagliaferro AR. (2012) Cost-effectiveness of health risk reduction after lifestyle education in the small workplace. Preventing Chronic Disease 9:E96.	Cost study, lifestyle intervention, mean age 48
Amireault S, Godin G, Vézina-Im LA. (2013) Determinants of physical activity maintenance: a systematic review and meta-analyses. Health Psychology Review 7(1): 55-91.	Review 1 include
An R. (2013) Effectiveness of subsidies in promoting healthy food purchases and consumption: a review of field experiments. Public Health Nutrition 16(7): 1215-1228.	SR, No info on mean age, relevant - food subsidies
Anokye NK, Trueman P, Green C et al. (2011) The cost-effectiveness of exercise referral schemes. BMC Public Health 11:954.	Cost study, exercise referral, 40-60 years analysis
Ara R, Blake L, Gray L et al. (2012) What is the clinical effectiveness and cost-effectiveness of using drugs in treating obese patients in primary care? A systematic review. Health Technology Assessment 16(5): iii-xiv, 1-195.	Drugs for obesity
Archer E, Groessl EJ, Sui X et al. (2012) An economic analysis of traditional and technology-based approaches to weight loss (Provisional abstract). American Journal of Preventive Medicine 43(2): 176-182.	Cost study, midlife mean age, weight loss
Asher RC, Burrows TL, Collins CE. (2013) Very low-energy diets for weight loss in adults: A review. Nutrition & Dietetics 70(2): 101-112.	SR, in people with BMI >30
Ashford S, Edmunds J, French DP. (2010) What is the best way to change self-efficacy to promote lifestyle and recreational physical activity? A systematic review with meta-analysis. British Journal of Health Psychology 15 (Pt 2): 265-288.	SR, mean age 43, age range 31 - 55 years, Outcome is self-efficacy (knowledge and attitudes, barrier from rev 1)

Avery KN, Donovan JL, Horwood J et al. (2013) Behavior theory for dietary interventions for cancer prevention: A systematic review of utilization and effectiveness in creating behavior change. Cancer Causes and Control 24(3): 409-420.	SR, 29 of 40 studies in people <50, behaviour theory for cancer prevention
Ayala GX, Vaz L, Earp JA et al. (2010) Outcome effectiveness of the lay health advisor model among Latinos in the United States: an examination by role. Health Education Research 25(5): 815-840.	SR?, Wide age range, Includes broad range of outcomes e.g. antenatal, HIV
Bacigalupo R, Cudd P, Littlewood C et al. (2013) Interventions employing mobile technology for overweight and obesity: an early systematic review of randomized controlled trials. Obesity Reviews 14(4): 279-291.	SR, most studies in obese people, 3/7 include midlife. Mobile technology for overweight/obesity
Bader P, Boisclair D, Ferrence R. (2011) Effects of tobacco taxation and pricing on smoking behavior in high risk populations: a knowledge synthesis. International Journal of Environmental Research & Public Health 8(11): 4118-4139.	Review 1 include SR
Baker MK, Simpson K, Lloyd B et al. (2011) Behavioral strategies in diabetes prevention programs: A systematic review of randomized controlled trials. Diabetes Research & Clinical Practice 91(1): 1-12.	HC - already included in diabetes guidance
Baker PR, Francis DP, Soares J et al. (2011) Community wide interventions for increasing physical activity. Cochrane Database of Systematic Reviews (4): CD008366.	SR, most studies in adults in general, not midlife, community int for PA
Bala MM, Strzeszynski L, Topor-Madry R et al. (2013) Mass media interventions for smoking cessation in adults. Cochrane Database of Systematic Reviews (6): CD004704.	SR, most studies in adults >18, not spec midlife, mass media for smoking cessation
Barber SE, Clegg AP, Young JB. (2012) Is there a role for physical activity in preventing cognitive decline in people with mild cognitive impairment? Age and Ageing 41(1): 5-8.	Review but not SR
Barella LA, Etnier JL, Chang YK. (2010) The immediate and delayed effects of an acute bout of exercise on cognitive performance of healthy older adults. Journal of Aging and Physical Activity 18(1): 87-98.	Acute bout of exercise effects
Barker F, Mackenzie E, Elliott L et al. (2013) Interventions to improve hearing aid use in adult auditory rehabilitation. Cochrane Database of Systematic Reviews: CD010342.	Protocol only
Barnes J, Dong CY, McRobbie H et al. (2010) Hypnotherapy for smoking cessation. Cochrane Database of Systematic Reviews: CD001008.	SR, most studies in adults in general, not midlife, hypnotherapy for smoking cessation
Barnes D, Yaffe K. (2011) The projected impact of risk factor reduction on Alzheimer's disease prevalence. Alzheimer's and Dementia 7(4): S511.	Projected dementia risk - considered for rev 2
Barnes D. (2012) Risk factor reduction and Alzheimer's disease prevalence: Projected effect and practical implications. Alzheimer's and Dementia 8 (4): 605.	Abstract

Barte JC, ter Bogt NC, Bogers RP et al. (2010) Maintenance of weight loss after lifestyle interventions for overweight and obesity, a systematic review. Obesity Reviews 11(12): 899-906.	SR, No info about age, weight loss/maintenance
Barton P, Andronis L, Briggs A et al. (2011) Effectiveness and cost effectiveness of cardiovascular disease prevention in whole populations: modelling study. BMJ 343: d4044.	Not SR, but KEEP as a primary study, modelling of CVD, reports midlife separately
Barton GR, Goodall M, Bower P et al. (2012) Increasing heart-health lifestyles in deprived communities: economic evaluation of lay health trainers. Journal of Evaluation in Clinical Practice 18(4): 835-840.	Not SR, RCT but KEEP for primary studies, not midlife but disadvantaged communities
Begh RA, Aveyard P, Upton P, et al. (2011) Promoting smoking cessation in Pakistani and Bangladeshi men in the UK: pilot cluster randomised controlled trial of trained community outreach workers. Trials 19(12):197.	Not SR, RCT but KEEP for primary studies, not midlife but disadvantaged communities
Bertram MY, Lim SS, Barendregt JJ et al. (2010) Assessing the cost-effectiveness of drug and lifestyle intervention following opportunistic screening for pre-diabetes in primary care. Diabetologia 53(5): 875-881.	Not SR, RCT but KEEP for primary studies?
Beswick AD, Gooberman-Hill R, Smith A et al. (2010) Maintaining independence in older people. Reviews in Clinical Gerontology 20(2): 128-153.	In older people
Black AP, Brimblecombe J, Eyles H et al. (2012) Food subsidy programs and the health and nutritional status of disadvantaged families in high income countries: a systematic review. BMC Public Health 12: 1099.	SR of food subsidy programs but most participants pregnant or postnatal
Blankers M, Nabitz U, Smit F et al. (2012) Economic evaluation of internet-based interventions for harmful alcohol use alongside a pragmatic randomized controlled trial. Journal of Medical Internet Research 14(5): 71-83.	Cost study, internet int for alcohol
Blankevoort CG, van Heuvelen MJ, Boersma F et al. (2010) Review of effects of physical activity on strength, balance, mobility and ADL performance in elderly subjects with dementia. Dementia and Geriatric Cognitive Disorders 30(5): 392-402.	>70 years
Boon B, Risselada A, Huiberts A et al. (2011) Curbing alcohol use in male adults through computer generated personalized advice: randomized controlled trial. Journal of Medical Internet Research 13(2): e43.	Not SR, cost study, computer feedback, alcohol
Bós AM, Howard BV, Beresford SA et al. (2011) Cost-effectiveness analysis of a low-fat diet in the prevention of breast and ovarian cancer. Journal of the American Dietetic Association 111(1):56-66.	Not SR, cost study, low fat diet and cancer

Boylan S, Louie JC, Gill TP. (2012) Consumer response to healthy eating, physical activity and weight-related recommendations: a systematic review. Obesity Reviews 13(7): 606-617.	Rev 1 ?
Boyle RG, Solberg LI, Fiore MC. (2010) Electronic medical records to increase the clinical treatment of tobacco dependence: a systematic review. American Journal of Preventive Medicine 39(6 Suppl 1): S77-82.	SR, not specifically midlife
Brambila-Macias J, Shankar B, Capacci S et al. (2011) Policy interventions to promote healthy eating: a review of what works, what does not, and what is promising. Food & Nutrition Bulletin 32(4): 365-375.	Review but not SR, relevant
Brindal E, Hendrie G, Freyne J et al. (2013) Design and pilot results of a mobile phone weight-loss application for women starting a meal replacement programme. Journal of Telemedicine and Telecare 19(3): 166-174.	Not SR, RCT but not spec midlife age 18-65, mean age 42
Brown J, Michie S, Geraghty AW et al. (2012) A pilot study of StopAdvisor: A theory-based interactive internet-based smoking cessation intervention aimed across the social spectrum. Addictive Behaviors 37(12): 1365-1370.	Not SR, RCT but not spec midlife
Bryden A, Roberts B, McKee M et al. (2012) A systematic review of the influence on alcohol use of community level availability and marketing of alcohol. Health & Place 18(2): 349-357.	Review 1 include
Bryden A, Roberts B, Petticrew M et al. (2013) A systematic review of the influence of community level social factors on alcohol use. Health & Place 21: 70-85.	Review 1 include
Cahill K, Lancaster T, Green N. (2010) Stage-based interventions for smoking cessation. Cochrane Database of Systematic Reviews (11): CD004492.	SR, not specifically midlife
Campos S, Doxey J, Hammond D. (2011) Nutrition labels on pre-packaged foods: a systematic review. Public Health Nutrition 14(8): 1496-1506.	SR, v broad age range and study types. Not spec midlife
Car J, Lang B, Colledge A, Ung C et al. (2011) Interventions for enhancing consumers' online health literacy. Cochrane Database of Systematic Reviews (6): CD007092.	SR, outcome is online skills
Carbone ET, Zoellner JM. (2012) Nutrition and Health Literacy: A Systematic Review to Inform Nutrition Research and Practice. Journal of the Academy of Nutrition and Dietetics 112(2): 254-265.	SR, not spec midlife, outcome is health literacy
Cardona-Morrell M, Rychetnik L, Morrell SL et al. (2010) Reduction of diabetes risk in routine clinical practice: are physical activity and nutrition interventions feasible and are the outcomes from reference trials replicable? A systematic review and meta-analysis. BMC Public Health 29(10): 653.	Main outcomes are IGT

Carr SM, Lhussier M, Forster N et al. (2011) An evidence synthesis of qualitative and quantitative research on component intervention techniques, effectiveness, cost-effectiveness, equity and acceptability of different versions of health-related lifestyle advisor role in improving health. Health Technology Assessment 15(9): 1 iii-iv, 1-284.	SR, not spec midlife, effect/cost-effect lifestyle advisor
Cecchini M, Sassi F, Lauer JA et al. (2010) Tackling of unhealthy diets, physical inactivity, and obesity: health effects and cost-effectiveness). Lancet 20;376(9754): 1775-84.	Cost study, not spec midlife
Chan CW, Perry L. (2012) Lifestyle health promotion interventions for the nursing workforce: A systematic review. Journal of Clinical Nursing 21(15-16): 2247-2261.	SR, 3 incl studies, 2 not midlife, nurses, range of HB
Chen PC, Lee YC, Tsai ST et al. (2012) A cost-benefit analysis of the outpatient smoking cessation services in Taiwan from a societal viewpoint. Nicotine and Tobacco Research 14(5):522-30.	SR, not spec midlife, computer and aids for smoking cessation
Civljak M, Sheikh A, Stead LF et al. (2010) Internet-based interventions for smoking cessation. Cochrane Database of Systematic Reviews (9): CD007078.	SR, not spec midlife, internet for smoking cess
Clark F, Jackson J, Carlson M et al. (2012) Effectiveness of a lifestyle intervention in promoting the well-being of independently living older people: results of the Well Elderly 2 Randomised Controlled Trial. Journal of Epidemiology and Commmunity Health 66(9): 782-790.	Not SR, RCT in older people
Clark IN, Taylor NF, Baker F. (2012) Music interventions and physical activity in older adults: a systematic literature review and meta-analysis. Journal of Rehabilitation Medicine 44(9): 710-719.	SR, in >60 yrs
Cobiac L, Vos T, Veerman L. (2010) Cost-effectiveness of Weight Watchers and the Lighten Up to a Healthy Lifestyle program. Australian and New Zealand Journal of Public Health 34(3) 240-247.	Cost study, not midlife, weight watchers etc
Colquitt JL, Jones J, Harris P et al. (2011). Bone-anchored hearing aids (BAHAs) for people who are bilaterally deaf: a systematic review and economic evaluation. Health Technology Assessment 15(26): 1-200.	SR, effect and cost effect of hearing aids
Cook PJ, Ostermann J, Sloan FA. (2005) The net effect of an alcohol tax increase on death rates in middle age. American Economic Review 95(2): 278-281.	Not SR or primary, Policy paper, alcohol tax
Crouch R, Wilson A, Newbury J. (2011) A systematic review of the effectiveness of primary health education or intervention programs in improving rural women's knowledge of heart disease risk factors and changing lifestyle behaviours. International Journal of Evidence-Based Healthcare 9(3): 236-245.	SR, not spec midlife and mean age not reported

Cugelman B, Thelwall M, Dawes P. (2011) Online interventions for social marketing health behavior change campaigns: a meta-analysis of psychological architectures and adherence factors. Journal of Medical Internet Research 13(1): e17.	SR, not spec midlife
Cussler EC, Teixeira PJ, Going SB et al. (2008) Maintenance of weight loss in overweight middle aged women through the internet. Obesity 16(5): 1052-1060.	At baseline mean BMI was 30 or > in all groups so would be an exclude on that basis
Damschroder LJ, Lutes LD, Goodrich DE et al. (2010) A small-change approach delivered via telephone promotes weight loss in veterans: Results from the ASPIRE-VA pilot study. Patient Education and Counseling 79(2): 262-266.	MIDLIFE Primary weight loss int - phone
Danaei G, Pan A, Hu FB et al. (2013) Hypothetical midlife interventions in women and risk of type 2 diabetes. Epidemiology 24(1): 122-128.	Hypothetical interventions, data based on cohort study
Dauchet L, Amouyel P, Dallongeville J. (2005) Fruit and vegetable consumption and risk of stroke: a meta-analysis of cohort studies. Neurology 65(8): 1193-1197.	SR of observational studies, not spec midlife - review 2?
Dawel A, Anstey KJ. (2011) Interventions for midlife smoking cessation: a literature review. Australian Psychologist 46(3): 190-195.	Review but not SR? Relevant, included ints are midlife. Have screened for relevant midlife primary studies.
De Smedt D, De Cocker K, Annemans L et al. (2012) A cost-effectiveness study of the community-based intervention '10 000 Steps Ghent'. Public Health Nutrition, 15(03): 442-451.	Mean age 48
de Viron S, Van der Heyden J, Ambrosino E et al. (2012) Impact of genetic notification on smoking cessation: Systematic review and pooled-analysis. PLoS One 7(7):e40230.	SR, not spec midlife, genetic not - smoking cessation
Dennis S, Williams A, Taggart J et al. (2012) Which providers can bridge the health literacy gap in lifestyle risk factor modification education: a systematic review and narrative synthesis. BMC Family Practice 28 (13): 44.	SR, health literacy so knowledge and attitudes
Dickens AP, Richards SH, Greaves CJ et al. (2011) Interventions targeting social isolation in older people: a systematic review. BMC Public Health 15 (11): 647.	SR, aged >60 years
Diep L, Kwagyan J, Kurantsin-Mills J et al. (2010) Association of physical activity level and stroke outcomes in men and women: a meta-analysis. Journal of Women's Health 19(10): 1815-1822.	Observational studies, consider for review 2
Dombrowski SU, Avenell A, Sniehott FF. (2010) Behavioural interventions for obese adults with additional risk factors for morbidity: systematic review of effects on behaviour, weight and disease risk factors. Obesity Facts 3(6): 377-396	SR but in obese adults

Durkin S, Brennan E, Wakefield M. (2012) Mass media campaigns to promote smoking cessation among adults: an integrative review. Tobacco Control 21(3): 127-138.	SR, Not specifically midlife
Eakin E. (2001) Promoting physical activity among middle-aged and older adults in health care settings. Journal of Aging and Physical Activity 9: S29-S37.	MIDLIFE PA Not a SR but relevant primary studies. Check primary studies
Elder JP, Ayala GX, Arredondo EM et al. (2013) Community health partnerships for chronic disease prevention among Latinos: the San Diego Prevention Research Center. Journal of Primary Prevention 34(1-2): 17-29.	Not SR or primary prevention study
Elfeddali I, Bolman C, Candel MJ et al. (2012) The role of self-efficacy, recovery self-efficacy, and preparatory planning in predicting short-term smoking relapse. British Journal of Health Psychology 17: 185-201.	Primary study, mean age 37
Elley CR, Garrett S, Rose SB et al. (2011) Cost-effectiveness of exercise on prescription with telephone support among women in general practice over 2 years). British Journal of Sports Medicine 45(15): 1223-1229.	Cost study, age 40-74 MIDLIFE, exercise on prescription
Eriksson MK, Hagberg L, Lindholm L et al. (2010) Quality of life and cost-effectiveness of a 3-year trial of lifestyle intervention in primary health care. Archives of Internal Medicine 13;170(16):1470-9.	Cost study, mean age 54,
Estabrooks PA, Gyurcsik NC. (2003) Evaluating the impact of behavioral interventions that target physical activity: issues of generalizability and public health. Psychology of Sport and Exercise 4(1): 41-55.	Translation, external transferability
Faucounau V, Wu YH, Boulay M et al. (2010) Cognitive Intervention Programmes on Patients Affected by Mild Cognitive Impairment: A Promising Intervention Tool for Mci? Journal of Nutrition Health & Aging 14(1): 31-35.	In elderly with MCI
Faulkner GE, Grootendorst P, Nguyen VH et al. (2011) Economic instruments for obesity prevention: Results of a scoping review and modified delphi survey. The International Journal of Behavioral Nutrition and Physical Activity 6 (8): 109.	Economic policies for weight loss
Felix HC, West DS. (2013) Effectiveness of weight loss interventions for obese older adults. American Journal of Health Promotion 27(3): 191-199.	In obese adults , age > 60
Fitzgibbon ML, Tussing-Humphreys LM, Porter JS et al. (2012) Weight loss and African-American women: a systematic review of the behavioural weight loss intervention literature. Obesity Reviews 13(3): 193-213.	All studies in obese participants,
Fjeldsoe B, Neuhaus M, Winkler E et al. (2011) Systematic review of maintenance of behavior change following physical activity and dietary interventions. Health Psychology 30(1): 99-109.	Mainly in people with existing chronic disease, age not reported

Flodgren G, Deane K, Dickinson HO et al. (2010) Interventions to change the behaviour of health professionals and the organisation of care to promote weight reduction in overweight and obese adults. Cochrane Database of Systematic Reviews (3): CD000984.	SR, not spec midlife, behaviour of HC profs for weight loss
Foley L, Maddison R, Jones Z et al. (2011) Comparison of two modes of delivery of an exercise prescription scheme. New Zealand Medical Journal 8;124(1338):44-54.	Cost study, mode of delivery of exercise prescription scheme
Forster M, Veerman JL, Barendregt JJ et al. (2011) Cost-effectiveness of diet and exercise interventions to reduce overweight and obesity. International Journal of Obesity 35(8): 1071-8.	Cost study, diet and ex for O/W
Foster CE, Brennan G, Matthews A et al. (2011) Recruiting participants to walking intervention studies: a systematic review. International Journal of Behavioral Nutrition & Physical Activity 15;8: 137.	SR, broad age range of participants, recruitment
Freak-Poli RL, Cumpston M, Peeters A et al. (2013) Workplace pedometer interventions for increasing physical activity. Cochrane Database of Systematic Reviews (4): CD009209.	SR, age in individual studies not reported
Frost SS, Goins RT, Hunter RH et al. (2010) Effects of the built environment on physical activity of adults living in rural settings. American Journal of Health Promotion 24(4): 267-283	Not an intervention study; looking at association
George ES, Kolt GS, Duncan MJ et al. (2012) A review of the effectiveness of physical activity interventions for adult males. Sports Medicine 42(4): 281-300.	SR, not spec midlife, PA in males
Goldsby TU. (2013) The immediate and long lasting effects of aerobic exercise: A meta-analysis among ethnically diverse adults.Dissertation Abstracts International: Section B: The Sciences and Engineering 74(1-B E).	PhD thesis
Goode AD, Reeves MM, Eakin EG. (2012) Telephone-delivered interventions for physical activity and dietary behavior change: an updated systematic review. American Journal of Preventive Medicine 42(1): 81-88.	SR, not spec midlife, telephone int for PA
Gourlan MJ, Trouilloud DO, Sarrazin PG. (2011) Interventions promoting physical activity among obese populations: a meta-analysis considering global effect, long-term maintenance, physical activity indicators and dose characteristics. Obesity Reviews 12(7): E633-E645.	Obese populations
Graudal N, Galloe A. (2000) Should dietary salt restriction be a basic component of antihypertensive therapy? Cardiovascular Drugs & Therapy 14(4): 381-386.	Cost-study, not spec midlife, lifestyle for construction workers
Graves N, Barnett AG, Halton KA et al. (2009) Cost-effectiveness of a telephone-delivered intervention for physical activity and diet. PLoS One 25;4(9):e7135.	SR, 3 of 9 studies in midlife

Greaves CJ, Sheppard KE, Abraham C et al. (2011) Systematic review of reviews of intervention components associated with increased effectiveness in dietary and physical activity interventions. BMC Public Health 18;11: 119.	REVIEW OF REVIEWS of diet/PA interventions, not spec midlife,
Hammond D, Wakefield M, Durkin S et al. (2013) Tobacco packaging and mass media campaigns: research needs for articles 11 and 12 of the WHO Framework Convention on Tobacco Control. Nicotine & Tobacco Research 15(4): 817-831.	SR?, Policy?
Hardcastle SJ, Taylor AH, Bailey MP et al. (2013) Effectiveness of a motivational interviewing intervention on weight loss, physical activity and cardiovascular disease risk factors: a randomised controlled trial with a 12-month post-intervention follow-up. International Journal of Behavioral Nutrition and Physical Activity 28;10:40.	Not SR, RCT not spec midlife
Harris R, Gamboa A, Dailey Y et al. (2012) One-to-one dietary interventions undertaken in a dental setting to change dietary behaviour. Cochrane Database of Systematic Reviews (3): CD006540.	SR, 4 of 5 studies NOT in midlife, diet-dental settings
Harris J, Felix L, Miners A et al. (2011) Adaptive e-learning to improve dietary behaviour: a systematic review and cost-effectiveness analysis. Health Technology Assessment 15(37): 1-160.	SR, not spec midlife, e-learning for diet
Harris T, Kerry S, Victor C et al. (2012) Randomised controlled trial of a complex intervention by primary care nurses to increase walking in patients aged 60–74 years: protocol of the PACE-Lift (Pedometer Accelerometer Consultation Evaluation-Lift) trial. BMC Public Health 13(1): 5.	Not SR, but assess as PRIMARY STUDY
Hartley L, Igbinedion E, Holmes J et al. (2013) Increased consumption of fruit and vegetables for the primary prevention of cardiovascular diseases. Cochrane Database of Systematic Reviews 4;6:CD009874.	SR, not spec midlife
Haynes SM, Lyons GF, McCombie EL et al. (2010) Long-term cost-effectiveness of weight management in primary care. International Journal of Clinical Practice 64(6): 775-783.	Cost study, mean age 49, weight management in primary care
Hersey JC, Khavjou O, Strange LB et al. (2012) The efficacy and cost-effectiveness of a community weight management intervention: a randomized controlled trial of the health weight management demonstration. Preventive Medicine 54(1):42-9.	Cost-effectiveness, mean age 49
Hettema JE, Hendricks PS. (2010) Motivational interviewing for smoking cessation: a meta-analytic review. Journal of Consulting and Clinical Psychology 78(6): 868–884.	SR, age of studies not reported, MI for smoking cessation

Hind D, Scott EJ, Copeland R et al. (2010) A randomised controlled trial and cost-effectiveness evaluation of "booster" interventions to sustain increases in physical activity in middle-aged adults in deprived urban neighbourhoods. BMC Public Health 4;10:3.	Protocol for primary study
Hollands GJ, Hankins M, Marteau TM. (2010) Visual feedback of individuals' medical imaging results for changing health behaviour. Cochrane Database of Systematic Reviews (1): CD007434.	SR, not spec midlife, feedback for HB
Hollis JL, Williams LT, Collins CE et al. (2013) Effectiveness of interventions using Motivational interviewing for dietary and physical activity modification in adults: A systematic review. JBI Database of Systematic Reviews and Implementation Reports 11(5): 1-27.	SR, not spec midlife
Hooper L, Abdelhamid A, Moore HJ et al. (2012) Effect of reducing total fat intake on body weight: systematic review and meta-analysis of randomised controlled trials and cohort studies. BMJ 6;345:e7666.	SR, not spec midlife, age of studies not reported, fat, body weight
Jacobs N, Evers S, Ament A et al. (2010) Cost-utility of a cardiovascular prevention program in highly educated adults: Intermediate results of a randomized controlled trial. International Journal of Technology Assessment in Health Care 26(1): 11-9.	CE study, mean age 40, CVD prevention
Joo NS, Park YW, Park KH et al. (2010) Cost-effectiveness of a community-based obesity control programme. Journal of Telemedicine and Telecare 16(2): 63-67.	CE study OW in Korea, mean age <40
Khadjesari Z, Murray E, Hewitt C et al. (2011) Can stand-alone computer-based interventions reduce alcohol consumption? A systematic review. Addiction 106(2): 267-282.	SR, broad age range includes young adults, computer based interventions for alcohol.
King AC, Ahn DK, Oliveira BM et al. (2008). Promoting physical activity through hand-held computer technology. American Journal of Preventive Medicine 34(2): 138-142.	MIDLIFE Primary study - PA computer technology
King AC, Hekler EB, Grieco LA et al. (2013) Harnessing different motivational frames via mobile phones to promote daily physical activity and reduce sedentary behavior in aging adults. PloS One 8(4): e62613.	MIDLIFE Primary study - PA mobile phones
Kremers S, Reubsaet A, Martens M et al. (2010) Systematic prevention of overweight and obesity in adults: a qualitative and quantitative literature analysis. Obesity Reviews 11(5): 371-379.	18/46 Spec midlife
Krogsbøll LT, Jørgensen KJ, Grønhøj Larsen C et al. (2012) General health checks in adults for reducing morbidity and mortality from disease. Cochrane Database of Systematic Reviews: CD009009.	Exclude – screening interventions

Krukowski RA, Tilford JM, Harvey-Berino J et al. (2011) Comparing behavioral weight loss modalities: incremental cost-effectiveness of an internet-based versus an in-person condition (Provisional abstract). Obesity 19(8):1629-35.	Obese at baseline
Lakerveld J, Bot SD, Chinapaw MJ, et al. (2013) Motivational interviewing and problem solving treatment to reduce type 2 diabetes and cardiovascular disease risk in real life: a randomized controlled trial. International Journal of Behavioral Nutrition and Physical Activity 19;10:47.	1 year study already in
Lara J, Errington L, White M et al. (2012) Effectiveness of dietary interventions using the Mediterranean diet, or any combination of its component food groups in older adults: a systematic of review. Proceedings of the Nutrition Society 71(OCE2): E104.	Abstract - check if full paper published
Latimer AE, Brawley LR, Bassett RL. (2010) A systematic review of three approaches for constructing physical activity messages: What messages work and what improvements are needed? The International Journal of Behavioral Nutrition and Physical Activity 11;7:36.	K+A
Linden K, Jormanainen V, Linna M et al. (2010) Cost effectiveness of varenicline versus bupropion and unaided cessation for smoking cessation in a cohort of Finnish adult smokers. Current Medical Research & Opinion, 26(3): 549-560..	
Liu CF, Collins MP, Souza PE et al. (2011) Long-term cost-effectiveness of screening strategies for hearing loss. Journal of Rehabilitation Research and Development 48(3): 235-43.	Screening for hearing loss, mean age 60
Loveman E, Frampton GK, Shepherd J et al. (2011) The clinical effectiveness and cost-effectiveness of long-term weight management schemes for adults: a systematic review. Health Technology Assessment 15(2): 1-182.	Cost and effectiveness long-term
Luckner H, Moss JR, Gericke CA. (2012) Effectiveness of interventions to promote healthy weight in general populations of children and adults: a meta-analysis (Structured abstract). European Journal of Public Health 22(4):491-7.	Mainly children and adults
Maes L, Van Cauwenberghe E, Van Lippevelde W et al. (2012) Effectiveness of workplace interventions in Europe promoting healthy eating: a systematic review. European Journal of Public Health 22(5): 677-683.	Broad age range
Marteau TM, French DP, Griffin SJ et al. (2010) Effects of communicating DNA-based disease risk estimates on risk-reducing behaviours. Cochrane Database of Systematic Reviews (10): CD007275.	Out of scope
Marteau TM, Aveyard P, Munafò MR et al. (2012) Effect on adherence to nicotine replacement therapy of informing smokers their dose is determined by their genotype: A randomised controlled trial. PLoS One 7(4): e35249.	Not specific to midlife population /out of scope

Martin M, Clare L, Altgassen AM et al. (2011) Cognition-based interventions for healthy older people and people with mild cognitive impairment. Cochrane Database of Systematic Reviews (1): CD006220.	>60 years
Maruyama C, Kimura M, Okumura H et al. (2010) Effect of a worksite-based intervention program on metabolic parameters in middle-aged male white-collar workers: a randomized controlled trial. Preventive Medicine 51(1): 11-17.	MIDLIFE Primary study - PA and nutrition - age of control group 36 but int gp >40
Masi CM, Chen HY, Hawkley LC et al. (2011) A meta-analysis of interventions to reduce loneliness. Personality & Social Psychology Review 15(3): 219-266.	Broad age range including children
McEachan RR, Lawton RJ, Jackson C et al. (2011) Testing a workplace physical activity intervention: a cluster randomized controlled trial. International Journal of Behavioral Nutrition and Physical Activity 11;8:29.	Mean age 43, PA intervention
Mehta S, Dimsdale J, Nagle B et al. (2013). Worksite Interventions Improving Lifestyle Habits Among Latin American Adults. American Journal of Preventive Medicine 44(5): 538-542.	Non SR
Mills M, Loney P, Jamieson E et al. (2010) A primary care cardiovascular risk reduction clinic in Canada was more effective and no more expensive than usual on-demand primary care: a randomised controlled trial. Health and Social Care in the Community 18(1): 30-40.	Mean age 65
Mills SD, Tanner LM, Adams J. (2013) Systematic literature review of the effects of food and drink advertising on food and drink-related behaviour, attitudes and beliefs in adult populations. Obesity Reviews 14(4): 303-314.	General
Mozaffarian D, Hao T, Rimm EB et al. (2011) Changes in diet and lifestyle and long-term weight gain in women and men. New England Journal of Medicine, 364(25), 2392-2404.	Review 2 include
Mulholland Y, Nicokavoura E, Broom J et al. (2012) Very-low-energy diets and morbidity: a systematic review of longer-term evidence. British Journal of Nutrition 108(5): 832-851.	Broad, includes children
Murphy SM, Edwards RT, Williams N et al. (2012) An evaluation of the effectiveness and cost effectiveness of the National Exercise Referral Scheme in Wales, UK: a randomised controlled trial of a public health policy initiative. Journal of Epidemiology and Commmunity Health 66(8):745-53.	UK, stratifies PA by age in results
Murray J, Craigs CL, Hill KM et al. (2012) A systematic review of patient reported factors associated with uptake and completion of cardiovascular lifestyle behaviour change. BMC Cardiovascular Disorders 8;12: 120.	Review 1?
Norberg M, Wall S, Boman K et al. (2010) The Västerbotten Intervention Programme: background, design and implications. Global Health Action 3.	Process paper - no results

Ogedegbe G, Tobin JN, Fernandez S et al. (2009) Counseling African Americans to Control Hypertension (CAATCH) Trial: A multi-level intervention to improve blood pressure control in hypertensive blacks. Circulation: Cardiovascular Quality and Outcomes, 2(3): 249-256.	Not just lifestyle
Oh EG, Bang SY, Hyun SS et al. (2010). Effects of a 6-month lifestyle modification intervention on the cardiometabolic risk factors and health-related qualities of life in women with metabolic syndrome. Metabolism 59(7): 1035-1043.	In people with existing METS
Ortegón M, Lim S, Chisholm D et al. (2012) Cost effectiveness of strategies to combat cardiovascular disease, diabetes, and tobacco use in sub-Saharan Africa and South East Asia: mathematical modelling study. BMJ 2;344: e607.	Not OECD country
Osei-Assibey G, Adi Y, Kyrou I et al. (2011) Pharmacotherapy for overweight/obesity in ethnic minorities and White Caucasians: a systematic review and meta-analysis. Diabetes, Obesity & Metabolism 13(5): 385-393.	Drugs
Pavey TG, Anokye N, Taylor AH et al. (2011) The clinical effectiveness and cost-effectiveness of exercise referral schemes: a systematic review and economic evaluation. Health Technology Assessment 15(44): 1-254.	Tai-chi in nurses
Pavey T, Taylor A, Hillsdon M et al. (2012) Levels and predictors of exercise referral scheme uptake and adherence: a systematic review. Journal of Epidemiology & Community Health 66(8): 737-744.	Not spec midlife
Peels DA, van Stralen MM, Bolman C et al. (2012) Development of web-based computer-tailored advice to promote physical activity among people older than 50 years. Journal of Medical Internet Research 2;14(2):e39.	Implementation
Perez A, Fleury J, Keller C. (2010) Review of intervention studies promoting physical activity in Hispanic women. Western Journal of Nursing Research 32(3): 341-362.	Review, not SR
Perez E, Edmonds BA. (2012) A systematic review of studies measuring and reporting hearing aid usage in older adults since 1999: a descriptive summary of measurement tools. PLoS One 7(3): e31831.	Reporting
Perry KJ, Hickson M, Thomas J. (2011) Factors enabling success in weight management programmes: systematic review and phenomenological approach. Journal of Human Nutrition & Dietetics 24(3): 301-302.	Review 1/3
Primack BA, Carroll MV, McNamara M et al. (2012) Role of video games in improving health-related outcomes: a systematic review. American Journal of Preventive Medicine 42(6): 630-638.	Therapy not prevention

Promberger M, Dolan P, Marteau TM. (2012) "Pay them if it works": Discrete choice experiments on the acceptability of financial incentives to change health related behaviour. Social Science & Medicine 75(12): 2509-2514.	Exclude, not specifically mid-life
Rabin BA, Glasgow RE, Kerner JF et al. (2010) Dissemination and implementation research on community-based cancer prevention: A systematic review. American Journal of Preventive Medicine 38(4): 443-456.	Implementation
Radcliff TA, Bobroff LB, Lutes LD et al. (2012) Comparing costs of telephone vs face-to-face extended-care programs for the management of obesity in rural settings. Journal of the Academy of Nutrition and Dietetics 112(9): 1363-73.	Obesity
Rasmussen SR, Thomsen JL, Kilsmark J et al. (2013) The cost effectiveness of telephone counselling to aid smoking cessation in Denmark: a modelling study. Scandinavian Journal of Public Health 35(4):365-72.	Midlife
Rasu RS, Hunter CM, Peterson AL et al. (2010) Economic evaluation of an internet-based weight management program (Provisional abstract). American Journal of Managed Care 16(4):e98-104.	Mean age 34.
Rhodes RE, Pfaeffli LA. (2010) Mediators of physical activity behaviour change among adult non-clinical populations: a review update. International Journal of Behavioral Nutrition and Physical Activity 11;7:37.	Review 1 include
Rhodes RE, Dickau L. (2013) Moderators of the intention-behaviour relationship in the physical activity domain: a systematic review. British Journal of Sports Medicine 47(4): 215-225.	Review 1 include
Rice VH, Hartmann-Boyce J, Stead LF. (2013) Nursing interventions for smoking cessation. Cochrane Database of Systematic Reviews (8).	Age of most individual studies not reported
Richards J, Thorogood M, Hillsdon M et al. (2013) Face-to-face interventions for promoting physical activity. Cochrane Database of Systematic Reviews: CD010392.	Most ages not reported
Rigotti NA, Bitton A, Kelley JK et al. (2011) Offering population-based tobacco treatment in a healthcare setting: a randomized controlled trial. American Journal of Preventive Medicine 41(5):498-503.	Not specifically midlife
Riper H, Spek V, Boon B et al. (2011) Effectiveness of E-self-help interventions for curbing adult problem drinking: a meta-analysis. Journal of Medical Internet Research 13(2): e42.	Age of included studies ???
Robroek SJ, Polinder S, Bredt FJ et al. (2012) Cost-effectiveness of a long-term Internet-delivered worksite health promotion programme on physical activity and nutrition: a cluster randomized controlled trial. Health Education Research 27(3): 399-410.	Mean age 42 years
Saleh SS, Alameddine MS, Hill D et al. (2010)The effectiveness and cost-effectiveness of a rural employer-based wellness program. Journal of Rural Health 26(3): 259-65.	Mean age midlife

Salehi-Abargouei A, Maghsoudi Z, Shirani F et al. (2013) Effects of Dietary Approaches to Stop Hypertension (DASH)-style diet on fatal or nonfatal cardiovascular diseases-Incidence: A systematic review and meta-analysis on observational prospective studies. Nutrition 29(4): 611-618.	Review 2 include
Sargent GM, Forrest LE et al. (2012) Nurse delivered lifestyle interventions in primary health care to treat chronic disease risk factors associated with obesity: a systematic review. Obesity Reviews 13(12): 1148-1171.	SR, not spec midlife
Schröer-Günther MA, Zhou M, Gerber A et al. (2011) Primary tobacco prevention in China: a systematic review. Asian Pacific Version of Cancer Prevention 12(11): 2973-80.	Non OECD?
Shaw R, Fenwick E, Baker G et al. (2011) Pedometers cost buttons': the feasibility of implementing a pedometer based walking programme within the community. BMC Public Health 31;11:200.	Mean age 49
Shaw R, Bosworth H. (2012) Short message service (SMS) text messaging as an intervention medium for weight loss: A literature review. Health Informatics Journal 18(4): 235-250.	Broad
Sheeran P, Harris P, Vaughan J et al. (2013) Gone exercising: Mental contrasting promotes physical activity among overweight, middle-aged, low-SES fishermen. Health Psychology 32(7): 802.	MIDLIFE PA - mental contrasting?
Skelton DA, Howe TE, Ballinger C et al. (2013) Environmental and behavioural interventions for reducing physical activity limitation in community-dwelling visually impaired older people. Cochrane Database of Systematic Reviews (6): CD009233.	Older people
Shen CZ. (2009) The effect of Chinese food therapy on community dwelling middle-aged hypertensive patients with Yin deficiency in Hangzhou, China. Hong Kong Polytechnic University (Hong Kong) PhD	Exclude – micro outcomes
Smerecnik C, Grispen JE, Quaak M. (2012) Effectiveness of testing for genetic susceptibility to smoking-related diseases on smoking cessation outcomes: a systematic review and meta-analysis. Tobacco Control 21(3): 347-354	Out of scope
Smith MW, An LC, Fu SS et al. (2011) Cost-effectiveness of an intensive telephone-based intervention for smoking cessation. Journal of Telemedicine and Telecare 17(8): 437-440.	Mean age 57
Taggart J, Williams A, Dennis S et al. (2012) A systematic review of interventions in primary care to improve health literacy for chronic disease behavioral risk factors. BMC Family Practice 1;13:49.	Knowledge and attitudes
Taylor RS, Ashton KE, Moxham T et al. (2011) Reduced dietary salt for the prevention of cardiovascular disease: a meta-analysis of randomized controlled trials. Cochrane Database of Systematic Reviews (7): CD009217.	Older and midlife

Taylor CA, Shaw RL, Dale J et al. (2011) Enhancing delivery of health behaviour change interventions in primary care: A meta-synthesis of views and experiences of primary care nurses. Patient Education and Counseling 85(2): 315-322.	Review 1?
Te Morenga L, Mallard S, Mann J. (2013) Dietary sugars and body weight: Systematic review and meta-analyses of randomised controlled trials. BMJ 15;346: e7492.	Adults in genera/. Not post 2000 and midlife
Thomson CA, Ravia J. (2011) A systematic review of behavioral interventions to promote intake of fruit and vegetables. Journal of the American Dietetic Association 1 111(10): 1523-35.	Broad
Toto PE. (2010) Impact of a multi-component exercise and physical activity program for sedentary, community-dwelling, older adults. Doctoral dissertation, University of Pittsburgh.	Thesis
Tzelepis F, Paul CL, Walsh RA et al. (2011) Proactive telephone counseling for smoking cessation: meta-analyses by recruitment channel and methodological quality. Journal of the National Cancer Institute 103(12): 922-941.	Recruitment issues
Tzelepis F, Paul CL, Duncan SL et al. (2012) Increasing the reach of quitlines through active telephone recruitment: do cold-called smokers differ from quitline callers? Nicotine & Tobacco Research 14(12): 1488-1493.	Recruitment issues
van Genugten L, van Empelen P, Flink I et al. (2010) Systematic development of a self-regulation weight-management intervention for overweight adults. BMC Public Health 27;10:649.	Development
Wagner LD, Rein DB. (2013) Attributes associated with eye care use in the United States: A meta-analysis. Ophthalmology 120(7): 1497-1501.	Include Review 1
Webel AR, Okonsky J, Trompeta J et al. (2010) A systematic review of the effectiveness of peer-based interventions on health-related behaviors in adults. American Journal of Public Health 100(2): 247-253.	Broad population and age
White A, Kavanagh D, Stallman H et al. (2010) Online alcohol interventions: a systematic review. Journal of Medical Internet Research 12(5): e62.	1/2 studies with students
Whittaker R, Borland R, Bullen C et al. (2009) Mobile phone-based interventions for smoking cessation. Cochrane Database of Systematic Reviews 4.	Broad
Wieland LS, Falzon L, Sciamanna CN et al. (2012) Interactive computer-based interventions for weight loss or weight maintenance in overweight or obese people. Cochrane Database of Systematic Reviews 8.	Broad
Williams EC, Achtmeyer CE, Kivlahan DR et al. (2010) Evaluation of an electronic clinical reminder to facilitate brief alcohol-counseling interventions in primary care. Journal of Studies on Alcohol and Drugs 71(5): 720-725.	Broad

Williams AD. (2012) Use of a text messaging program to promote adherence to daily physical activity guidelines: a review of the literature. Bariatric Nursing and Surgical Patient Care 7(1): 13-16.	Review not SR
Williams AL, Grogan S, Clark-Carter D et al. (2013) Appearance-based interventions to reduce ultraviolet exposure and/or increase sun protection intentions and behaviours: A systematic review and meta-analyses. British Journal of Health Psychology 18(1): 182-217.	Broad
Wilson LM, Avila Tang E, Chander G et al. (2012) Impact of tobacco control interventions on smoking initiation, cessation, and prevalence: a systematic review. Journal Of Environmental & Public Health 2012: 961724.	Policy
Wong JY, Gilson ND, van Uffelen JG et al. (2012) The effects of workplace physical activity interventions in men: a systematic review. American journal of Men's Health 6(4):303-13.	Age of individual studies not reported
Wycherley TP, Moran LJ, Clifton PM et al. (2012) Effects of energy-restricted high-protein, low-fat compared with standard-protein, low-fat diets: a meta-analysis of randomized controlled trials. American Journal of Clinical Nutrition 96(6): 1281-1298.	SR, broad age range of participants
Young MD, Morgan PJ, Plotnikoff RC et al. (2012) Effectiveness of male-only weight loss and weight loss maintenance interventions: a systematic review with meta-analysis. Obesity Reviews 13(5): 393-408.	SR, broad age range
Zautra AJ, Davis MC, Reich JW et al. (2012) Phone-based interventions with automated mindfulness and mastery messages improve the daily functioning for depressed middle-aged community residents. Journal of Psychotherapy Integration 22(3): 206.	Patient depressive at baseline

G2. Primary Studies

Reference	Reason excluded
Ai-jun N, Yan-qun W, Jin-long L. (2010) Effect of healthy Qigong "WuQinXi" exercise on peripheral blood T-cell subgroups in middle-aged subjects. African Journal of Biotechnology, 9(29): 4620-4623.	Micro outcomes
Albright CL, King AC, Barr Taylor C et al. (1992) Effect of a six-month aerobic exercise training program on cardiovascular responsivity in healthy middle-aged adults. Journal of Psychosomatic Research, 36(1): 25-36.	<2000
Aldana SG, Greenlaw RL, Diehl HA et al. (2006). The behavioral and clinical effects of therapeutic lifestyle change on middle-aged adults. Preventing Chronic Disease 3(1): A05.	Obese
Aldred HE, Hardman AE, Taylor S. (1995) Influence of 12 weeks of training by brisk walking on postprandial lipemia and insulinemia in sedentary middle-aged women. Metabolism 44 (3): 390-397.	<2000
Al-Shayji IA, Caslake MJ, Gill JM. (2012) Effects of moderate exercise on VLDL1 and Intralipid kinetics in overweight/obese middle-aged men. American Journal of Physiology-Endocrinology and Metabolism 302(3): E349-E355.	Obese and overweight adults not separated. Small sample size
Alterman AI, Gariti P, Mulvaney F. (2001) Short-and long-term smoking cessation for three levels of intensity of behavioral treatment. Psychology of Addictive Behaviors 15(3): 261.	Cost effectiveness of 3 levels of smoking cess treatment but not paper
Annesi J. (2013) Effects of treatment differences on psychosocial predictors of exercise and improved eating in obese, middle-age adults. Journal of Physical Activity & Health 10(7).	In obsess patients - men
Antunes-Correa L, Kanamura BY, Melo RC et al. (2010) Effects of exercise training on functional capacity and neurovascular control in middle-aged and old heart failure patients. European Heart Journal 31: 381-382.	Not paper
Aptekmann NP, Cesar TB. (2010) Orange juice improved lipid profile and blood lactate of overweight middle-aged women subjected to aerobic training. Maturitas 67(4): 343-347.	Micro outcomes
Arslan F. (2011) The effects of an eight-week step-aerobic dance exercise programme on body composition parameters in middle-aged sedentary obese women: original research article. International Sport Med Journal 12(4): 160-168.	In obese patients - women
Atienza AA. (2001) Home-based physical activity programs for middle-aged and older adults: summary of empirical research. Journal of Aging and Physical Activity 9: S38-S58.	Systematic Review
Babaei P, Azali AK, Soltani TB et al. (2013) Effect of six weeks of endurance exercise and following detraining on serum brain derived neurotrophic factor and memory performance in middle aged males with metabolic syndrome. The Journal of Sports Medicine and Physical Fitness 53(4): 437-443.	Micro outcomes

Baker TT, Allen D, Lei KY et al. (1986) Alterations in lipid and protein profiles of plasma lipoproteins in middle-aged men consequent to an aerobic exercise program. Metabolism 35(11): 1037-1043.	<2000
Ballard KD, Kupchak BR, Volk BM et al. (2013) Acute effects of ingestion of a novel whey-derived extract on vascular endothelial function in overweight, middle-aged men and women. British Journal of Nutrition 109(05): 882-893.	Micro outcomes
Bassey EJ, Patrick JM, Irving JM et al. (1983) An unsupervised “aerobics” physical training programme in middle-aged factory workers: feasibility, validation and response. European Journal of Applied Physiology and Occupational Physiology, 52(1), 120-125.	<2000
Behm DG, Plewe S, Grage P et al. (2011) Relative static stretch-induced impairments and dynamic stretch-induced enhancements are similar in young and middle-aged men. Applied Physiology, Nutrition, and Metabolism 36(6) 790-797.	Micro outcomes
Bemben MG, Witten MS, Carter JM et al. (2010) The effects of supplementation with creatine and protein on muscle strength following a traditional resistance training program in middle-aged and older men. The Journal of Nutrition, Health & Aging 14(2): 155-159.	Micro outcomes
Bemelmans W, van Baal P, Wendel-Vos W et al. (2008) The costs, effects and cost-effectiveness of counteracting overweight on a population level. A scientific base for policy targets for the Dutch national plan for action. Preventive Medicine 46(2): 127-132.	No age range specified
Benton MJ, Swan PD. (2007) Effect of protein ingestion on energy expenditure and substrate utilization after exercise in middle-aged women. International Journal of Sport Nutrition & Exercise Metabolism 17(6).	Micro outcomes
Benton MJ, Kasper MJ, Raab SA et al. (2011) Short-term effects of resistance training frequency on body composition and strength in middle-aged women. The Journal of Strength & Conditioning Research 25(11): 3142-3149.	Micro outcomes
Berg A, Witt N, Frey I et al. (2011) Meal replacement based on soy protein improves benefits of a weight reduction program on health related quality of life (HRQOL) in middle-aged obese females. Obesity Reviews 12: 73.	Abstract, not full paper
Bijeh N, Hosseini SA, Hejazi K. (2012) The effect of aerobic exercise on serum C - reactive protein and leptin levels in untrained middle-aged women. Iranian Journal of Public Health 41(9): 36-41.	Not in English
Bijeh N, Moazami M, Ahmadi A et al. (2011) Effect of 6 months of aerobic exercise training on serum leptin, cortisol, insulin and glucose levels in thin middle-aged women. [Arabic]. Trauma Monthly 16(1): 53-59.	Not in English
Bijeh N, Moazami M, Mansouri J et al. (2011) Effect of aerobic exercises on markers of bone metabolism in middle-aged women. Kowsar Medical Journal 16(2): 129-135.	Micro outcomes

Billat VL, Slawinksi J, Bocquet V et al. (2001) Very short (15 s-15 s) interval-training around the critical velocity allows middle-aged runners to maintain VO~ 2 max for 14 minutes. International Journal of Sports Medicine 22(3): 201-208.	Micro outcomes
Bizheh N, Rashidlamir A, Zabihi A et al. (2011) The acute effects of strength training on inflammatory markers predicting atherosclerosis: a study on inactive middle-aged men. Tehran University Medical Journal 69(3).	Not in English
Bodner ME, Dean E. (2009) Advice as a smoking cessation strategy: a systematic review and implications for physical therapists. Physiotherapy Theory and Practice 25(5-6): 369-407.	Systematic Review
Bolam KA, van Uffelen JG, Taaffe DR. (2013) The effect of physical exercise on bone density in middle-aged and older men: A systematic review. Osteoporosis International 24(11): 2749-2762.	Systematic Review
Borg P, Kukkonen-Harjula K, Fogelholm M et al. (2002) Effects of walking or resistance training on weight loss maintenance in obese, middle-aged men: a randomized trial. International Journal of Obesity & Related Metabolic Disorders 26(5).	Obese
Boudou P, De Kerviler E, Vexiau P et al. (2008) Effects of a single bout of exercise and exercise training on steroid levels in middle-aged type 2 diabetic men: relationship to abdominal adipose tissue distribution and metabolic status. Diabetes & Metabolism 26(6):450-7.	Diagnosed with T2DM
Bouillon LE, Sklenka DK, Driver AC. (2009) Comparison of training between 2 cycle ergometers on dynamic balance for middle-aged women. Journal of Sport Rehabilitation 18(2).	Micro outcomes
Boutcher SH, Stein P. (1995) Association between heart rate variability and training response in sedentary middle-aged men. European Journal of Applied Physiology and Occupational Physiology 70(1): 75-80.	<2000
Boyette LW, Lloyd A, Manuel S et al. (2001) Development of an exercise expert system for older adults. Journal of Rehabilitation Research & Development 38(1).	Design of system not testing effectiveness
Brynes AE, Edwards CM, Ghatei MA et al. (2003) A randomised four-intervention crossover study investigating the effect of carbohydrates on daytime profiles of insulin, glucose, non-esterified fatty acids and triacylglycerols in middle-aged men. British Journal of Nutrition 89(02): 207-218.	Micro outcomes
Buchheit M, Simon C, Charloux A et al. (2005) Heart rate variability and intensity of habitual physical activity in middle-aged persons. Medicine and Science in Sports and Exercise 37(9): 1530.	>60
Bullen C, Howe C, Lin RB et al. (2010) Pre-cessation nicotine replacement therapy: pragmatic randomized trial. Addiction 105(8): 1474-1483.	<40 yrs old

Caperchione CM, Vandelanotte C, Kolt GS et al. (2012) What a man wants understanding the challenges and motivations to physical activity participation and healthy eating in middle-aged Australian Men. American Journal of Men's Health 6(6): 453-461.	Non-RCT
Cardoso AM, Bagatini MD, Roth MA et al. (2012) Acute effects of resistance exercise and intermittent intense aerobic exercise on blood cell count and oxidative stress in trained middle-aged women. Brazilian Journal of Medical and Biological Research 45(12): 1172-1182.	Micro outcomes
Carlson O, Martin B, Stote KS et al. (2007) Impact of reduced meal frequency without caloric restriction on glucose regulation in healthy, normal-weight middle-aged men and women. Metabolism 56(12): 1729-1734.	Micro outcomes
Carr LJ, Lewis B, Hartman S et al. (2013) Communication strategies for enhancing understanding of the behavioral implications of genetic and biomarker tests for disease risk: The role of coherence. Health Psychology 32(3): 328–336.	<40 yrs old
Cecchini M, Sassi F, Lauer JA et al. (2010) Tackling of unhealthy diets, physical inactivity, and obesity: health effects and cost-effectiveness. The Lancet 376(9754): 1775-1784.	Description of strategies not intervention
Chang YK, Etnier JL. (2009) Effects of an acute bout of localized resistance exercise on cognitive performance in middle-aged adults: A randomized controlled trial study. Psychology of Sport and Exercise 10(1): 19-24.	Micro outcomes
Chao S, Roberts JS, Marteau TM et al. (2008) Health behavior changes after genetic risk assessment for Alzheimer disease: The REVEAL Study. Alzheimer Disease and Associated Disorders 22(1): 94.	Age range but not sure it's a suitable intervention
Chu-Ru L. (2012) Effect of a regular community-based physical activity program on metabolic parameters in middle-aged women. Tzu Chi Nursing Journal 11(4): 84-94.	Micro outcomes
Clifton PM, Bastiaans K, Keogh JB. (2009) High protein diets decrease total and abdominal fat and improve CVD risk profile in overweight and obese men and women with elevated triacylglycerol. Nutrition, Metabolism and Cardiovascular Diseases 19(8): 548-554.	Micro outcomes
Colado JC, Triplett NT. (2008) Effects of a short-term resistance program using elastic bands versus weight machines for sedentary middle-aged women. The Journal of Strength & Conditioning Research 22(5): 1441-1448.	Micro outcomes
Cortez-Cooper MY, Anton MM, DeVan AE et al. (2008) The effects of strength training on central arterial compliance in middle-aged and older adults. European Journal of Cardiovascular Prevention & Rehabilitation 15(2): 149-155.	Micro outcomes
Cotofana S, Ring-Dimitriou S, Hudelmaier M et al. (2010) Effects of exercise intervention on knee morphology in middle-aged women: a longitudinal analysis using magnetic resonance imaging. Cells Tissues Organs 192(1): 64-72.	Micro outcomes

Cox RH, White AH, Gaylord CK. (2003) A video lesson series is effective in changing the dietary intakes and food-related behaviors of low-income homemakers. Journal of the American Dietetic Association 103(11): 1488-1493.	<40yrs old
Crane PB, Wallace DC. (2007) Cardiovascular risks and physical activity in middle-aged and elderly African American women. Journal of Cardiovascular Nursing 22(4): 297-303.	Micro outcomes
Damschroder LJ, Lutes LD, Goodrich DE et al. (2010) A small-change approach delivered via telephone promotes weight loss in veterans: results from the ASPIRE-VA pilot study. Patient Education and Counseling 79(2): 262-266.	Some participants are too young but average is OK
DeBusk RF, Convertino VA, Hung J et al. (1983) Exercise conditioning in middle-aged men after 10 days of bed rest. Circulation 68(2): 245-250.	<2000
Dengel JL, Katzel LI, Goldberg AP. (1995) Effect of an American Heart Association diet, with or without weight loss, on lipids in obese middle-aged and older men. The American Journal of Clinical Nutrition 62(4): 715-721.	<2000
Dengo AL, Dennis EA, Orr JS et al. (2010) Arterial destiffening with weight loss in overweight and obese middle-aged and older adults. Hypertension 55(4): 855-861.	>60
Dennis EA, Dengo AL, Comber DL et al. (2010) Water consumption increases weight loss during a hypocaloric diet intervention in middleaged and older adults. Obesity 18(2): 300-307.	>60
Depp CA, Lebowitz BD, Patterson TL et al. (2007) Medication adherence skills training for middle-aged and elderly adults with bipolar disorder: development and pilot study. Bipolar Disorders 9(6): 636-645..	Age is just in our inc.
De Schryver AM, Keulemans YC, Peters HP et al. (2005) Effects of regular physical activity on defecation pattern in middle-aged patients complaining of chronic constipation. Scandinavian Journal of Gastroenterology 40(4): 422-429.	Micro outcomes
Dixon NC, Hurst TL, Talbot D et al. (2013) Effect of short-term reduced physical activity on cardiovascular risk factors in active lean and overweight middle-aged men. Metabolism 62(3): 361-368.	Micro outcomes
Donges CE, Burd NA, Duffield R et al. (2012) Concurrent resistance and aerobic exercise stimulates both myofibrillar and mitochondrial protein synthesis in sedentary middle-aged men. Journal of Applied Physiology 112(12): 1992-2001.	Micro outcomes
Donges CE, Duffield R. (2012) Effects of resistance or aerobic exercise training on total and regional body composition in sedentary overweight middle-aged adults. Applied Physiology, Nutrition, and Metabolism, 37(3), 499-509.	Micro outcomes
Doolan DM, Froelicher ES. (2006) Efficacy of smoking cessation intervention among special populations: review of the literature from 2000 to 2005. Nursing Research 55(4): S29-S37.	Systematic Review

Douris PC, Elokda AS, Handrakis JP et al. (2009) Martial art training enhances the glutathione antioxidant system in middle-aged adults. The Journal of Strength & Conditioning Research 23(5): 1518-1523.	Micro outcomes
Drigny J, Gayda M, Sosner P et al. (2012) 382 Effects of a 4-months high-intensity interval training associated with resistance training program on cognitive performance, cerebral oxygenation, exercise capacity and cardiac output in middle-aged overweight subjects: a pilot study.Canadian Journal of Cardiology 28(5): S241.	Not full paper - abstract
Duncan MJ, Vandelanotte C, Rosenkranz RR et al. (2012) Effectiveness of a website and mobile phone based physical activity and nutrition intervention for middle-aged males: Trial protocol and baseline findings of the ManUp Study. BMC Public Health 12(1): 656.	Protocol only
Duscha BD, Slentz CA, Johnson JL et al. (2005) Effects of exercise training amount and intensity on peak oxygen consumption in middle-age men and women at risk for cardiovascular disease. CHEST Journal 128(4): 2788-2793.	Micro outcomes
Eakin E. (2001) Promoting physical activity among middle-aged and older adults in health care settings. Journal of Aging and Physical Activity 9: S29-S37.	Not an intervention - no age specified
Ekkekakis P, Lind E, Vazou S. (2010) Affective Responses to Increasing Levels of Exercise Intensity in Normal-weight, Overweight, and Obese Middle-aged Women. Obesity 18(1): 79-85.	Only normal weight group eligible for inclusion
Elavsky S. (2010) Longitudinal examination of the exercise and self-esteem model in middle-aged women. Journal of Sport & Exercise Psychology *32*(6): 862.	Self-efficacy
Eriksson M, Uddén J, Hemmingsson E et al. (2010) Impact of physical activity and body composition on heart function and morphology in middle-aged, abdominally obese women. Clinical Physiology and Functional Imaging 30(5), 354-359.	In obese women
Evers A, Klusmann V, Schwarzer R et al. (2011) Improving cognition by adherence to physical or mental exercise: A moderated mediation analysis. Aging & Mental Health 15(4): 446-455.	Too old - not midlife
Figard-Fabre H, Fabre N, Leonardi A et al. (2010) Physiological and perceptual responses to Nordic walking in obese middle-aged women in comparison with the normal walk. European Journal of Applied Physiology 108(6): 1141-1151.	Obesity
Fiocco AJ, Scarcello S, Marzolini S et al. (2013) The effects of an exercise and lifestyle intervention program on cardiovascular, metabolic factors and cognitive performance in middle-aged adults with type ii diabetes: A pilot study. Canadian Journal of Diabetes 37(4): 214-219.	Micro outcomes

Fleck SJ, Mattie C, Martensen III HC. (2006) Effect of resistance and aerobic training on regional body composition in previously recreationally trained middle-aged women. Applied Physiology, Nutrition, and Metabolism 31(3): 261-270.	Micro outcomes
Fleming P, Godwin M. (2008) Lifestyle interventions in primary care Systematic review of randomized controlled trials. Canadian Family Physician 54(12): 1706-1713.	Systematic Review
Francis SL, Taylor ML, Haldeman LM. (2009) Nutrition education improves morale and self-efficacy for middle-aged and older women. Journal of Nutrition for the Elderly 28(3): 272-286.	Too old - not midlife
Frape DL, Williams NR, Scriven AJ et al. (1997) Effects of high-and low-fat meals on the diurnal response of plasma lipid metabolite concentrations in healthy middle-aged volunteers. British Journal of Nutrition 77(03): 375-390.	<2000
Freene N, Waddington G, Chesworth W et al. (2011) 'Physical activity at home (PAAH)', evaluation of a group versus home based physical activity program in community dwelling middle aged adults: rationale and study design. BMC Public Health 11(1): 883.	Protocol
Fujii H, Haruyama Y, Muto T et al. (2009) High attendance at a lifestyle intervention program is important to reduce risks related to metabolic syndrome in middle-aged Japanese. Tohoku Journal of Experimental Medicine 219(2).	Too old - not midlife
Fujii H, Muto T, Haruyama Y et al. (2010) Community-based lifestyle modification of cardiovascular disease risks in middle-aged Japanese: a 27-month update. Tohoku Journal of Experimental Medicine 220(4).	>60 - just!
Furukawa F, Kazuma K, Kawa M et al. (2003) Effects of an off-site walking program on energy expenditure, serum lipids, and glucose metabolism in middle-aged women. Biological Research for Nursing 4(3): 181-192.	Micro outcomes
García-López D, Häkkinen K, Cuevas MJ et al. (2007) Effects of strength and endurance training on antioxidant enzyme gene expression and activity in middle-aged men. Scandinavian Journal of Medicine & Science in Sports 17(5): 595-604.	Micro outcomes
Gaston MH, Porter GK, Thomas VG. (2011) Paradoxes in obesity with mid-life African American women. Journal of the National Medical Association 103(1): 17-25.	Obese
Gaume V, Mougin F, Figard H et al. (2005) Physical training decreases total plasma homocysteine and cysteine in middle-aged subjects. Annals of Nutrition and Metabolism 49(2), 125-131.	Micro outcomes
Gill JM, Al-Mamari A, Ferrell WR et al. (2006) Effects of a moderate exercise session on postprandial lipoproteins, apolipoproteins and lipoprotein remnants in middle-aged men. Atherosclerosis 185(1): 87-96.	Micro outcomes

Gillis A, Perry A. (1991) The relationships between physical activity and health-promoting behaviours in mid-life women. Journal of Advanced Nursing16(3): 299-310.	<2000
Goff DC, DM Lloyd-Jones, Bennett G et al. (2013) A report of the American College of Cardiology/American Heart Association Task Force on practice guidelines. Circulation 01.cir.0000437741.48606.98.	Systematic Review
Goldstein MG, Pinto BM, Marcus BH et al. (1999) Physician-based physical activity counseling for middle-aged and older adults: a randomized trial. Annals of Behavioral Medicine 21(1): 40-47.	Too old - not midlife
Goodrich DE. (2004) Effect of daily step count goals on mood states of middle-aged women: A multiple treatment single-subject design. Doctoral dissertation, West Virginia University.	Dissertation only
Goon JA, Noor Aini AH, Musalmah M et al. (2009) Effect of Tai Chi exercise on DNA damage, antioxidant enzymes, and oxidative stress in middle-age adults. Journal of Physical Activity & Health 6(1).	No age range specified
Gorman C. (2001) An educational intervention for reducing the intake of dietary fats and cholesterol among middle-aged and older women. Educational Gerontology 27(5): 417-427.	Cannot separate all findings for age groups
Gossard D, Haskell WL, Taylor CB et al. (1986) Effects of low- and high-intensity home-based exercise training on functional capacity in healthy middle-aged men. The American Journal of Cardiology 57(6): 446-449.	<2000
Granacher U, Wick C, Rueck N et al. (2011) Promoting balance and strength in the middle-aged workforce. International Journal of Sports Medicine 32(1): 35.	Micro outcomes
Guyon A, Morselli L, Balbo M et al. (2012) Sleep restriction in middle-aged obese subjects: Impact on leptin levels, hunger and food intake. Obesity Facts 5: 154.	Micro outcomes
Häkkinen K, Alen M, Kallinen M et al. (2000) Neuromuscular adaptation during prolonged strength training, detraining and re-strength-training in middle-aged and elderly people. European Journal of Applied Physiology 83(1): 51-62.	Micro outcomes
Hall S, Reid E, Ukoumunne OC et al. (2007) Brief smoking cessation advice from practice nurses during routine cervical smear tests appointments: A cluster randomised controlled trial assessing feasibility, acceptability and potential effectiveness. British Journal of Cancer 96(7): 1057-1061.	<40yrs old
Hameed UA, Manzar D, Raza S et al. (2012) Resistance training leads to clinically meaningful improvements in control of glycemia and muscular strength in untrained middle-aged patients with type 2 diabetes mellitus. North American Journal of Medical Sciences 4(8): 336.	Diagnosed with T2DM
Handrakis JP, Southard VN, Abreu JM et al. (2010) Static stretching does not impair performance in active middle-aged adults. The Journal of Strength & Conditioning Research 24(3): 825-830.	Micro outcomes

Herman S, Blumenthal JA, Babyak M et al. (2002) Exercise therapy for depression in middle-aged and older adults: Predictors of early dropout and treatment failure. Health Psychology 21(6): 553.	Diagnosed with depression
Hespel P, Lijnen P, Fagard R et al. (1988) Changes in plasma lipids and apoproteins associated with physical training in middle-aged sedentary men. American Heart Journal 115(4): 786-792.	<2000
Hobbs N, Godfrey A, Lara J et al. (2013) Are behavioral interventions effective in increasing physical activity at 12 to 36 months in adults aged 55 to 70 years? A systematic review and meta-analysis. BMC Medicine 11: 75.	Systematic Review
Hollands GJ, Hankins M, Marteau TM. (2010) Visual feedback of individuals' medical imaging results for changing health behaviour. Cochrane Database of Systematic Reviews 1.	Systematic Review
Hollands GJ, Whitwell SC, Parker RA et al. (2012) Effect of communicating DNA based risk assessments for Crohn's disease on smoking cessation: randomised controlled trial. BMJ: British Medical Journal 345.	Is disclosure an intervention we'd want to look at?
Holme I, Hjermann I, Helgeland A et al. (1985) The Oslo Study: diet and antismoking advice. Additional results from a 5-year primary preventive trial in middle-aged men. Preventive Medicine 14(3): 279-292.	<2000
Hosaka Y, Nagasaki M, Bajotto G et al. (2010) Effects of daily mechanical horseback riding on insulin sensitivity and resting metabolism in middle-aged type 2 diabetes mellitus patients. Nagoya Journal of Medical Science 72(3-4): 129-137.	Diagnosed with T2DM
Hsu MC, Wang TS, Liu YP et al. (2008) Effects of Baduanjin exercise on oxidative stress and antioxidant status and improving quality of life among middle-aged women. The American Journal of Chinese Medicine 36(05): 815-826.	Micro outcomes
Huang FJ, Chien DK, Chung UL. (2013) Effects of Hatha yoga on stress in middle-aged women. Journal of Nursing Research 21(1): 59-66.	Micro outcomes
Hubinger LYLE, Mackinnon LT. (1996) The effect of endurance training on lipoprotein (a)[Lp (a)] levels in middle-aged males. Medicine and Science in Sports and Exercise 28(6): 757-764.	<2000
Hughes MC, Girolami TM, Cheadle AD et al. (2007) A lifestyle-based weight management program delivered to employees: examination of health and economic outcomes. Journal of Occupational and Environmental Medicine 49(11): 1212-1217.	Most patients are <40 years, only one group not. Obese
Huuskonen J, Väisänen SB, Kröger H et al. (2001) Regular physical exercise and bone mineral density: a four-year controlled randomized trial in middle-aged men. The DNASCO study. Osteoporosis international 12(5): 349-355.	Micro outcomes

Huuskonen J, Väisänen SB, Kröger H et al. (2002) Relation of sex hormones to bone mineral density in middle-aged men during a 4 year exercise intervention trial. Bone 31(1): 51-56.	Micro outcomes
Iso H, Imano H, Nakagawa Y et al. (2002) One-year community-based education program for hypercholesterolemia in middle-aged Japanese: a long-term outcome at 8-year follow-up. Atherosclerosis 164(1): 195-202.	Micro outcomes
Istvan JA, Buist AS, Hess DL et al. (1995) Relationship of smoking cessation and nicotine gum use to salivary androstenedione and testosterone in middle-aged men. Metabolism 44(1): 90-95.	<2000
Izquierdo M, Hakkinen K, Ibanez J et al. (2003) Effects of strength training on submaximal and maximal endurance performance capacity in middle-aged and older men. The Journal of Strength & Conditioning Research 17(1): 129-139.	Micro outcomes
Izquierdo M, Häkkinen K, Ibanez J et al. (2005) Effects of combined resistance and cardiovascular training on strength, power, muscle cross-sectional area, and endurance markers in middle-aged men. European Journal of Applied Physiology 94(1-2): 70-75.	Micro outcomes
Jablonski KL, Racine ML, Geolfos CJ et al. (2013). Dietary sodium restriction reverses vascular endothelial dysfunction in middle-aged/older adults with moderately elevated systolic blood pressure. Journal of the American College of Cardiology 61(3): 335-343.	>60 – age 63 (7): looking at endothelium dysfunction and other biomarkers linked to salt intake
Jakicic JM, Tate DF, Lang W et al. (2012) Effect of a stepped-care intervention approach on weight loss in adults: a randomized clinical trial. JAMA 307(24): 2617-2626.	Cannot separate obese and overweight
Jayalath VH, de Souza RJ, Sievenpiper JL et al. (2014) Effect of dietary pulses on blood pressure: a systematic review and meta-analysis of controlled feeding trials. American Journal of Hypertension 27(1): 56-64.	Systematic Review
Jebb SA. (2005) Dietary strategies for the prevention of obesity. Proceedings of the Nutrition Society 64(2): 217-227.	Not an intervention
Jenkins DJA, Kendall CWC, Vidgen E et al. (2003) Effect of high vegetable protein diets on urinary calcium loss in middle-aged men and women. European Journal of Clinical Nutrition 57(2): 376-382.	Micro outcomes
Juneau M, Rogers F, De Santos V et al. (1987) Effectiveness of self-monitored, home-based, moderate-intensity exercise training in middle-aged men and women. The American Journal of Cardiology 60(1): 66-70.	<2000
Kamioka H, Nakamura Y, Yazaki T et al. (2004) Effectiveness of comprehensive health education combining hot spa bathing and lifestyle education in middle-aged and elderly women: randomized controlled trial of three-and six-month interventions. Journal of the Japanese Society of Balneology, Climatology & Physical Medicine 67(4): 202-214.	>60 - just!

Kamioka H, Nakamura Y, Yazaki T et al. (2006) Comprehensive health education combining hot spa bathing and lifestyle education in middle-aged and elderly women: one-year follow-up on randomized controlled trial of three-and six-month interventions. Journal of Epidemiology/Japan Epidemiological Association 16(1): 35-44.	Micro outcomes
Kawasaki T, Sullivan CV, Ozoe N et al. (2011) A long-term, comprehensive exercise program that incorporates a variety of physical activities improved the blood pressure, lipid and glucose metabolism, arterial stiffness, and balance of middle-aged and elderly Japanese. Hypertension Research 34(9): 1059-1066..	Micro outcomes
Khan EB, Ramsey LT, Brownson RC et al. (2002) The effectiveness of interventions to increase physical activity: A systematic review. American Journal of Preventive Medicine 22(4): 73-107.	Systematic Review
Kim EJ, Cho SW, Kang JY et al. (2012) Effects of a 12-week lifestyle intervention on health outcome and serum adipokines in middle-aged korean men with borderline high blood pressure. Journal of the American College of Nutrition 31(5): 352-360.	Micro outcomes
Kim MK, Sasaki S, Sasazuki S et al. (2004) Long-term vitamin C supplementation has no markedly favourable effect on serum lipids in middle-aged Japanese subjects. British Journal of Nutrition 91(01): 81-90.	Micro outcomes
Kim MK, Sasazuki S, Sasaki S et al. (2003) Effect of five-year supplementation of vitamin C on serum vitamin C concentration and consumption of vegetables and fruits in middle-aged Japanese: a randomized controlled trial. Journal of the American College of Nutrition 22(3): 208-216.	Micro outcomes
Kisioglu AN, Aslan B, Ozturk M et al. (2004) Improving control of high blood pressure among middle-aged Turkish women of low socio-economic status through public health training. Croatian Medical Journal 45(4): 477-482.	<40
Koelewijn-van Loon MS, van der Weijden T et al. (2010) Improving lifestyle and risk perception through patient involvement in nurse-led cardiovascular risk management: a cluster-randomized controlled trial in primary care. Preventive Medicine 50(1): 35-44.	Not an intervention - protocol
Kukkonen-Harjula K, Hiilloskorpi H et al. (2007) Self-guided brisk walking training with or without poles: a randomized-controlled trial in middle-aged women. Scandinavian Journal of Medicine & Science in Sports 17(4): 316-323.	<2000
Kukkonen-Harjula K, Laukkanen R, Vuori I et al. (1998) Effects of walking training on health-related fitness in healthy middle-aged adults—a randomized controlled study. Scandinavian Journal of Medicine & Science in Sports 8(4): 236-242.	Micro outcomes

Kukuljan S, Nowson CA, Sanders K et al. (2009) Effects of resistance exercise and fortified milk on skeletal muscle mass, muscle size, and functional performance in middle-aged and older men: an 18-mo randomized controlled trial. Journal of Applied Physiology 107(6): 1864-1873.	>60 - just!
Lalande S, Okazaki K, Yamazaki T et al. (2010) Effects of interval walking on physical fitness in middle-aged individuals. Journal of Primary Care & Community Health 1(2): 104-110.	Micro outcomes
Latimer CS, SearcyJL, Bridges MT et al. (2011) Reversal of glial and neurovascular markers of unhealthy brain aging by exercise in middle-aged female mice. PLoS ONE 6(10): e26812.	Not human study
Lau C, Toft U, Tetens I et al. (2009) Dietary patterns predict changes in two-hour post-oral glucose tolerance test plasma glucose concentrations in middle-aged adults. The Journal of Nutrition 139(3): 588-593.	Micro outcomes
Laudani L, Vannozzi G, Sawacha Z et al. (2013) Association between physical activity levels and physiological factors underlying mobility in young, middle-aged and older individuals living in a city district. PLoS ONE 8(9): e74227.	Only one group meets inc
La Vignera S, Condorelli R, Vicari E et al. (2011) Aerobic physical activity improves endothelial function in the middle-aged patients with erectile dysfunction. The Aging Male 14(4): 265-272.	Micro outcomes
Lee HJ, Kang KJ, Park SH et al. (2012) Effect of integrated personalized health care system on middle-aged and elderly women's health. Healthcare Informatics Research 18(3): 199-207.	Health behaviour outcomes
Lee WK, Bang HJ. (2010) The effects of mindfulness-based group intervention on the mental health of middle-aged Korean women in community. Stress and Health 26(4): 341-348.	No relevant outcomes
Lee MR, Kim WS. (2006) The effects of brisk walking versus brisk walking plus diet on triglycerides and apolipoprotein B levels in middle-aged overweight/obese women with high triglyceride levels. Taehan Kanho Hakhoe Chi 36(8): 1352-8.	Overweight/obese women with high tryglycerides. Small sample range in Korea
Lee MS, Lee MS, Choi ES. (2003) Effects of Qigong on blood pressure, blood pressure determinants and ventilatory function in middle-aged patients with essential hypertension. The American Journal of Chinese Medicine 31(03): 489-497.	Micro outcomes.
Levinger I, Goodman C, Matthews V et al. (2008) BDNF, metabolic risk factors, and resistance training in middle-aged individuals. Medicine and Science in Sports and Exercise 40(3): 535-541.	Too old
Li JS, Hou ZK, Yu XQ et al. (2012) Prognostic factors for community-acquired pneumonia in middle-aged and elderly patients treated with integrated medicine. Journal of Traditional Chinese Medicine 32(2): 179-186.	Too old

Libardi CA, Souza GV, GÁspari AF et al. (2011) Effects of concurrent training on interleukin-6, tumour necrosis factor-alpha and C-reactive protein in middle-aged men. Journal of Sports Sciences 29(14): 1573-1581.	Micro outcomes
Libardi AC, Bonganha V, Soares Conceicao M, Vergenia De Souza G, Fernandes Bernades C, Secolin R… Traina Chacon-Mikahil MP. (2012). The periodized resistance training promotes similar changes in lipid profile in middle-aged men and women. Journal of Sports Medicine & Physical Fitness 52(3): 286-292.	Micro outcomes
Lichtenstein AH, Ausman LM, Jalbert SM et al. (2002) Efficacy of a Therapeutic Lifestyle Change/Step 2 diet in moderately hypercholesterolemic middle-aged and elderly female and male subjects. Journal of Lipid Research 43(2): 264-273.	Too old
Lim S, Choi SH, Jeong IK et al. (2008) Insulin-sensitizing effects of exercise on adiponectin and retinol-binding protein-4 concentrations in young and middle-aged women. Journal of Clinical Endocrinology & Metabolism 93(6): 2263-2268.	Age just <60
Lin FR, Thorpe R, Gordon-Salant S et al. (2011) Hearing loss prevalence and risk factors among older adults in the United States. The Journals of Gerontology Series A: Biological Sciences and Medical Sciences 66(5): 582-590.	Not an intervention. Too old
Lind E, Joens-Matre RR, Ekkekakis P. (2005) What intensity of physical activity do previously sedentary middle-aged women select? Evidence of a coherent pattern from physiological, perceptual, and affective markers. Preventive Medicine 40(4): 407-419.	Micro outcomes
Littman AB, Fava M, Halperin P et al. (1993) Physiologic benefits of a stress reduction program for healthy middle-aged Army officers. Journal of psychosomatic research, 37(4), 345-354.	<2000
Liu Y, Mimura K, Wang L et al. (2003) Physiological benefits of 24-style Taijiquan exercise in middle-aged women. Journal of Physiological Anthropology and Applied Human Science 22(5): 219-226.	Micro outcomes
Liu-Ambrose T, Donaldson MG. (2009) Exercise and cognition in older adults: is there a role for resistance training programmes? British Journal of Sports Medicine 43: 25–27.	Systematic Review
Lu WA, Kuo CD. (2012) Effect of 3-month Tai Chi Chuan on heart rate variability, blood lipid and cytokine profiles in middle-aged and elderly individuals. International Journal of Gerontology 6(4): 267-272.	Micro outcomes
Marckmann P, Sandström B, Jespersen J. (1994) Low-fat, high-fiber diet favorably affects several independent risk markers of ischemic heart disease: observations on blood lipids, coagulation, and fibrinolysis from a trial of middle-aged Danes. The American Journal of Clinical Nutrition 59(4): 935-939.	<2000

Marteau TM, Munaf MR, Aveyard P et al. (2010) Trial Protocol: Using genotype to tailor prescribing of nicotine replacement therapy: A randomised controlled trial assessing impact of communication upon adherence. BMC Public Health 10: 680.	Not an intervention, protocol. Also a duplicate of Whitwell (2011)
Marteau TM, Thorne J, Aveyard P et al. (2013) Financial incentives for smoking cessation in pregnancy: Protocol for a single arm intervention study. BMC Pregnancy and Childbirth 13 (1):66.	Not an intervention - protocol
Marti B, Suter E, Riesen WF et al. (1990) Effects of long-term, self-monitored exercise on the serum lipoprotein and apolipoprotein profile in middle-aged men. Atherosclerosis 81(1): 19-31.	<2000
Maruyama C, Kimura M, Okumura H et al. (2010). Effect of a worksite-based intervention program on metabolic parameters in middle-aged male white-collar workers: a randomized controlled trial. Preventive Medicine 51(1): 11-17.	Micro outcomes
Massé PG, Tranchant CC, Jougleux JL et al. (2008) Cardiovascular disease-risk factors in middle-aged osteopaenic women treated with calcium alone or combined to three nutrients essential to artery and bone collagen. Journal of Human Nutrition and Dietetics 21(2): 117-128.	Micro outcomes
McAuley E, Courneya KS, Rudolph DL et al. (1994). Enhancing exercise adherence in middle-aged males and females. Preventive Medicine 23(4): 498-506.	<2000
McCarthy M. (2013) New US prevention guidelines focus on overall risk of cardiovascular disease. BMJ 347:f6858.	Not an intervention
McIntosh GH, Noakes M, Royle PJ et al. (2003) Whole-grain rye and wheat foods and markers of bowel health in overweight middle-aged men. The American Journal of Clinical Nutrition 77(4): 967-974.	Mean age not reported but likely to be within range
McMorrow AM. (2011) The effects of whey protein supplementation and exercise on bone in overweight/obese middle-aged adults. FASEB Journal 25.	Cannot separate overweight and obese
Mettler JA, English KL, Doucet BM et al. (2011) Recovery of muscular endurance and motor activation following physical inactivity in middle-aged adults. FASEB Journal 25 (1): 1106.4.	Abstract only
Meulepas MA, Jacobs JE, Smeenk FW et al. (2007) Effect of an integrated primary care model on the management of middle-aged and old patients with obstructive lung diseases. Scandinavian Journal of Primary Health Care 25(3): 186-192.	Obstructive lung diseases
Miyai N, Arita M, Miyashita K et al. (2002) Antihypertensive effects of aerobic exercise in middle-aged normotensive men with exaggerated blood pressure response to exercise. Hypertension Research: official journal of the Japanese Society of Hypertension 25(4): 507-514.	Micro outcomes

Miyaki A, Maeda S, Choi Y et al. (2012) Habitual aerobic exercise increases plasma pentraxin 3 levels in middle-aged and elderly women. Applied Physiology, Nutrition, and Metabolism 37(5): 907-911.	Aged 60
Miyashita M, Eto M, Sasai H et al. (2010) Twelve-week jogging training increases pre-heparin serum lipoprotein lipase concentrations in overweight/obese middle-aged men. Journal of Atherosclerosis and Thrombosis 17(1): 21-29.	Cannot separate obese from overweight
Miyashita M, Sasai H, Tanaka K. (2010) Post-prandial capillary triacylglycerol responses to moderate exercise in centrally obese middle-aged men. Journal of Sports Sciences 28(12): 1269-1275.	Obese
Morgan ATA. (2010) Effects of improved physical fitness on cognitive/psychological functioning in community-dwelling, sedentary middle-aged and older adults. Dissertation Abstracts International Section A: Humanities and Social Sciences 71(11A): 4137.	Not an intervention. Thesis
Mostofsky E, Levitan EB, Wolk A et al. (2010) Chocolate intake and incidence of heart failure a population-based prospective study of middle-aged and elderly women. Circulation: Heart Failure 3(5): 612-616.	Not an intervention study
Mujumdar PP, Duerksen-Hughes PJ, Firek AF et al. (2011) Long-term, progressive, aerobic training increases adiponectin in middle-aged, overweight, untrained males and females. Scandinavian Journal of Clinical & Laboratory Investigation 71(2); 101-107.	Micro outcomes
Myslivecek PR, Brown CA, Wolfe LA. (2002) Effects of physical conditioning on cardiac autonomic function in healthy middle-aged women. Canadian Journal of Applied Physiology 27(1): 1-18.	Micro outcomes
Naci H, Ioannidis JP. (2013) Comparative effectiveness of exercise and drug interventions on mortality outcomes: metaepidemiological study. BMJ: British Medical Journal 347.	Systematic Review
Nemoto KI, Gen-no H, Masuki S et al. (2007) Effects of high-intensity interval walking training on physical fitness and blood pressure in middle-aged and older people. In Mayo Clinic Proceedings 82 (7): 803-811.	Too old
Netz Y, Tomer R, Axelrad S et al. (2007) The effect of a single aerobic training session on cognitive flexibility in late middle-aged adults. International Journal of Sports Medicine 28(01): 82-87.	Micro outcomes
NHS: The Health and Social Care Information Centre. (2012) Prescriptions dispensed in the community: England, statistics for 2001 to 2011. The Health and Social Care Information Centre 01-68.	Not an intervention
NHS: The Health and Social Care Information Centre. (2012) Prescriptions dispensed in the community: England, statistics for 2001 to 2011. Data Quality supplement.	Not an intervention

Nides M, Rand C, Dolce J et al. (1994) Weight gain as a function of smoking cessation and 2-mg nicotine gum use among middle-aged smokers with mild lung impairment in the first 2 years of the Lung Health Study. Health Psychology 13(4): 354.	<2000
Nishida Y, Tokuyama K, Nagasaka S et al. (2004) Effect of moderate exercise training on peripheral glucose effectiveness, insulin sensitivity, and endogenous glucose production in healthy humans estimated by a two-compartment-labeled minimal model. Diabetes 53(2): 315-320.	Micro outcomes
Nomata Y, Kume N, Sasai H et al. (2009) Weight reduction can decrease circulating soluble lectin-like oxidized low-density lipoprotein receptor–1 levels in overweight middle-aged men. Metabolism 58(9): 1209-1214.	Micro outcomes
Nygaard H, Tomten SE, Høstmark AT. (2009) Slow postmeal walking reduces postprandial glycemia in middle-aged women. Applied Physiology, Nutrition, and Metabolism 34(6): 1087-1092.	Micro outcomes
Oguri K, Zhao L, Du N et al. (2004) Association of habitual long-distance running with the thickness of skeletal muscles and subcutaneous fat in the body extremities and trunk in middle-aged men. The Journal of Sports Medicine and Physical Fitness 44(4): 417-423.	Micro outcomes
Okayama A, Chiba N, Ueshima H. (2004) Non-pharmacological intervention study of hypercholesterolemia among middle-aged people. Environmental Health and Preventive Medicine 9(4): 165-169.	Micro outcomes
Okazaki T, Himeno E, Nanri H et al. (2001) Effects of a community-based lifestyle-modification program on cardiovascular risk factors in middle-aged women. Hypertension Research: Official Journal of the Japanese Society of Hypertension 24(6): 647-653.	>60 - just! Micro outcomes
Okazaki K, Yazawa D, Goto M et al. (2013) Effects of macronutrient intake on thigh muscle mass during home-based walking training in middle-aged and older women. Scandinavian Journal of Medicine & Science in Sports 23(5): e286-e292.	Micro outcomes
Pal S, Cheng C, Ho S. (2011) The effect of two different health messages on physical activity levels and health in sedentary overweight, middle-aged women. BMC Public Health 11(1): 204.	Cannot separate obese and overweight
Paoli A, Pacelli QF, Moro T et al. (2013) Effects of high-intensity circuit training, low-intensity circuit training and endurance training on blood pressure and lipoproteins in middle-aged overweight men. Lipids in Health and Disease 12(1): 131.	>60 - just! Mean age man 61. Overweight. Micro outcomes

Parker B, Capizzi J, Augeri A et al. (2011) Sex-specific effect of aging on submaximal leg exercise hemodynamics in middle-aged and older adults. European Journal of Applied Physiology 111(7): 1369-1379.	Micro outcomes
Passaro A, Calzavarini S, Volpato S et al. (2008) Reduced factor VII and factor VIII levels and prolonged thrombin-generation times during a healthy diet in middle-aged women with mild to moderate cardiovascular disease risk. Journal of Thrombosis and Haemostasis 6(12): 2088-2094.	Micro outcomes
Philippou E, Brynes AE, Dornhorst A et al. (2008) The effect of a 12-week low glycaemic index diet on heart disease risk factors and 24 h glycaemic response in healthy middle-aged volunteers at risk of heart disease: a pilot study. European Journal of Clinical Nutrition 62(1): 145-149.	Micro outcomes
Pierce G, Eskurza I, Walker A et al. (2011) Sex-specific effects of habitual aerobic exercise on brachial artery flow-mediated dilation in middle-aged and older adults. Clinical Science 120: 13-23.	>60 - just! Mean age 63. Micro outcomes
Pijl M, Timmermans DR, Claassen L et al. (2009) Impact of communicating familial risk of diabetes on illness perceptions and self-reported behavioral outcomes: a randomized controlled trial. Diabetes Care 32(4): 597-599.	Too old
Piyakhachornrot N, Aree-Ue S, Putwatana P et al. (2011) Impact of an integrated health education and exercise program in middle-aged Thai adults with osteoarthritis of the knee. Orthopaedic Nursing 30(2): 134-142.	Management of existing condition
Pritchard JE, Nowson CA, Wark JD. (1997) A worksite program for overweight middle-aged men achieves lesser weight loss with exercise than with dietary change. Journal of the American Dietetic Association 97(1): 37-42.	<2000
Ramachandran AK, Rosengren KS, Yang Y et al. (2007) Effect of Tai Chi on gait and obstacle crossing behaviors in middle-aged adults. Gait & Posture 26(2): 248-255.	Micro outcomes
Rankinen T, Rauramaa R, Väisänen S et al. (1994) Blood coagulation and fibrinolytic factors are unchanged by aerobic exercise or fat modified diet Randomized clinical trial in middle-aged men. Fibrinolysis 8(1): 48-53.	<2000
Rashidlamir A, Saadatnia A. (2011) The effects of an eight-week aerobic training program on plasma adipokine concentrations in middle-aged men. Tehran University Medical Journal 69(2).	Not in English
Rashidlamir A, Saadatnia A. (2012) The effect of eight weeks of aerobic training on the plasma level of adiponectin, leptin, and resistin in healthy middle-aged men. Science & Sports 27(6): 351-356.	Controls <40. Too young
Remes T, Väisänen SB, Mahonen A et al. (2003) Aerobic exercise and bone mineral density in middle-aged Finnish men: a controlled randomized trial with reference to androgen receptor, aromatase, and estrogen receptor alpha gene polymorphisms small star, filled. Bone 32(4): 412-420.	Micro outcomes

Remes T, Väisänen SB, Mahonen A et al. (2004) The association of bone metabolism with bone mineral density, serum sex hormone concentrations, and regular exercise in middle-aged men. Bone 35(2): 439-447.	Micro outcomes
Remes T, Väisänen SB, Mahonen A et al. (2005) Bone mineral density, body height, and vitamin D receptor gene polymorphism in middle-aged men. Annals of Medicine 37(5): 383-392.	Micro outcomes
Riby LM, McLaughlin J, Riby DM. (2008) Lifestyle, glucose regulation and the cognitive effects of glucose load in middle-aged adults. British Journal of Nutrition 100(5): 1128-1134.	Not an intervention study
Robinson MJ, Burd NA, Breen L et al. (2012) Dose-dependent responses of myofibrillar protein synthesis with beef ingestion are enhanced with resistance exercise in middle-aged men. Applied Physiology, Nutrition, and Metabolism 38(2): 120-125.	Age just <60. Micro outcomes
Rokkas K, Vlachopoulos C, Ioakeimidis N et al. (2009) Relationship between impaired aortic elastic properties with erectile dysfunction in middle-aged men with metabolic syndrome. Journal of Sexual Medicine 6: 96.	Poster, not a full paper
Rose G, Hamilton PJ. (1978) A randomised controlled trial of the effect on middle-aged men of advice to stop smoking. Journal of Epidemiology and Community Health 32: 275-281.	<2000
Rosell M, Regnström J, Kallner A et al. (1999) Serum urate determines antioxidant capacity in middle-aged men–a controlled, randomized diet and exercise intervention study. Journal of Internal Medicine 246(2): 219-226.	<2000
Ryushi T, Kumagai K, Hayase H et al. (2000) Effect of resistive knee extension training on postural control measures in middle aged and elderly persons. Journal of Physiological Anthropology and Applied Human Science 19(3): 143.	Micro outcomes
Sallinen J, Fogelholm M, Volek JS et al. (2007) Effects of strength training and reduced training on functional performance and metabolic health indicators in middle-aged men. International Journal of Sports Medicine 28(10): 815-822.	Micro outcomes
Sallis RE. (2009) Exercise is medicine and physicians need to prescribe it!.British Journal of Sports Medicine 43(1): 3-4.	Not an intervention - editorial
Samentzas A, Vlachopoulos C, Ioakeimidis N et al. (2010) Heart rate profiles during exercise stress testing in untreated hypertensive middle-aged men with severe erectile dysfunction. European Heart Journal 31: 1015.	Not an intervention - poster
Samuel-Hodge C.D, Garcia BA, Johnston LF. (2013) Translation of a behavioral weight loss intervention for mid-life, low-income women in local health departments. Obesity 21(9): 1764-1773.	Cannot separate obese from overweight
Sasai H, Katayama Y, Nakata Y et al. (2010) The effects of vigorous physical activity on intra-abdominal fat levels: a preliminary study of middle-aged Japanese men. Diabetes Research and Clinical Practice 88(1): 34-41.	Obesity

Satre DD, Mertens JR, Arean PA et al. (2004) Five-year alcohol and drug treatment outcomes of older adults versus middle-aged and younger adults in a managed care program. Addiction 99(10): 1286-1297.	<40
Sattler M, Dannhauer T, Ring-Dimitriou S et al. (2012) Effects of training intervention on quadriceps heads in untrained middle-aged women. Osteoarthritis and Cartilage 20: S230	Management of existing condition
Sawashita J, Onitsuka S, Gen-no H et al. (2009) Effects of mild calorie restriction and high-intensity interval walking in middle-aged and older overweight Japanese. Experimental Gerontology 44(10): 666-675.	>60 - just!
Schlatter RR. (2007) The impact of aerobic exercise on locus of control and self-efficacy in middle-aged women: Implications for mental health counselors. Dissertation. University of Arkansas.	Dissertation
Schwab U, Louheranta A, Törrönen A et al. (2006) Impact of sugar beet pectin and polydextrose on fasting and postprandial glycemia and fasting concentrations of serum total and lipoprotein lipids in middle-aged subjects with abnormal glucose metabolism. European Journal of Clinical Nutrition 60(9): 1073-1080.	Micro outcomes
Sealey RM, Twomey J, Pringle FA et al. (2013) A 12-week lifestyle intervention for middle-aged, overweight men who are supporters of local sporting clubs. The Aging Male 16(3): 118-122.	Obese men
Seo DI, Jun TW, Park KS et al. (2010) 12 weeks of combined exercise is better than aerobic exercise for increasing growth hormone in middle-aged women. International Journal of Sport Nutrition & Exercise Metabolism 20(1).	Micro outcomes
Shahab L, Hall S, Marteau T. (2007) Showing smokers with vascular disease images of their arteries to motivate cessation: a pilot study. British Journal of Health Psychology 12(2): 275-283.	Too old - Just!
Sharpe PA, Burroughs EL, Granner ML et al. (2010) Impact of a community-based prevention marketing intervention to promote physical activity among middle-aged women. Health Education & Behavior 37(3): 403-423.	Obese
Siasos G, Chrysohoou C, Oikonomou E et al. (2012) Beneficial effect of physical activity on endothelial function in middle-aged and elderly habitants in an area with increased rates of longevity: Ikaria study. Journal of the American College of Cardiology 1: E1750.	Conference abstract
Sierksma A, Sarkola T, Eriksson CJ et al. (2004) Effect of moderate alcohol consumption on plasma dehydroepiandrosterone sulfate, testosterone, and estradiol levels in middle-aged men and postmenopausal women: a diet-controlled intervention study. Alcoholism: Clinical and Experimental Research 28(5): 780-785.	Micro outcomes

Sillanpää E, Laaksonen DE, Häkkinen A et al. (2009) Body composition, fitness, and metabolic health during strength and endurance training and their combination in middle-aged and older women. European Journal of Applied Physiology106(2): 285-296.	Micro outcomes
Sillanpää E, Häkkinen K, Holviala J et al. (2012) Combined strength and endurance training improves health-related quality of life in healthy middle-aged and older adults. International Journal of Sports Medicine 33(12): 981.	Micro outcomes
Siren R, Eriksson J, Vanhanen. (2010) Dietary fats and risk for cardiovascular disease in middle-aged men. European Heart Journal 31: 687.	Abstract, not full paper
Sjögren P, Cederholm T, Heimbürger M et al. (2010) Simple advice on lifestyle habits and long-term changes in biomarkers of inflammation and vascular adhesion in healthy middle-aged men. European Journal of Clinical Nutrition 64(12): 1450-1456.	Micro outcomes
Skalska M. (2013) Improvement of risk factors of lifestyle diseases in obese fully employed middle-aged women by 5 months movement intervention. Journal of Women's Health 22 (3): 21.	Micro outcomes
Smith BJ, Brown BJ, Hermann JR. (2003) Impact of a physical activity program emphasizing cardiovascular fitness, muscle strength, and flexibility among middle-aged women. Journal of Nutrition Education and Behavior 35(4), 215-216.	Conference abstract
Sørensen M, Anderssen S, Hjerman I et al. (1997) Exercise and diet interventions improve perceptions of self in middle-aged adults. Scandinavian Journal of Medicine & Science in Sports 7(5): 312-320.	<2000
Sorensen M, Anderssen S, Hjerman I et al. (1999) The effect of exercise and diet on mental health and quality of life in middle-aged individuals with elevated risk factors for cardiovascular disease. Journal of Sports Sciences 17(5): 369-377.	<2000
Souza GVD, Libardi CA, Rocha Jr J et al. (2012) Effect of concurrent training on components of the metabolic syndrome in middle-aged men. Fisioterapia em Movimento 25(3): 649-658.	Not in English
Stein PK, Boutcher SH. (1992) The effect of participation in an exercise training program on cardiovascular reactivity in sedentary middle-aged males. International journal of psychophysiology 13(3): 215-223.	<2000
Stein RA, Michielli DW, Glantz MD et al. (1990) Effects of different exercise training intensities on lipoprotein cholesterol fractions in healthy middle-aged men. American Heart Journal 119(2): 277-283.	<2000
Stensrud S, Roos EM, Risberg MA. (2012) A 12-week exercise therapy program in middle-aged patients with degenerative meniscus tears: a case series with 1-year follow-up. Journal of Orthopaedic & Sports Physical Therapy 42(11): 919-931.	Management of existing condition

Stote KS, Baer DJ, Spears K et al. (2007). A controlled trial of reduced meal frequency without caloric restriction in healthy, normal-weight, middle-aged adults. The American Journal of Clinical Nutrition 85(4): 981-988.	Micro outcomes
Sugawara J, Komine H, Hayashi K et al. (2007) Systemic alpha-adrenergic and nitric oxide inhibition on basal limb blood flow: effects of endurance training in middle-aged and older adults. American Journal of Physiology 293(3): H1466.	>60 - just!
Surakka J, Alanen E, Aunola S et al. (2004) Adherence to a power-type strength training programme in sedentary, middle-aged men and women. Advances in Physiotherapy 6(3): 99-109.	Attitudes and knowledge. Micro outcomes
Surakka J, Alanen E, Aunola S et al. (2006) Effects of external light loading in power-type strength training on muscle power of the lower extremities in middle-aged subjects. International Journal of Sports Medicine 27(6): 448.	Micro outcomes
Takarada Y, Ishii N. (2002) Effects of low-intensity resistance exercise with short interset rest period on muscular function in middle-aged women. Journal of Strength & Conditioning Research 16(1): 123-128.	Micro outcomes
Tamosiunas A, Reklaitiene R, Radisauskas R et al. (2005) Prognosis of risk factors and trends in mortality from external causes among middle-aged men in Lithuania. Scandinavian Journal of Public Health 33(3): 190-196.	Not an intervention
Teixeira PJ, Going SB, Houtkooper LB et al. (2002) Weight loss readiness in middle-aged women: psychosocial predictors of success for behavioral weight reduction. Journal of Behavioral Medicine 25(6): 499-523.	Obese
Teixeira PJ, Silva MN, Coutinho SR et al. (2010) Mediators of weight loss and weight loss maintenance in middle-aged women. Obesity 18(4): 725-735.	<40
Thies F. (2012) Effect of a tomato-rich diet on markers of cardiocascular disease risk in moderately overweight, disease-free middle-aged adults: a randomized controlled trial. American Journal of Clinical Nutrition 95(5): 1013-1022.	Micro outcomes
Thomas S, Ness RB. (2003) Racial differences in perception of healthy body weight in midlife women: results from the Do Stage Transitions Result in Detectable Effects study. Menopause: The Journal of the North American Menopause Society 20(3): 269-273.	Not an intervention
Thompson D, Markovitch D, Betts JA et al. (2010) Time course of changes in inflammatory markers during a 6-mo exercise intervention in sedentary middle-aged men: a randomized-controlled trial. Journal of Applied Physiology 108(4): 769-779.	Micro outcomes
Thornton EW, Sykes KS, Tang WK. (2004).Health benefits of Tai Chi exercise: improved balance and blood pressure in middle-aged women. Health Promotion International 19(1): 33-38.	Micro outcomes

Thorsen L, Skovlund E, Strømme SB et al. (2005) Effectiveness of physical activity on cardiorespiratory fitness and health-related quality of life in young and middle-aged cancer patients shortly after chemotherapy. Journal of Clinical Oncology 23(10): 2378-2388.	<40
Thorstensson CA, Roos EM, Petersson IF et al. (2005) Six-week high-intensity exercise program for middle-aged patients with knee osteoarthritis: a randomized controlled trial [ISRCTN20244858]. BMC Musculoskeletal Disorders 6(1): 27.	Confirmed osteoarthritis
Tighe P, Duthie G, Vaughan N et al. (2010) Effect of increased consumption of whole-grain foods on blood pressure and other cardiovascular risk markers in healthy middle-aged persons: a randomized controlled trial. The American Journal of Clinical Nutrition 92(4): 733-740.	Micro outcomes
Tricon S, Burdge GC, Jones EL et al. (2006) Effects of dairy products naturally enriched with cis-9, trans-11 conjugated linoleic acid on the blood lipid profile in healthy middle-aged men. The American Journal of Clinical Nutrition 83(4): 744-753.	Micro outcomes
Tsai YK, Chen HH, Lin IH et al. (2008) Qigong improving physical status in middle-aged women. Western journal of nursing research 30(8): 915-927.	Micro outcomes
Tsao LI, Huang KE. (2004) Effectiveness of a perimenopausal health education intervention for mid-life women in northern Taiwan (# MS03-21-LW). Patient Education and Counseling 54(3), 321-328.	Non OECD
Tsao LI, Su MC, Hsiao PJ et al. (2007) The longitudinal effects of a perimenopausal health education intervention on the mid-life women in Taiwan. Maturitas 57(3): 296-305.	Non OECD
Tuomainen P, Peuhkurinen K, Kettunen R et al. (2005) Regular physical exercise, heart rate variability and turbulence in a 6-year randomized controlled trial in middle-aged men: the DNASCO study. Life Sciences 77(21): 2723-2734.	Micro outcomes
Van der Gaag MS, Van den Berg R, Van den Berg H et al. (2000) Moderate consumption of beer, red wine and spirits has counteracting effects on plasma antioxidants in middle-aged men. European Journal of Clinical Nutrition 54(7): 586-591.	Not an intervention
Van der Gaag MS, van Tol A, Scheek LM et al. (1999) Daily moderate alcohol consumption increases serum paraoxonase activity; a diet-controlled, randomised intervention study in middle-aged men. Atherosclerosis 147(2): 405-410.	Not an intervention
Van Dijk GP, Huijts M, Lodder J. (2013) Feasibility, safety and subjective experience of a one-year WTF-Taekwondo training course for middle-aged volunteers: The Sekwondo study. Gazzetta Medica Italiana Archivio per le Scienze Mediche 172(6): 433-441.	Feasibility and implementation paper

Van Raaij JM, Katan MB, West CE et al. (1982) Influence of diets containing casein, soy isolate, and soy concentrate on serum cholesterol and lipoproteins in middle-aged volunteers. The American Journal of Clinical Nutrition 35(5): 925-934.	<2000
Vance D, Fazeli P. (2012) Speed of processing training improves neurocognition and IADLs in middle-aged and older adults with HIV. European Journal of Neurology 19: 646.	Confirmed HIV. Out of scope
Venojärvi M, Wasenius N, Manderoos S et al. (2013) Nordic walking decreased circulating chemerin and leptin concentrations in middle-aged men with impaired glucose regulation. Annals of Medicine 45(2): 162-170.	Micro outcomes
Wagner S. (2008) Does a cognitive-training programme improve the performance of middle-aged employees undergoing in-patient psychosomatic treatment? Disability and Rehabilitation 30(23): 1786-1793.	Micro outcomes
Wang Y, Chen Q, Chen W et al. (2011) The effect of shadowboxing exercise on lipid metabolism of middle-aged and elderly women. International Journal of Obesity 35: S44-S45.	Abstract, not full paper
Watkinson C, van Sluijs EM, Sutton S et al. (2010) Randomised controlled trial of the effects of physical activity feedback on awareness and behaviour in UK adults: the FAB study protocol [ISRCTN92551397]. BMC Public Health 10(1): 144.	Not an intervention - protocol
Weinheimer EM. (2011) Effects of whey protein supplementation and exercise training on body composition and indices of metabolic syndrome in middle-aged overweight and obese adults. FASEB Journal 25.	Abstract only
Weinheimer EM, Conley TB, Kobza VM et al. (2012) Whey protein supplementation does not affect exercise training-induced changes in body composition and indices of metabolic syndrome in middle-aged overweight and obese adults. The Journal of Nutrition 142(8): 1532-1539.	Cannot separate overweight from obese
Whitwell SC, Mathew CG, Lewis CM et al. (2011) Trial Protocol: Communicating DNA-based risk assessments for Crohn's disease: a randomised controlled trial assessing impact upon stopping smoking. BMC Public Health 11(1) 44.	Not an intervention - protocol
Will JC, Farris RP, Sanders CG et al. (2004) Health promotion interventions for disadvantaged women: overview of the WISEWOMAN projects. Journal of Women's Health 13(5): 484-502.	Not an intervention - methodological paper
Wilson D, Peters R, Ritchie K et al. (2011) Latest advances on interventions that may prevent, delay or ameliorate dementia. Therapeutic Advances in Chronic Diseases 2(3): 161-173.	Systematic Review
Wood PD, Haskell WL, Blair SN et al. (1983) Increased exercise level and plasma lipoprotein concentrations: a one-year, randomized, controlled study in sedentary, middle-aged men. Metabolism 32(1): 31-39.	<2000

Wright AJ, French DP, Weinman J et al. (2006) Can genetic risk information enhance motivation for smoking cessation? An analogue study. Health Psychology 25(6): 740-752.	Too young
Wright AJ, Takeichi C, Whitwell SCL et al. (2008) The impact of genetic testing for Crohn's disease, risk magnitude and graphical format on motivation to stop smoking: An experimental analogue study. Clinical Genetics 73(4): 306-314.	Age not reported
Wright AJ, Sutton SR, Hankins M et al. (2012) Why does genetic causal information alter perceived treatment effectiveness? An analogue study. British Journal of Health Psychology 17(2): 294-313.	Too young - just!
Wu HY, Tsao TH, Hsu CH et al. (2011) The effects of low-impact dance on knee torque and lower extremity mobility in middle-aged and older women. Journal of Nursing Research 19(4): 267-274.	Not focussed on efficacy of particular intervention type
Wu T, Yeh H, Chan P et al. (2007) The effects of simple eight-week regular exercise on cardiovascular disease risk factors in middle-aged women at risk in Taiwan. Acta Cardiologica Sinica 23(3): 169.	Non OECD
Wu YT, Hwang CL, Chen CN et al. (2011) Home-based exercise for middle-aged Chinese at diabetic risk: A randomized controlled trial. Preventive Medicine 52(5): 337-343.	Non OECD
Yang S, Long Y. (2004) The influence of Taijiquan exercise on psychological state and the function of the autonomic nervous system of the middle-aged and elderly people. Homeostasis in Health and Disease 43(1): 7-11.	Micro outcomes
Yokoyama S, Gamada K, Sugino S et al. (2012) The effect of “the core conditioning exercises” using the stretch pole on thoracic expansion difference in healthy middle-aged and elderly persons. Journal of Bodywork and Movement Therapies 16(3): 326-329.	Experimental group >60
Yoshitake Y, Takai Y, Kitamura T et al. (2011) Body mass-based exercise in middle-aged and older women. International journal of sports medicine 32(12): 924-928.	Combined outcomes
Zehnacker CH, Bemis-Dougherty A. (2007) Effect of weighted exercises on bone mineral density in post-menopausal women: a systematic review. Journal of Geriatric Physical Therapy 30(2): 79-88.	Superseded by Bolam 2013 so exclude
Zhang G, Pan A, Zong G et al. (2011) Substituting white rice with brown rice for 16 weeks does not substantially affect metabolic risk factors in middle-aged Chinese men and women with diabetes or a high risk for diabetes. The Journal of Nutrition 141(9): 1685-1690.	Cannot separate those with diabetes from those at risk

Zhang J, Wang C, Li L et al. (2012) Dietary inclusion of salmon, herring and pompano as oily fish reduces CVD risk markers in dyslipidaemic middle-aged and elderly Chinese women. British Journal of Nutrition 108(08): 1455-1465.	Abstract, not full paper
Ziegelmann JP, Lippke S, Schwarzer R. (2006) Adoption and maintenance of physical activity: Planning interventions in young, middle-aged, and older adults. Psychology & Health 21(2): 145-163.	Management of existing condition
Zwolinsky S, McKenna J, Pringle A. (2013) The public health value of doctors encouraging patients to exercise. BMJ 347.	Not an intervention - letter

APPENDIX H - Methodology checklists

H.1 Inclusion/Exclusion form (Search stage 1 – systematic reviews)

Paper author/year/journal/Endnote identifier: ……

Reviewer and date: ……..…….

Inclusion criteria	Yes	No	Unclear
Is it a systematic review that meets the 5 screening criteria below? (Further information about each of these screening criteria is given in Appendix J of the CPH methods manual)			
Does the review address an appropriate and clearly focused question that is relevant to the key research questions as defined in the protocol? Note: Reviews will be included if they are relevant to all or part of a key research question but the data relevant to the research question must be sufficiently separate from other data to answer the further 4 screening questions below.			
Does the review include the types of study/ies relevant to the key research questions as defined in the protocol? i.e. • Intervention studies • Observational studies (including longitudinal cohort studies, but cross-sectional studies are excluded) • Qualitative studies (including surveys and process evaluations) Note: Reviews will be included if they include the study types included above. Where additional data is presented e.g. cross-sectional data as well as longitudinal cohort data, the data and conclusions relevant to the research question must be sufficiently separate from other data to be reported separately.			
Is the literature search sufficiently rigorous to identify all the relevant studies?			

Is the study quality of included studies appropriately assessed and reported?			
Is an adequate description of the analytical methodology used included, and are the methods used appropriate to the question?			
Is the paper some other study type (not a systematic review) that may be relevant as a primary study?			
INCLUDE	**EXCLUDE**	**UNSURE**	

H.2 Quality assessment for quantitative studies

Study identification: Include full citation details		
Study design: • Refer to the glossary of study designs (appendix D) and the algorithm for classifying experimental and observational study designs (appendix E) to best describe the paper's underpinning study design		
Guidance topic:		
Assessed by:		
Section 1: Population		
1.1 Is the source population or source area well described? • Was the country (e.g. developed or non-developed, type of health care system), setting (primary schools, community centres etc), location (urban, rural), population demographics etc adequately described?	**++** **+** **–** **NR** **NA**	**Comments:**
1.2 Is the eligible population or area representative of the source population or area? • Was the recruitment of individuals, clusters or areas well defined (e.g. advertisement, birth register)? • Was the eligible population representative of the source? Were important groups underrepresented?	**++** **+** **–** **NR** **NA**	**Comments:**
1.3 Do the selected participants or areas represent the	**++**	**Comments:**

eligible population or area? • Was the method of selection of participants from the eligible population well described? • What % of selected individuals or clusters agreed to participate? Were there any sources of bias? • Were the inclusion or exclusion criteria explicit and appropriate?	**+** **–** **NR** **NA**	
Section 2: Method of selection of exposure (or comparison) group		
2.1 Selection of exposure (and comparison) group. How was selection bias minimised? • How was selection bias minimised?	**++** **+** **–** **NR** **NA**	**Comments:**
2.2 Was the selection of explanatory variables based on a sound theoretical basis? • How sound was the theoretical basis for selecting the explanatory variables?	**++** **+** **–** **NR** **NA**	**Comments:**
2.3 Was the contamination acceptably low? • Did any in the comparison group receive the exposure? • If so, was it sufficient to cause important bias?	**++** **+** **–** **NR** **NA**	**Comments:**
2.4 How well were likely confounding factors identified and controlled? • Were there likely to be other confounding factors not considered or appropriately adjusted for? • Was this sufficient to cause important bias?	**++** **+** **–** **NR** **NA**	**Comments:**

2.5 Is the setting applicable to the UK? • Did the setting differ significantly from the UK?	**++** **+** **–** **NR** **NA**	**Comments:**
Section 3: Outcomes		
3.1 Were the outcome measures and procedures reliable? • Were outcome measures subjective or objective (e.g. biochemically validated nicotine levels ++ vs self-reported smoking −)? • How reliable were outcome measures (e.g. inter- or intra-rater reliability scores)? • Was there any indication that measures had been validated (e.g. validated against a gold standard measure or assessed for content validity)?	**++** **+** **–** **NR** **NA**	**Comments:**
3.2 Were the outcome measurements complete? • Were all or most of the study participants who met the defined study outcome definitions likely to have been identified?	**++** **+** **–** **NR** **NA**	**Comments:**
3.3 Were all the important outcomes assessed? • Were all the important benefits and harms assessed? • Was it possible to determine the overall balance of benefits and harms of the intervention versus comparison?	**++** **+** **–** **NR** **NA**	**Comments:**
3.4 Was there a similar follow-up time in exposure and comparison groups? • If groups are followed for different lengths of time, then more events are likely to occur in the group followed-up for longer distorting the comparison.	**++** **+** **–** **NR**	**Comments:**

• Analyses can be adjusted to allow for differences in length of follow-up (e.g. using person-years).	**NA**	
3.5 Was follow-up time meaningful? • Was follow-up long enough to assess long-term benefits and harms? • Was it too long, e.g. participants lost to follow-up?	**++** **+** **–** **NR** **NA**	**Comments:**
Section 4: Analyses		
4.1 Was the study sufficiently powered to detect an intervention effect (if one exists)? • A power of 0.8 (i.e. it is likely to see an effect of a given size if one exists, 80% of the time) is the conventionally accepted standard. • Is a power calculation presented? If not, what is the expected effect size? Is the sample size adequate?	**++** **+** **–** **NR** **NA**	**Comments:**
4.2 Were multiple explanatory variables considered in the analyses? • Were there sufficient explanatory variables considered in the analysis?	**++** **+** **–** **NR** **NA**	**Comments:**
4.3 Were the analytical methods appropriate? • Were important differences in follow-up time and likely confounders adjusted for?	**++** **+** **–** **NR** **NA**	**Comments:**
4.6 Was the precision of association given or calculable? Is association meaningful? • Were confidence intervals or p values for effect estimates given or possible to calculate? • Were CIs wide or were they sufficiently precise to aid decision-making? If precision is lacking, is	**++** **+** **–** **NR**	**Comments:**

this because the study is under-powered?	**NA**	
Section 5: Summary		
5.1 Are the study results internally valid (i.e. unbiased)? • How well did the study minimise sources of bias (i.e. adjusting for potential confounders)? • Were there significant flaws in the study design?	**++** **+** **–**	**Comments:**
5.2 Are the findings generalisable to the source population (i.e. externally valid)? • Are there sufficient details given about the study to determine if the findings are generalisable to the source population? • Consider: participants, interventions and comparisons, outcomes, resource and policy implications.	**++** **+** **–**	**Comments:**

H.3 Quality assessment for randomly controlled trials

Author, title, reference, year of publication					
Guideline topic:	**Review question no:**				
Checklist completed by:					
		Circle or highlight one option for each question			
A. Selection bias (systematic differences between the comparison groups)					
A1	An appropriate method of randomisation was used to allocate participants to treatment groups (which would have balanced any confounding factors equally across groups)	Yes	No	Unclear	N/A
A2	There was adequate concealment of allocation (such that investigators, clinicians and participants cannot influence enrolment or treatment allocation)	Yes	No	Unclear	N/A
A3	The groups were comparable at baseline, including all major confounding and prognostic factors	Yes	No	Unclear	N/A
A3b Based on your answers to the above, in your opinion was selection bias present? If so, what is the likely direction of its effect?					
Low risk of bias	Unclear/unknown risk	High risk of bias			
A3c Likely direction of effect: . .					
B. Performance bias (systematic differences between groups in the care provided, apart from the intervention under investigation)					

B1	The comparison groups received the same care apart from the intervention(s) studied	Yes	No	Unclear	N/A
B2	Participants receiving care were kept 'blind' to treatment allocation	Yes	No	Unclear	N/A
B3	Individuals administering care were kept 'blind' to treatment allocation	Yes	No	Unclear	N/A

B3b Based on your answers to the above, in your opinion was performance bias present? If so, what is the likely direction of its effect?

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Low risk of bias	Unclear/unknown risk	High risk of bias

B3c Likely direction of effect:

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C. Attrition bias (systematic differences between the comparison groups with respect to loss of participants)

C1	All groups were followed up for an equal length of time (or analysis was adjusted to allow for differences in length of follow-up)	Yes	No	Unclear	N/A
C2	a. How many participants did not complete treatment in each group?				
	b. The groups were comparable for treatment completion (that is, there were no important or systematic differences between	Yes	No	Unclear	N/A

	groups in terms of those who did not complete treatment)				
C3	a. For how many participants in each group were no outcome data available? .				
	b. The groups were comparable with respect to the availability of outcome data (that is, there were no important or systematic differences between groups in terms of those for whom outcome data were not available).	Yes	No	Unclear	N/A
C3b Based on your answers to the above, in your opinion was attrition bias present? If so, what is the likely direction of its effect? . .					
Low risk of bias	Unclear/unknown risk	High risk of bias			
C3c Likely direction of effect: . .					
D. Detection bias (bias in how outcomes are ascertained, diagnosed or verified)					
D1	The study had an appropriate length of follow-up	Yes	No	Unclear	N/A
D2	The study used a precise definition of outcome	Yes	No	Unclear	N/A

D3	A valid and reliable method was used to determine the outcome	Yes	No	Unclear	N/A
D4	Investigators were kept 'blind' to participants' exposure to the intervention	Yes	No	Unclear	N/A
D5	Investigators were kept 'blind' to other important confounding and prognostic factors	Yes	No	Unclear	N/A

D5b Based on your answers to the above, in your opinion was detection bias present? If so, what is the likely direction of its effect?

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Low risk of bias	Unclear/unknown risk	High risk of bias

D5c Likely direction of effect:

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H.4 Quality assessment for systematic reviews

AMSTAR: A measurement instrument tool to assess the methodological quality of systematic reviews

Shea B *et al*. AMSTAR is a reliable and valid measurement tool to assess the methodological quality f systematic reviews. Journal of Clinical Epidemiology 2009;62:1013-1020.

			Comments
1	Was an ‘‘a priori’’ design provided? The research question and inclusion criteria should be established before the conduct of the review. Note: Need to refer to a protocol, ethics approval, or pre-determined/a priori published research objectives to score a “yes.”	☐ Yes ☐ No ☐ Can’t answer ☐ Not applicable	
2	Was there duplicate study selection and data extraction? There should be at least two independent data extractors and a consensus procedure for dis- agreements should be in place. Note: 2 people do study selection, 2 people do data extraction, consensus process or one person checks the other’s work.	☐ Yes ☐ No ☐ Can’t answer ☐ Not applicable	
3	Was a comprehensive literature search performed? At least two electronic sources should be searched. The report must include years and databases used (e.g., Central, EMBASE, and MEDLINE). Key words and/or MESH terms must be stated, and where feasible, the search strategy should be provided. All searches should be supplemented by consulting current contents, reviews, textbooks, specialized registers, or experts in the particular field of study, and by reviewing the references in the studies found. Note: If at least 2 sources + one supplementary strategy used, select “yes” (Cochrane register/Central counts as 2 sources; a grey literature search counts as supplementary).	☐ Yes ☐ No ☐ Can’t answer ☐ Not applicable	
4	Was the status of publication (i.e., grey literature) used as an inclusion criterion?	☐ Yes	

	The authors should state that they searched for reports regardless of their publication type. The authors should state whether or not they excluded any reports (from the systematic review), based on their publication status, language etc. Note: If review indicates that there was a search for “grey literature” or “unpublished literature,” indicate “yes.” SIGLE database, dissertations, conference proceedings, and trial registries are all considered grey for this purpose. If searching a source that contains both grey and non-grey, must specify that they were searching for grey/unpublished lit.	☐ No ☐ Can’t answer ☐ Not applicable	
5	Was a list of studies (included and excluded) provided? A list of included and excluded studies should be provided. Note: Acceptable if the excluded studies are referenced. If there is an electronic link to the list but the link is dead, select “no.”	☐ Yes ☐ No ☐ Can’t answer ☐ Not applicable	
6	Were the characteristics of the included studies provided? In an aggregated form, such as a table, data from the original studies should be provided on the participants, interventions, and out- comes. The ranges of characteristics in all the studies analyzed, e.g., age, race, sex, relevant socioeconomic data, disease status, duration, severity, or other diseases should be reported. Note: Acceptable if not in table format as long as they are described as above.	☐ Yes ☐ No ☐ Can’t answer ☐ Not applicable	

			Comments
7	Was the scientific quality of the included studies assessed and documented? ''A priori'' methods of assessment should be provided (e.g., for effectiveness studies if the author(s) chose to include only randomized, double-blind, placebo-controlled studies, or allocation concealment as inclusion criteria); for other types of studies, alternative items will be relevant. Note: Can include use of a quality scoring tool or checklist, e.g., Jadad scale, risk of bias, sensitivity analysis, etc., or a description of quality items, with some kind of result for EACH study ("low" or "high" is fine, as long as it is clear which studies scored "low" and which scored "high"; a summary score/range for all studies is not acceptable).	☐ Yes ☐ No ☐ Can't answer ☐ Not applicable	
8	Was the scientific quality of the included studies used appropriately in formulating conclusions? The results of the methodological rigor and scientific quality should be considered in the analysis and the conclusions of the review, and explicitly stated in formulating recommendations. Note: Might say something such as "the results should be interpreted with caution due to poor quality of included studies." Cannot score "yes" for this question if scored "no" for question 7.	☐ Yes ☐ No ☐ Can't answer ☐ Not applicable	
9	Were the methods used to combine the findings of studies appropriate? For the pooled results, a test should be done to ensure the studies were combinable, to assess their homogeneity (i.e., Chi-squared test for homogeneity, I2). If heterogeneity exists, a random effects model should be used and/or the clinical appropriateness of combining should be 0taken into consideration (i.e., is it sensible to combine?). Note: Indicate "yes" if they mention or describe heterogeneity, i.e., if they explain that they cannot pool because of heterogeneity/variability between interventions.	☐ Yes ☐ No ☐ Can't answer ☐ Not applicable	

10	Was the likelihood of publication bias assessed? An assessment of publication bias should include a combination of graphical aids (e.g., funnel plot, other available tests) and/or statistical tests (e.g., Egger regression test). Note: If no test values or funnel plot included, score “no”. Score “yes” if mentions that publication bias could not be assessed because there were fewer than 10 included studies.	☐ Yes ☐ No ☐ Can’t answer ☐ Not applicable	
11	Was the conflict of interest included? Potential sources of support should be clearly acknowledged in both the systematic review and the included studies. Note: To get a “yes,” must indicate source of funding or support for the systematic review AND for each of the included studies.	☐ Yes ☐ No ☐ Can’t answer ☐ Not applicable	
‘‘Can’t answer’’ is chosen when the item is relevant but not described by the authors; ‘‘not applicable’’ is used when the item is not relevant, such as when a meta-analysis has not been possible or was not attempted by the authors.			

H.5 Quality assessment for economic evaluations

NICE Methodology checklist: economic evaluations. A measurement instrument tool to assess the methodological quality of economic evaluations

Evers, S, Goossens M, de Vet H et al. (2005) Criteria list for assessment of methodological quality of economic evaluations: consensus on health economic criteria. International Journal of Technology Assessment in Health Care 21: 240–5

Study identification *Include author, title, reference, year of publication*		
Guideline topic:		Question no:
Checklist completed by:		
Section 1: Applicability (relevance to specific guideline review question(s) and the NICE reference case) ***This checklist should be used first to filter out irrelevant studies.***	**Yes/ Partly/ No /Unclear /NA**	**Comments**
1.1 Is the study population appropriate for the guideline?		
1.2 Are the interventions and services appropriate for the guideline?		
1.3 Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?		
1.4 Are costs measured from the NHS and personal social services		

(PSS) perspective?		
1.5 Are non-direct health effects on individuals excluded?		
1.6 Are both costs and health effects discounted at an annual rate of 3.5%?		
1.7 Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?		
1.8 Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?		
1.9 Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?		
1.10 Overall judgement: Directly applicable/Partially applicable/Not applicable There is no need to use section 2 of the checklist if the study is considered 'not applicable'.		
Other comments:		
Section 2: Study limitations (the level of methodological quality)	**Yes/ Partly /No/ Unclear/ NA**	**Comments**

This checklist should be used once it has been decided that the study is sufficiently applicable to the context of the clinical guideline*[2]*.		
2.1 Does the model structure adequately reflect the nature of the health condition under evaluation?		
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?		
2.3 Are all important and relevant health outcomes included?		
2.4 Are the estimates of baseline health outcomes from the best available source?		
2.5 Are the estimates of relative treatment effects from the best available source?		
2.6 Are all important and relevant costs included?		
2.7 Are the estimates of resource use from the best available source?		
2.8 Are the unit costs of resources from the best available source?		
2.9 Is an appropriate incremental analysis presented or can it be		

calculated from the data?		
2.10 Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?		
2.11 Is there no potential conflict of interest?		
2.12 Overall assessment: Minor limitations/Potentially serious limitations/Very serious limitations		
Other comments:		