



**Projet SPICES : sélection parmi 5 recommandations de
bonne pratique pour la prévention des maladies
cardiovasculaires via les procédures AGREE II et
ADAPTE. Identification des références bibliographiques
des recommandations internationales, “ 2013
AHA/ACC/TOS. Guideline for the Management of
Overweight and Obesity in Adults ” et “ 2015 NICE
guideline: Preventing excess weight gain ”, à intégrer
dans la matrice de recherche de l’étude SPICES**

Nicolas Vimfles

HAL Id: dumas-01951769

<https://dumas.ccsd.cnrs.fr/dumas-01951769>

Submitted on 11 Dec 2018

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - NonCommercial - NoDerivatives 4.0
International License

► **To cite this version:**

Nicolas Vimfles. Projet SPICES: sélection parmi 5 recommandations de bonne pratique pour la prévention des maladies cardiovasculaires via les procédures AGREE II et ADAPTE. Identification des références bibliographiques des recommandations internationales, “ 2013 AHA/ACC/TOS. Guideline for the Management of Overweight and Obesity in Adults ” et “ 2015 NICE guideline: Preventing excess weight gain ”, à intégrer dans la matrice de recherche de l’étude SPICES. Life Sciences [q-bio]. 2018. dumas-01951769



UNIVERSITÉ de BRETAGNE OCCIDENTALE
FACULTÉ DE MÉDECINE

THESE DE DOCTORAT EN MEDECINE

| |
|-----------------------|
| DIPLOME D'ETAT |
|-----------------------|

Année : 2018

Thèse présentée par :

Monsieur VIMFLES Nicolas
Né le 08 Août 1988 à SAINT-RENAN (29)

Thèse soutenue publiquement le 25 Octobre 2018

Titre de la thèse :

Projet SPICES :

- **Sélection parmi 5 recommandations de bonne pratique pour la prévention des maladies cardiovasculaires via les procédures AGREE II et ADAPTE.**
- **Identification des références bibliographiques des recommandations internationales, « 2013 AHA/ACC/TOS : Guideline for the Management of Overweight and Obesity in Adults » et « 2015 NICE guideline : Preventing excess weight gain », à intégrer dans la matrice de recherche de l'étude SPICES.**

Président

Mr le Professeur LE RESTE Jean-Yves

Membres du jury :

Mr le Docteur DERRIENNIC Jérémy
Me le Docteur BARAIS Marie
Me le Docteur LE GOFF Delphine

UNIVERSITE DE BRETAGNE OCCIDENTALE
FACULTE DE MEDECINE ET DES SCIENCES DE LA SANTE DE BREST

Doyens honoraires

FLOCH Hervé
LE MENN Gabriel (†)
SENECAIL Bernard
BOLES Jean-Michel
BIZAIS Yves (†)
DE BRAEKELEER Marc (†)

Doyen

BERTHOU Christian

Professeurs émérites

| | |
|--------------------------|-------------------------|
| BOLES Jean-Michel | Réanimation |
| CENAC Arnaud | Médecine interne |
| COLLET Michel | Gynécologie obstétrique |
| JOUQUAN Jean | Médecine interne |
| LEHN Pierre | Biologie cellulaire |
| MOTTIER Dominique | Thérapeutique |
| YOUINOU Pierre | Immunologie |

Professeurs des Universités – Praticiens Hospitaliers en surnombre

| | |
|--------------------------|-----------------------------|
| LEFEVRE Christian | Anatomie |
| OZIER Yves | Anesthésiologie-réanimation |

Professeurs des Universités – Praticiens Hospitaliers de Classe Exceptionnelle

| | |
|---------------------------------|---|
| BERTHOU Christian | Hématologie |
| COCHENER-LAMARD Béatrice | Ophtalmologie |
| DEWITTE Jean-Dominique | Médecine et santé au travail |
| FEREC Claude | Génétique |
| FOURNIER Georges | Urologie |
| GENTRIC Armelle | Gériatrie et biologie du vieillissement |
| GILARD Martine | Cardiologie |
| GOUNY Pierre | Chirurgie vasculaire |
| NONENT Michel | Radiologie et imagerie médicale |
| REMY-NERIS Olivier | Médecine physique et réadaptation |
| SARAUX Alain | Rhumatologie |
| ROBASZKIEWICZ Michel | Gastroentérologie |

Professeurs des Universités – Praticiens Hospitaliers de 1^{ère} Classe

| | |
|-------------------------|---------------------|
| AUBRON Cécile | Réanimation |
| BAIL Jean-Pierre | Chirurgie digestive |

AU 01/09/2018

BEZON Éric
BLONDEL Marc
BOTBOL Michel
BRESSOLLETTE Luc
CARRE Jean-Luc
DE PARSCAU DU PLESSIX Loïc
DELARUE Jacques
DEVAUCHELLE-PENSEC Valérie
DUBRANA Frédéric
FENOLL Bertrand
HU Weiguo
KERLAN Véronique
LACUT Karine
LE MEUR Yannick
LE NEN Dominique
LEROYER Christophe
MANSOURATI Jacques
MARIANOWSKI Rémi
MERVIEL Philippe
MISERY Laurent
NEVEZ Gilles
PAYAN Christopher
SALAUN Pierre-Yves
SIZUN Jacques
STINDEL Éric

TIMSIT Serge
VALERI Antoine
WALTER Michel

Chirurgie thoracique et cardiovasculaire
 Biologie cellulaire
 Pédiopsychiatrie (*jusqu'en décembre 2018*)
 Médecine vasculaire
 Biochimie et biologie moléculaire
 Pédiatrie
 Nutrition
 Rhumatologie
 Chirurgie orthopédique et traumatologique
 Chirurgie infantile
 Chirurgie plastique, reconstructrice et esthétique
 Endocrinologie, diabète et maladies métaboliques
 Thérapeutique
 Néphrologie
 Chirurgie orthopédique et traumatologique
 Pneumologie
 Cardiologie
 Oto-rhino-laryngologie
 Gynécologie obstétrique
 Dermato-vénérologie
 Parasitologie et mycologie
 Bactériologie-virologie
 Biophysique et médecine nucléaire
 Pédiatrie
 Biostatistiques, informatique médicale et technologies de communication
 Neurologie
 Urologie
 Psychiatrie d'adultes

Professeurs des Universités – Praticiens Hospitaliers de 2^{ème} Classe

ANSART Séverine
BEN SALEM Douraid
BERNARD-MARCORELLES Pascale
BROCHARD Sylvain
BRONSARD Guillaume
CORNEC Divi
COUTURAUD Francis
GENTRIC Jean-Christophe
GIROUX-METGES Marie-Agnès
HERY-ARNAUD Geneviève
HUET Olivier
L'HER Erwan
LE GAC Gérald
LE MARECHAL Cédric
LE ROUX Pierre-Yves
LIPPERT Éric
MONTIER Tristan
NOUSBAUM Jean-Baptiste
PRADIER Olivier
RENAUDINEAU Yves

Maladies infectieuses
 Radiologie et imagerie médicale
 Anatomie et cytologie pathologiques
 Médecine physique et réadaptation
 Pédiopsychiatrie (*à compter du 1^{er} décembre 2018*)
 Rhumatologie
 Pneumologie
 Radiologie et imagerie médicale
 Physiologie
 Bactériologie-virologie
 Anesthésiologie-réanimation
 Réanimation
 Génétique
 Génétique
 Biophysique et médecine nucléaire
 Hématologie
 Biologie cellulaire
 Gastroentérologie
 Cancérologie
 Immunologie

Anatomie
Chirurgie digestive
Génétique

LE FLOC'H Bernard
LE RESTE Jean-Yves

BARRAINE Pierre
CHIRON Benoît

BORDRON Anne Biologie cellulaire

METGES Jean-Philippe Cancérologie

| | |
|-------------------------|---|
| JAMIN Christophe | Immunologie |
| MOREL Frédéric | Biologie et médecine du développement et de la reproduction |
| PERSON Hervé | Anatomie |

| | |
|--------------------------------|---|
| ABGRAL Ronan | Biophysique et médecine nucléaire |
| DE VRIES Philine | Chirurgie infantile |
| DOUET-GUILBERT Nathalie | Génétique |
| HILLION Sophie | Immunologie |
| LE BERRE Rozenn | Maladies infectieuses |
| LE GAL Solène | Parasitologie et mycologie |
| LE VEN Florent | Cardiologie |
| LODDE Brice | Médecine et santé au travail |
| MIALON Philippe | Physiologie |
| PERRIN Aurore | Biologie et médecine du développement et de la reproduction |
| PLEE-GAUTIER Emmanuelle | Biochimie et biologie moléculaire |
| QUERELLOU Solène | Biophysique et médecine nucléaire |
| TALAGAS Matthieu | Histologie, embryologie et cytogénétique |
| UGUEN Arnaud | Anatomie et cytologie pathologiques |
| VALLET Sophie | Bactériologie-virologie |

BERROUIGUET Sofian Psychiatrie d'adultes
BRENAUT Emilie Dermato-vénéréologie

| | |
|------------------------------|---|
| CORNEC-LE GALL Emilie | Néphrologie |
| GUILLOU Morgane | Addictologie |
| MAGRO Elsa | Neurochirurgie |
| ROBIN Philippe | Biophysique et médecine nucléaire |
| SALIOU Philippe | Epidémiologie, économie de la santé et prévention |
| SCHICK Ulrike | Cancérologie |

NABBE Patrice

BARAIS Marie
BEURTON COURAUD Lucas
DERRIENNIC Jérémy

| | |
|------------------------------|---|
| BERNARD Delphine | Biochimie et biologie moléculaire |
| BOUSSE Alexandre | Génie informatique, automatique et traitement du signal |
| DANY Antoine | Epidémiologie et santé publique |
| DERBEZ Benjamin | Sociologie démographie |
| LE CORNEC Anne-Hélène | Psychologie |
| LANCIEN Frédéric | Physiologie |
| LE CORRE Rozenn | Biologie cellulaire |
| MIGNEN Olivier | Physiologie |
| MORIN Vincent | Electronique et informatique |

MERCADIE Lolita Rhumatologie

GUELLEC-LAHAYE Julie Marie Charlotte Biochimie et biologie moléculaire

| | |
|--------------------|----------|
| MONOT Alain | Français |
| RIOU Morgan | Anglais |

| | |
|-----------------------|---------------------------------|
| NGUYEN BA Vinh | Anesthésie-réanimation |
| ROUSSET Jean | Radiologie et imagerie médicale |
| DULOU Bruno | Neurochirurgie |

Remerciements :

Je souhaiterais remercier le Professeur LE RESTE pour la présidence de ma thèse.

Je souhaiterais remercier le Docteur BARAIS d'avoir accepté de faire partie de mon jury.

Je souhaite également remercier le Docteur DERRIENNIC pour sa participation dans mon jury.

Un grand merci à Delphine LE GOFF, mon directeur de thèse pour toute son aide, sa disponibilité et ses encouragements.

Merci à Michele ODORICO pour son encadrement lors de la création de ce travail.

Je remercie également mes co-internes sur le projet SPICES qui ont participé au consensus de notation des guidelines lors de l'utilisation de l'outil AGREE II et pour les échanges enrichissants qu'on a pu partager.

Merci à Justine, ma compagne, pour son soutien tout au long de mon cursus, pour la joie qu'elle m'apporte au quotidien et pour m'avoir donné deux beaux enfants.

Merci à Pia et Basile, mes enfants, d'avoir égayé mon travail.

Merci à mes parents, Franck et Danièle, et à mon frère, Hugo pour avoir supporté toutes mes histoires de médecine durant les repas de famille et pour leur soutien pendant toutes ces années.

Merci à toute ma famille et à ma belle-famille d'avoir toujours cru en moi.

Merci à Arthur et Charlotte mes deux co-internes de premier semestre pour avoir été à mes côtés pendant les bons comme les mauvais moments.

Merci à tous mes amis pour tous ces bons moments passés ensemble ce qui a rendu mes études plus supportables.

Merci aux maîtres de stage et aux médecins qui m'ont transmis leur expérience et leur savoir-faire.

A Clément.

Table of Contents :

| | |
|-------------------|----|
| Abstract..... | 8 |
| Abstract..... | 9 |
| Introduction..... | 10 |
| Method..... | 15 |
| Results..... | 20 |
| Discussion..... | 36 |
| Conclusion..... | 42 |
| References..... | 43 |
| Appendix 1..... | 46 |
| Appendix 2..... | 48 |
| Appendix 3..... | 50 |
| Appendix 4..... | 51 |
| Appendix 5..... | 53 |
| Appendix 6..... | 56 |
| Appendix 7..... | 57 |
| Appendix 8..... | 57 |
| Appendix 9..... | 61 |

Abstract:

Introduction:

Cardiovascular diseases (CVD) are the first cause of mortality in the world. Despite health-care prevention policies, the global burden of CVD increases. The SPICES project was created to implement innovative interventions about CVD prevention in Europe and Sub-Saharan Africa. The first step was a systematic review of the international recommendations on the topic using the ADAPTE procedure.

Method:

ADAPTE Step 11 assessed quality of 5 guidelines with the AGREE II Instrument. Inclusion was based on an overall assessment score ≥ 5 . ADAPTE Step 13 was extraction of recommendations from “2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adults” and “2015 NICE guideline: Preventing excess weight gain”. Recommendations were included if they were A or B level of evidence, 1++, 1+, 2++, 2+, Strong or Class 1. Recommendations were excluded if they focused on secondary or tertiary CVD prevention, diagnostic procedures, pharmacological or surgical treatments. References of selected recommendations were gathered in a matrix. If no grading of recommendations, references were included if they were randomized controlled trials or cohort interventional surveys.

Results:

2 guidelines were included and 3 excluded. Regarding ADAPTE step 13, 17 recommendations and 316 references were selected and extracted to the research matrix.

Conclusion:

A great disparity in the quality of guidelines and references was found. Main limitation was lack of time. The research group had to stop at a draft matrix. The next step will be finalization of the matrix to extract interventions and implementation from references.

Résumé:

Introduction :

Les maladies cardiovasculaires (MCV) sont la première cause de mortalité dans le monde. Malgré les politiques de prévention des soins de santé, le fardeau mondial des MCV augmente. Le projet SPICES a été créé pour mettre en œuvre des interventions innovantes sur la prévention des MCV en Europe et en Afrique subsaharienne. La première étape consistait à réaliser une revue systématique des recommandations internationales sur le sujet en utilisant la procédure ADAPTE.

Méthode :

L'étape 11 d'ADAPTE a évalué la qualité de 5 recommandations de bonne pratique (RBP) avec l'instrument AGREE II. L'inclusion était basée sur un score d'évaluation globale ≥ 5 . L'étape 13 d'ADAPTE a été l'extraction des recommandations de "2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adults" et "2015 NICE guideline: Preventing excess weight gain". Les recommandations ont été incluses si le niveau de preuve était A ou B, 1 ++, 1 +, 2 ++, 2+, Fort ou Classe 1. Elles ont été exclues si elles portaient sur la prévention secondaire ou tertiaire des MCV, des procédures de diagnostic, des traitements pharmacologiques ou chirurgicaux. Les références des recommandations sélectionnées ont été rassemblées dans une matrice. Pour les recommandations sans système de gradation, les références ont été incluses en cas d'essais contrôlés randomisés ou d'enquêtes interventionnelles de cohorte.

Résultats :

2 RBP ont été incluses et 3 ont été exclues. Pour l'étape 13 d'ADAPTE, 17 recommandations et 316 références ont été sélectionnées et extraites dans la matrice.

Conclusion :

Une grande disparité dans la qualité des RBP et des références a été constatée. La principale limitation a été le manque de temps. Le groupe de recherche a dû s'arrêter à un projet de matrice. L'étape suivante sera de finaliser la matrice pour extraire des références les interventions et leurs mises en œuvre.

I) Introduction :

In 2015, non-communicable diseases (NCD) were the leading cause of death in the world. According to the World Health Organization (WHO), 70% of the 56.4 million global deaths were attributable to NCD. Cardiovascular diseases, cancers, diabetes and chronic lung diseases were the four main NCD (1). Cardiovascular diseases (CVD) like heart attacks and strokes, caused annually 17,7 million deaths (about 31% of all deaths worldwide) (2). In Europe, nearly half of deaths were due to CVD and a third of them concerned people under the age of 75 (3). In France, CVD caused more than 900.000 hospitalizations in 2013 and around 150.000 deaths in 2014 (4) (5). The most disadvantaged socio-economic countries were the most affected. More than 75% of CVD deaths occurred in low-income and middle-income countries (2). The global burden of CVD still increases. The number of deaths from stroke increased from 5.4 million in 2000 to 6.2 million in 2015 worldwide (6). According to estimates, global cardiovascular deaths are expected to increase from 16.7 million in 2002 to 23.3 million in 2030 (7).

An unhealthy diet, physical inactivity, smoking and the harmful use of alcohol are the key behavioral risk factors for CVD. They can lead to increased blood pressure, increased blood sugar, dyslipidemia and obesity, which are metabolic risk factors that lead to CVD (2). Each year, more than 7 million deaths were attributable to tobacco use, 4,1 million deaths to excess salt/sodium intake and 1,6 million deaths to insufficient physical activity. These deaths were avoidable and these behavioral and metabolic risk factors were modifiable (8).

To reduce CVD deaths, large-scale cost effectiveness interventions are possible (tobacco control policy, tax policy for food products high in fat, sugar and salt, development of pedestrian and bicycle paths to increase the physical activity of the population...) (2). Interventions focused on individuals are also possible, both in primary prevention and in secondary prevention using drugs or non-pharmacological interventions that have proven their effectiveness (2).

Non-pharmacological cardiovascular primary prevention measures have shown their ability to reduce exposure to risk factors by adopting a healthy lifestyle and smoking cessation (6). To adopt a healthy lifestyle, WHO recommends eating lots of fruits and vegetables (5 serving a day), reducing fat, sugar, alcohol consumption, salt intake and regularly exercising (a

minimum of 150 minutes of moderate-intensity physical activity during the week for adults) (9).

French National Authority for Health (HAS) recommends lifestyle modifications for each individual, regardless of cardiovascular risk level. HAS recommends to stop smoking and not to be exposed to tobacco, to eat a Mediterranean diet, by eating fish 2-3 times a week, 400 grams of fruits and vegetables a day, reducing salt intake. HAS recommends fighting a sedentary lifestyle, doing sport (to accumulate at least 150 min per week of moderate intensity activities, or 75 min of aerobic activities of high intensity, or a combination of both). Alcohol consumption is strongly discouraged. (10).

Health model of rich countries cannot be transposed to low-income countries because of the limitations of the health system (lack of health personnel, infrastructure, equipment and medicines, insufficient funding) (11). Cost-effective and easy-to-implement interventions would reduce the inequalities between these countries in terms of cardiovascular morbidity and mortality (12).

The SPICES (Scaling-up Packages of Interventions for Cardiovascular disease prevention in selected sites in Europe and Sub-Saharan Africa (SSA)) study is an international project involving Belgium, France, United Kingdoms, South Africa and Uganda. It aims to implement strategies of non-pharmacological primary cardiovascular prevention, especially for people having a limited access to cardiovascular prevention. Implementation science is a new field of research. Implementation studies are testing methods to extend at a large scale the systematic uptake of proven clinical treatments, practices, organizational and management interventions into routine practice, and to improve health. It includes the exploration of multiple influences on patients, healthcare professionals, and involves organizational behavior science techniques in healthcare or population settings (13).

SPICES project builds on progress in HIV / AIDS control in SSA and chronic disease management through innovative care for chronic diseases (ICCC framework), plan for WHO. ICCC framework was introduced in 2002 to improve chronic disease management. Creation of a healthcare triad is the central point of this model which is organized on 3 levels: microlevel, mesolevel and macrolevel. At the microlevel, a partnership between patients and families, health care teams and community supporters form a triad. The integration of mesolevel and macrolevel components, represented by the larger health care organization, the

broader community and the policy environment, allows for active patient and family involvement, supported by the community and the health care teams, in the management of chronic diseases (14). About HIV / AIDS control, WHO based its plan on four main themes: simplification of monitoring and treatment protocols, facilitation of access to antiretroviral therapy (ART), task shifting and involvement of the population and patients in the organization of this new system of care (15). For example, nurses have been trained in setting up and monitoring ART. The interventions implemented under this new WHO plan have demonstrated their effectiveness and cost-effectiveness in many countries in SSA (16)(17)(18)(19).

The SPICES team chose to retain a dozen of the most effective interventions for non-pharmacological primary prevention. The selected interventions would be grouped in the SPICES basket. Then community leaders could choose in the basket the ones they would use during the project. To select interventions, the SPICES consortium chose a new approach. A systematic review of the international recommendations on the topic was conducted following the ADAPTE procedure.

This research was a piece of the creation of the SPICES basket. The overall question of the review procedure was:

Which lifestyle interventions related to smoking cessation, physical activity, healthy diet and weight loss are proven effective in reducing cardiovascular risk (primary /secondary outcomes) in primary prevention of cardiovascular diseases on primary health care and/or community level?

Which strategies for implementation of these interventions are proven to be effective (outcome measures on implementation)?

The ADAPTE and AGREE II procedures were chosen to construct a research matrix from the references of the guidelines.

The ADAPTE procedure is a systematic approach for guideline developers created to quarry existing guidelines, to product new ones, adapted to a specific cultural and organizational context. Its purpose is to take advantage of existing guidelines in order to enhance the efficient production and use of high-quality adapted guidelines (20).This procedure is

structured by the use of the ADAPTE Manual and Resource Toolkit. One step of the ADAPTE procedure is to assess the quality of guideline by using the AGREE instrument.

The original AGREE instrument was published in 2003. It has since been improved to make it easier to use and to increase its reliability and validity, leading to the AGREE II instrument. AGREE II is a quality assessment grid of recommendations for clinical practice. This tool was developed because the potential benefits provided by the guidelines depend on their quality of elaboration. The AGREE II instrument assesses the methodological rigor and transparency of the guideline development process and address the problem of variability in the quality of guidelines. It is composed of 23 questions organized into six domains, followed by two general elements of evaluation. Each domain deals with a particular dimension of the quality of the guidelines.

The systematic review of international (Netherlands, Europe, USA, Australia) and of national (each country participating in the SPICES project) guidelines has been conducted from July to October 2017 by SPICES Project team. The ADAPTE Process methodology was partly used for the guideline review. ADAPTE steps 7 to 13 were carried out. The search was conducted on the G-I-N database (Guidelines International Network) and TRIP Database (Turning Research Into Practice). This review followed the PRISMA Statement quality criteria. After the identification and selection process of the guidelines, 48 guidelines were eligible for a full text evaluation by AGREE II instrument. Guidelines were assigned within a research group, the following guidelines were attributed to our study:

- 2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adults (21),
- 2014 BC Guidelines: Cardiovascular Disease - Primary Prevention: Resource Guide for Physicians (22),
- 2014 UMHS Lipid Therapy Guideline update, Screening and Management of Lipids (23),
- 2015 BC Guidelines: A Guide for Patients: Management of Hypertension (24),
- 2012 WHO: Prevention and control of non-communicable diseases: guidelines for primary health care in low resource settings (25).

Guidelines selected by the AGREE II procedure were then analyzed to describe effective interventions and their implementation strategies. Data, references and interventions will be

further gathered in a research matrix. The research matrix will allow several uses, synthesis of the data, comparison of the recommendations, identification of the high-level recommendations. It will provide a basis for a discussion within the consortium to select the dozen of most effective interventions for non-pharmacological primary prevention.

Guidelines assessed within this study were:

- 2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adults (21),
- 2015 NICE guideline: Preventing excess weight gain (26).

The research questions of the current study were:

- *Among the 5 attributed guidelines identified in the SPICES study, which guidelines should be selected using the AGREE II and ADAPTE procedures?*
- *In the 2 subsequent attributed guidelines what are the bibliographical references for non-pharmacological interventions in primary cardiovascular prevention to be included in the research matrix of the SPICES study?*

II) Method:

This study was developed within the Département Universitaire de Médecine générale (DUMG) of Brest in a thesis workgroup. The group comprised medical trainees, junior researchers and a senior research teacher. The group met monthly to discuss difficulties encountered, to exchange their views on the work progress and to ascertain the procedure was followed.

Among the 48 guidelines eligible for a full text evaluation by AGREE II instrument, 27 guidelines were assigned to the Brest research team. Then guidelines were assigned to 6 medical trainees of the thesis workgroup concurrently with the three researchers. The study was conducted from June 2017 to January 2018.

The following assigned guidelines to this work were evaluated with the AGREE II Instrument:

- 2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adults (21);
- 2014 BCGuidelines: Cardiovascular Disease - Primary Prevention: Resource Guide for Physicians (22);
- 2014 UMHS Lipid Therapy Guideline update, Screening and Management of Lipids (23);
- 2015 BCGuidelines: A Guide for Patients: Management of Hypertension (24);
- 2012 WHO: Prevention and control of non-communicable diseases: guidelines for primary health care in low resource settings (25);

To answer the research question, step 11, step 12 and step 13 of the ADAPTE procedure were used.

a) Step 11. Assess guideline quality (Using AGREE II instrument):

Step 11 of the ADAPTE procedure was used to assess guideline quality with the AGREE II Instrument. After full text reading, researchers rated the 23 items on a 7-point scale, 1 being the worst and 7 being the best possible quality. Domain scores were calculated by summing up all the scores of the individual items in a domain and by scaling the total as a percentage of the maximum possible score for that domain. An overall assessment (OA) was scored. This

was not the calculated average of the item scores but was estimated independently as expected by the tool's developers.

The 23 items were distributed in 6 domains:

- Domain 1. Scope and Purpose
- Domain 2. Stakeholder Involvement
- Domain 3. Rigor of Development
- Domain 4. Clarity of Presentation
- Domain 5. Applicability
- Domain 6. Editorial Independence

Regarding the domain Scope and Purpose (items 1-3), the researcher ensured that the objective of the guideline, the health question and the target population were clearly described.

Regarding the domain Stakeholder Involvement (items 4-6), the researcher ensured that the guideline development group included individuals from all appropriate professional groups, the views and preferences of the target population and the target users.

Regarding the domain Rigor of development (items 7-14), the researcher ensured that the process used to collect and synthesize the evidence was suitable, the methods to formulate the recommendations, and to update them were provided.

Regarding the domain Clarity of Presentation (items 15-18), the researcher ensured that the language, structure and presentation of the guideline were suitable: specific and unambiguous recommendations, easily identifiable key recommendations.

Regarding the domain Applicability (items 19-21), the researcher ensured that barriers and facilitators were considered as well as an approach to improve their adoption.

Regarding the domain Editorial Independence (items 22-23), the researcher ensured that identification of biases resulting from conflicts of interest was considered.

As recommended by the ADAPTE Manual and Resource Toolkit (20), the thesis workgroup experimented AGREE II on a first guideline, *the 2016 European Guidelines on Cardiovascular Disease Prevention in Clinical Practice* (27), as a common training exercise. The members individually scored the guideline. Then the group had a meeting to compare the scoring, to discuss any question or discrepancy, and to reach a consensus about in the evaluation of each domain.

Each screened guideline was assessed independently with the AGREE II instrument by at least two researchers. To conclude the evaluation, the researchers assessed the quality of the guidelines by assigning the OA score and answering three questions: “*I would recommend this guideline for use. Yes - Yes, with modifications – No*”.

The selection of the guidelines for subsequent research was based on OA scores:

- All appraisers OA scores superior or equal to 5 (over 7): inclusion
- All appraisers OA scores inferior to 5: exclusion
- OA score around cut-off: exclusion (One OA score of 4 and one OA score of 5)
- Discrepant OA scores, i.e. difference of more than 1 point with at least one OA score being superior or equal to 5: discussion between appraisers and consensual decision.

b) Step 12. Assess guidelines currency:

Selected guidelines were published after 2011, the team considered that their bibliography was current and did not require re-evaluation.

c) Step 13. Assess guideline content:

A part of step 13 of the ADAPTE procedure consisted in creating a research matrix of recommendations to be evaluated. The following guidelines were assigned to this study:

- 2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adults (21),
- 2015 NICE guideline: Preventing excess weight gain (26),

Their recommendations were listed in structured research matrix with the references related to recommendations. The structure of the guidelines, recommendations and references and the link between recommendations and related references were described. Recommendations on

lifestyle interventions were retained. Pharmacological and surgical interventions recommendations were excluded. Inclusion criteria for recommendations were:

- Recommendations with A or B level of evidence or 1++, 1 +, 2++, 2+ for NICE grading system,
- Strong or Class 1 recommendations (regardless of the level of evidence).
- For guidelines without recommendation grades, references were included if they were randomized controlled trials (RCTs), cohort interventional surveys, or systematic reviews and meta-analysis of such surveys.

Recommendations were excluded if it they treated exclusively of:

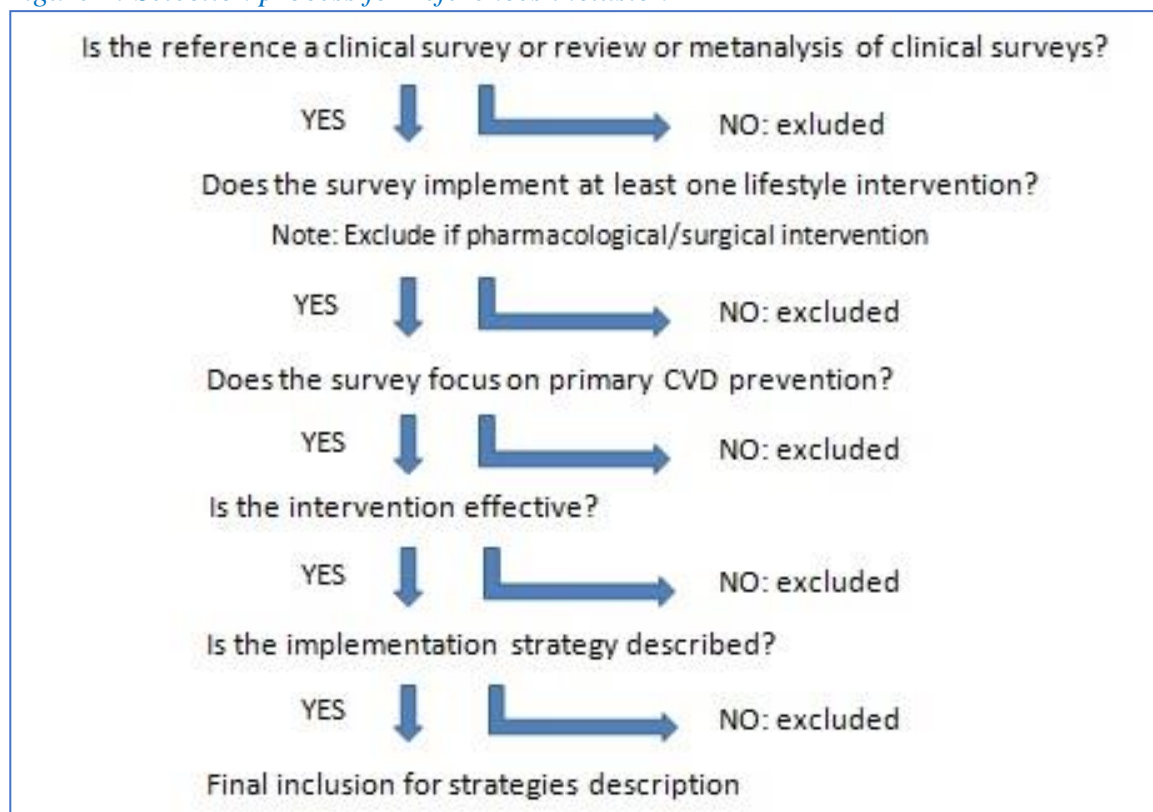
- Secondary or tertiary CVD prevention
- Diagnostic procedures
- Pharmacological or surgical treatments

Very-low calories diet were excluded as such interventions need a strict medical follow-up which is out of scope for SPICES project.

First references were defined as studies cited in the bibliography of the guidelines. Derived references were defined as studies included in meta-analysis and literature reviews cited by the guidelines. First and derived references of the recommendations were included into the research matrix. References were first included or excluded according to their title and abstract. Clinical surveys, review and meta-analysis of clinical surveys were included. Studies that did not focus on primary CVD prevention and did not include at least one lifestyle intervention were excluded. When a researcher was unsure about the inclusion of a study, the reference was included in the research matrix for later evaluation. Duplicates were searched for and removed.

The following protocol was used to select references from included recommendations:

Figure 1: Selection process for references inclusion



New members of the thesis workgroup worked later on the research matrix. Interventions and implementation strategies used in the included references were then described in details. They were ranked accordingly to their reliability and effectiveness.

III) Results:

A) Step 11. Assess guideline quality (Using AGREE II instrument):

Table 1: listbox of assigned guidelines.

| <u>Number of the guideline</u> | <u>Name of the guideline</u> | <u>Year of publication</u> |
|--------------------------------|--|----------------------------|
| Guideline # 1 | AHA/ACC/TOS guideline for the management of overweight and obesity in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society.(21) | 2013 |
| Guideline # 2 | BCGuidelines.ca: Cardiovascular Disease - Primary Prevention: Resource Guide for Physicians.(22) | 2014 |
| Guideline # 3 | UMHS Lipid Therapy Guideline: Screening and Management of Lipids. (23) | 2014 |
| Guideline # 4 | BCGuidelines.ca: Hypertension – Diagnosis and Management (24) | 2015 |
| Guideline # 5 | Prevention and Control of Noncommunicable Diseases: Guidelines for primary health care in low-resource settings. WHO (25) | 2012 |

Two guidelines were included and three guidelines were excluded after step 11 of the ADAPTE procedure.

OA scores of the guideline # 1 were 6 for the first appraiser, 5 for the second appraiser, the final decision was inclusion.

OA scores of the guideline # 2 were 3 for the first appraiser, 4 for the second appraiser, the final decision was exclusion.

OA scores of the guideline # 3 were 4 for the first appraiser, 3 for the second appraiser, the final decision was exclusion.

OA scores of the guideline # 4 were 2 for the first appraiser, 2 for the second appraiser, the final decision was exclusion.

OA scores of the guideline # 5 were 5 for the first appraiser, 5 for the second appraiser, the final decision was inclusion.

The AGREE scores are presented in Table 2 with the OA score for each evaluator, their comments and the final decision, inclusion or exclusion. Details of AGREE's score and all appraiser's comments for each item and for each domain were reported in appendix 1, 2, 3, 4 and 5.

Table 2: AGREE score results.

| Guidelines | First appraiser evaluation | Second appraiser evaluation | Final decision |
|---|--|---|--|
| Guideline # 1 : 2013 AHA/ACC/TOS | <u>OA score:</u> 6 <u>Comment:</u> Insufficient info on implementation strategy + no formal cost analysis | <u>OA score:</u> 5 <u>Comment:</u> Assess global CV risk | Q1 – 1 Q2 – 1 Q3 – 0 FD: INCLUSION |
| Guideline # 2 : 2014 BC Guidelines | <u>OA score:</u> 3 <u>Comment:</u> NC | <u>OA score:</u> 4 <u>Comment:</u> Main limitation is research methodology | Q1 – 0 Q2 – 0 Q3 – 2 FD: EXCLUSION |
| Guideline # 3 : 2014 UMHS | <u>OA score:</u> 4 <u>Comment:</u> Yes with modifications. Lack of information concerning the methodology. | <u>OA score:</u> 3 <u>Comment:</u> Purely pharmacological no references to link recommendations to literature search methodology is not clear (no inclusion exclusion criteria) | Q1 – 0 Q2 – 1 Q3 – 1 FD: EXCLUSION |
| Guideline # 4 : 2015 BC Guidelines | <u>OA score:</u> 2 <u>Comment:</u> Insufficient (NO) info on overall development process!!! | <u>OA score:</u> 3 <u>Comment:</u> NC | Q1 – 0 Q2 – 0 Q3 – 2 FD: EXCLUSION |
| Guideline # 5 : 2012 WHO | <u>OA score:</u> 5 <u>Comment:</u> Good process description but could be more detailed. Not specifically about CVD but T2D | <u>OA score:</u> 5 <u>Comment:</u> Nothing about SMOKING CESSATION. positive points: not a lot of guideline for low income countries | Q1 – 1 Q2 – 1 Q3 – 0 FD: INCLUSION |

NC: no comment, Q1: I would recommend this guideline for use: Yes, Q2: I would recommend this guideline for use: Yes, with modifications, Q3: I would recommend this guideline for use: No, FD: Final decision.

B) Step 13. Assess guideline content:

Table 3: listbox of assigned guidelines.

| <u>Number of the guideline</u> | <u>Name of the guideline</u> | <u>Year of publication</u> |
|--------------------------------|--|----------------------------|
| Guideline # 1 | AHA/ACC/TOS guideline for the management of overweight and obesity in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society.(21) | 2013 |
| Guideline # 6 | NICE guideline : Preventing excess weight gain.(26) | 2015 |

I. Guideline # 1:

Eleven recommendations of the guideline # 1 were included and six were excluded. The recommendations included are presented in Table 4. The excluded recommendations and the reason for the exclusion are presented in appendix 6.

This guideline was organized in critical question (CQ) connected to recommendations. Each recommendation was related to a CQ. References were not linked to the recommendations but to the CQs. Methodology had to be adapted. “Good” and “fair” references of the CQs were included in the research matrix. The “good and fair” rating was attributed by the guideline # 1 creators, after a structured assessment of the quality of the references. CQs retained if following the inclusion criteria were:

CQ1: Among overweight and obese adults, does weight loss produce CVD health benefits and what health benefits can be expected with different degrees of weight loss?

CQ2: What are the CVD-related health risks of overweight and obesity and are the current cutpoints for overweight (BMI 25–29.9kg/m²), obesity (BMI >30kg/m²), and waist circumference (>102 cm (M) and >88 cm (F)) appropriate for population subgroups?

CQ3: Which dietary strategies are effective for weight loss?

CQ4: What is the efficacy/effectiveness of a comprehensive lifestyle intervention program (i.e., diet, physical activity, and behavior therapy) in facilitating weight loss or maintaining weight loss?

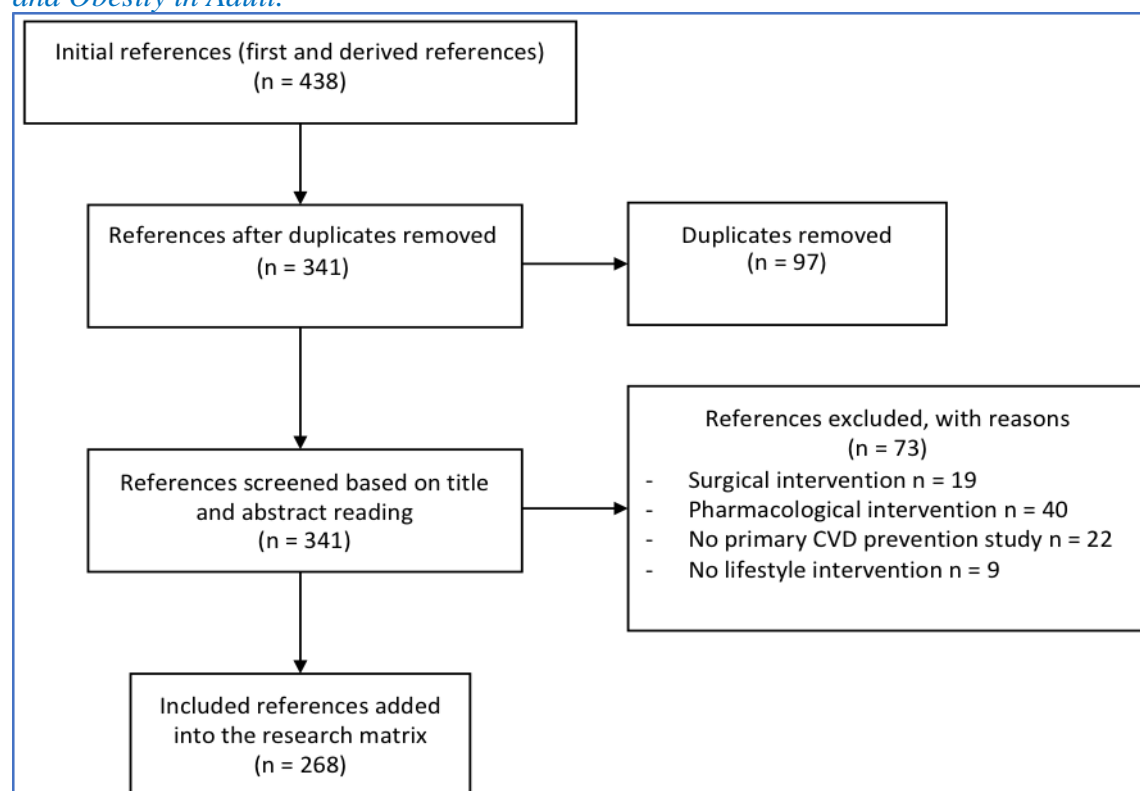
Table 4: Included recommendations for 2013 AHA/ACC/TOS Guideline for the Management of Overweight and Obesity in Adult.

| Recommendation | Critical Question (CQ) | Grade of recommendations | |
|---|------------------------|--------------------------|-------|
| | | CLASS | LEVEL |
| <p>Counsel overweight and obese adults with cardiovascular risk factors (high BP, hyperlipidemia, and hyperglycemia) that lifestyle changes that produce even modest, sustained weight loss of 3%–5% produce clinically meaningful health benefits, and greater weight losses produce greater benefits.</p> <p>a. Sustained weight loss of 3%–5% is likely to result in clinically meaningful reductions in triglycerides, blood glucose, hemoglobin A1c, and the risk of developing type 2 diabetes;</p> <p>b. Greater amounts of weight loss will reduce BP, improve LDL–C and HDL–C, and reduce the need for medications to control BP, blood glucose, and lipids as well as further reduce triglycerides and blood glucose.</p> | CQ1 | A | I |
| Advise overweight and obese adults that the greater the BMI, the greater the risk of CVD, type 2 diabetes, and all-cause mortality. | CQ2 | A | I |
| Advise adults that the greater the waist circumference, the greater the risk of CVD, type 2 diabetes, and all-cause mortality. The cutpoints currently in common use (from either NIH/NHLBI or WHO/IDF) may continue to be used to identify patients who may be at increased risk until further evidence becomes available. | CQ2 | E/B | IIa |
| <p>Prescribe a diet to achieve reduced calorie intake for obese or overweight individuals who would benefit from weight loss, as part of a comprehensive lifestyle intervention. Any one of the following methods can be used to reduce food and calorie intake:</p> <p>a. Prescribe 1200–1500 kcal/d for women and 1500–1800 kcal/d for men (kilocalorie levels are usually adjusted for the individual’s body weight);</p> <p>b. Prescribe a 500-kcal/d or 750-kcal/d energy deficit;</p> <p>or</p> <p>c. Prescribe one of the evidence-based diets that restricts certain food types (such as high-carbohydrate foods, low-fiber foods, or high-fat foods) in order to create an energy deficit by reduced food intake.</p> | CQ3 | A | I |

| | | | |
|---|-----|-----|-----|
| Prescribe a calorie-restricted diet, for obese and overweight individuals who would benefit from weight loss, based on the patient's preferences and health status, and preferably refer to a nutrition professional for counseling. | CQ3 | A | I |
| Advise overweight and obese individuals who would benefit from weight loss to participate for ≥ 6 months in a comprehensive lifestyle program that assists participants in adhering to a lower-calorie diet and in increasing physical activity through the use of behavioral strategies. | CQ4 | A | I |
| Prescribe on-site, high-intensity (ie, ≥ 14 sessions in 6 mo) comprehensive weight loss interventions provided in individual or group sessions by a trained interventionist. [†] | CQ4 | A | I |
| Advise overweight and obese individuals who have lost weight to participate long term (≥ 1 year) in a comprehensive weight loss maintenance program. | CQ4 | A | I |
| For weight loss maintenance, prescribe face-to-face or telephone-delivered weight loss maintenance programs that provide regular contact (monthly or more frequently) with a trained interventionist [†] who helps participants engage in high levels of physical activity (ie, 200–300 min/wk), monitor body weight regularly (ie, weekly or more frequently), and consume a reduced-calorie diet (needed to maintain lower body weight). | CQ4 | A | I |
| Electronically delivered weight loss programs (including by telephone) that include personalized feedback from a trained interventionist [†] can be prescribed for weight loss but may result in smaller weight loss than face-to-face interventions. | CQ4 | B/A | IIa |
| Some commercial-based programs that provide a comprehensive lifestyle intervention can be prescribed as an option for weight loss, provided there is peer-reviewed published evidence of their safety and efficacy | CQ4 | B/A | IIa |

The included recommendations of the *AHA/ACC/TOS Guideline* led to 438 initial references (first and derived references). 73 references were excluded (see Appendix 8), 97 duplicates were removed, and 268 references were added (see Table 6) to the research matrix. (Figure 2)

Figure 2: Flow chart for 2013 AHA/ACC/TOS Guideline for the Management of Overweight and Obesity in Adult.



II. Guideline # 6:

Six recommendations of the guideline # 6 were included and four were excluded. The grade of the recommendations was not formulated in this guideline but the recommendations were based on high quality systematic reviews. The recommendations were formulated as a result of evidence statements based on the literature. The included recommendations are presented in Table 2. The excluded recommendations and the reason for the exclusion are presented in appendix 7.

Table 5: Included recommendations for Preventing excess weight gain NICE guideline.

| Included recommendations | Evidence Base Statement | Grade of recommendations |
|--|---|--------------------------|
| Recommendation 1: Encourage people to make changes in line with existing advice | Evidence Statement 1.17: Relationship between sugar sweetened beverage (SSB) consumption and weight related outcomes | None |
| | Evidence Statement 1.31: Relationship between adherence to population dietary guidelines and weight related outcomes in adults | |
| | Evidence Statement 1.33: Relationship between dietary pattern and weight related outcomes in children and young people | |
| | Evidence Statement 1.37: Relationship between total carbohydrate consumption and weight related outcomes | |
| | Evidence Statement 1.50: Relationship between snacking/snacks and weight related outcomes | |
| | Evidence Statement 2.7: Combining messages for diet and physical activity | |
| | Evidence Statement 2.8: Conflicting messages | |
| | Evidence Statement 2.10: General content | |
| Recommendation 2: Encourage physical activity habits to avoid low energy expenditure | Evidence Statement 1.3: Relationship between leisure and recreational activity and weight related outcomes in adults and children | None |
| | Evidence Statement 1.4: Relationship between sport and weight related outcomes | |
| | Evidence Statement 1.5: Relationship between active travel and weight related outcomes | |
| | Evidence Statement 1.6: Relationship between walking and weight related outcomes | |
| | Evidence Statement 1.7: Relationship between cycling and weight related outcomes | |
| | Evidence Statement 1.8: Relationship between activities of daily living and weight related outcomes | |
| | Evidence Statement 1.9: Relationship between incidental physical activity and weight related | |
| | Evidence Statement 1.11: Relationship between aerobic exercise and weight related outcomes | |
| | Evidence Statement 1.12: Relationship between physical activity (PA) intensity/frequency/duration and weight related outcomes in adults | |
| | Evidence Statement 1.15: Relationship between TV and other screen time and weight related outcomes | |

| | | |
|---|--|------|
| Recommendation 3: Encourage dietary habits that reduce the risk of excess energy intake | Evidence Statement 1.17: Relationship between sugar sweetened beverage (SSB) consumption and weight related outcomes | None |
| | Evidence Statement 1.18: Relationship between fruit juice consumption and weight related outcomes | |
| | Evidence Statement 1.19: Relationship between water consumption and weight related outcomes | |
| | Evidence Statement 1.20: Relationship between tea and coffee consumption and weight related outcomes | |
| | Evidence Statement 1.22: Relationship between milk and dairy consumption and weight related outcomes | |
| | Evidence Statement 1.23: Relationship between whole grain consumption and weight related outcomes | |
| | Evidence Statement 1.24: Relationship between refined grain consumption and weight related outcomes | |
| | Evidence Statement 1.25: Relationship between fruit and vegetable consumption and weight related outcomes | |
| | Evidence Statement 1.26: Relationship between meat consumption and weight related outcomes | |
| | Evidence Statement 1.27: Relationship between fish consumption and weight related outcomes | |
| | Evidence Statement 1.28: Relationship between legume consumption and weight related outcomes | |
| | Evidence Statement 1.29: Relationship between nut consumption and weight related outcomes | |
| | Evidence Statement 1.30: Relationship between Mediterranean diet and weight related outcomes in adults | |
| | Evidence Statement 1.33: Relationship between dietary pattern and weight related outcomes in children and young people | |
| | Evidence Statement 1.34: Relationship between vegetarian or vegan diet and weight related outcomes | |
| | Evidence Statement 1.35: Relationship between total fat consumption and weight related outcomes | |
| | Evidence Statement 1.36: Relationship between total protein consumption and weight related outcomes | |
| | Evidence Statement 1.37: Relationship between total carbohydrate consumption and weight related outcomes | |
| | Evidence Statement 1.39: Relationship between dietary fibre consumption on healthy weight maintenance | |
| | Evidence Statement 1.40: Relationship between energy density (ED) and weight related outcomes | |
| | Evidence Statement 1.41: Relationship between non-nutritive sweeteners and weight related outcomes | |
| | Evidence Statement 1.42: Relationship between dietary sugar consumption (sucrose, glucose, fructose, high fructose corn syrup) and weight related outcomes | |
| | Evidence Statement 1.43: Relationship between catechin intake and weight related outcomes | |
| | Evidence Statement 1.44: Relationship between caffeine intake and weight related outcomes | |
| | Evidence Statement 1.45: Relationship between eating meals prepared outside of home (eating out/fast food/takeaway meals) and weight related outcomes | |
| | Evidence Statement 1.48: Relationship between family meals and weight related outcomes | |
| | Evidence Statement 1.49: Relationship between breakfast consumption or skipping and weight related outcomes | |
| | Evidence Statement 1.50: Relationship between snacking/snacks and weight related outcomes | |

| | | |
|--|---|------|
| Recommendation 4: Further advice for parents and carers of children and young people | Evidence Statement 1.3: Relationship between leisure and recreational activity and weight related outcomes in adults and children | None |
| | Evidence Statement 1.4: Relationship between sport and weight related outcomes | |
| | Evidence Statement 1.11: Relationship between aerobic exercise and weight related outcomes | |
| | Evidence Statement 1.13: Relationship between physical activity intensity/frequency/duration and weight related outcomes in children and young people | |
| | Evidence Statement 1.15: Relationship between TV and other screen time and weight related outcomes | |
| | Evidence Statement 1.48: Relationship between family meals and weight related outcomes | |
| | Evidence Statement 1.51: Relationship between sleep and weight related outcomes | |
| Recommendation 5: Encourage adults to limit the amount of alcohol they drink | Evidence Statement 1.21: Relationship between alcohol consumption and weight related outcomes | None |
| Recommendation 6: Encourage self-monitoring | Evidence Statement 1.52: Relationship between physical activity monitoring and weight related outcomes | None |
| | Evidence Statement 2.8: Conflicting messages | |

The included recommendations of the NICE guideline led to 134 initial references (first and derived references). 34 references were excluded (see Appendix 9), 52 duplicates were removed, and 48 references were added (see Table 7) to the research matrix. (Figure 3)

Figure 3: Flow chart: Included references for: Preventing excess weight gain NICE guideline.

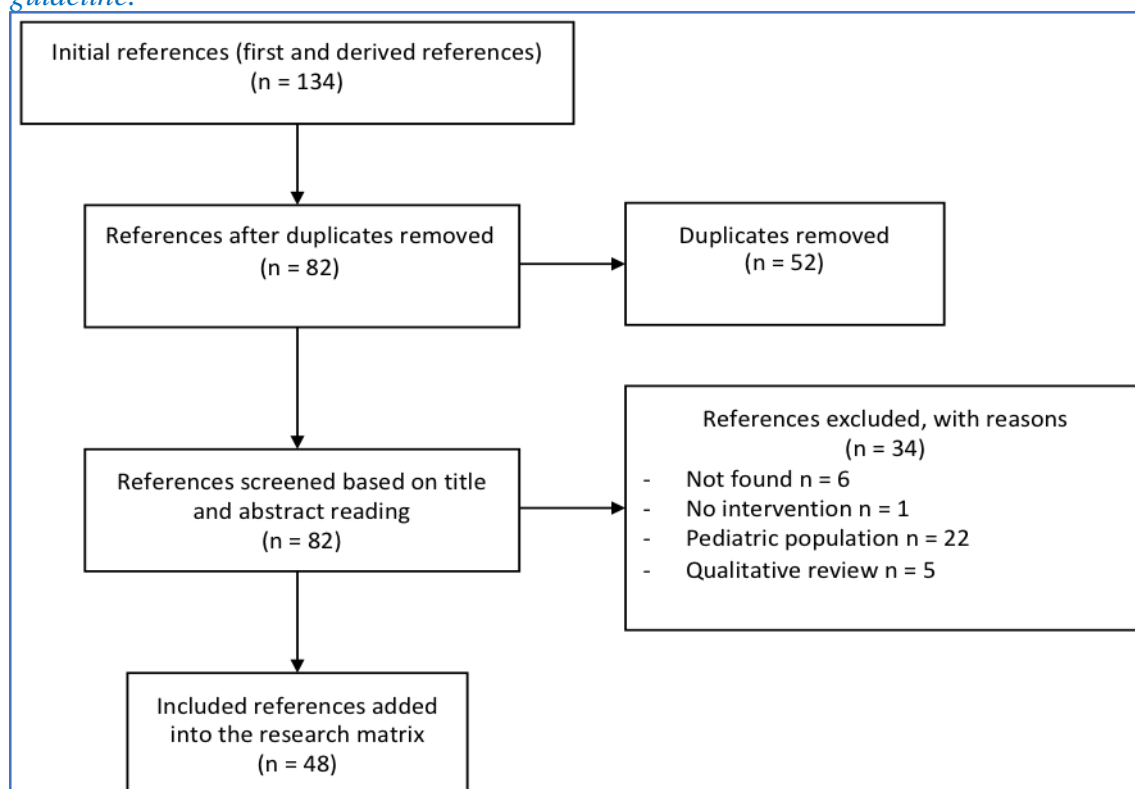


Table 6: 268 included references added into the research matrix for 2013 AHA/ACC/TOS guideline.

| Guideline # 1 AHA/ACC/TOS | |
|---|--|
| Included references added into the research matrix | |
| Tuomilehto J, Lindstrom J, Eriksson J. Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance. <i>N Engl J Med</i> 2001; 344: 1343–1350. | Hartwell SL, Kaplan RM, Wallace JP. Comparison of behavioral interventions for control of type II diabetes mellitus. <i>Behavior Therapy</i> 1986;17:447–61. |
| Wing RR, Venditti E, Jakicic JM, Polley BA, Lang W. Lifestyle intervention in overweight individuals with a family history of diabetes. <i>Diabetes Care</i> 1998; 21: 350–359. | Heitzmann CA, Kaplan RM, Wilson DK, Sandler J. Sex differences in weight loss among adults with type II diabetes mellitus. <i>Journal of Behavioral Medicine</i> 1987;10:197–211. |
| Wing RR, Jeffery RW, Hellerstedt WL. A prospective study of effects of weight cycling on cardiovascular risk factors. <i>Arch Intern Med</i> . 1995; 155:1416–1422. | Heller SR, Clarke P, Daly H, Davis I, McCulloch DK, Allison SP, et al. Group education for obese patients with type 2 diabetes: greater success at less cost. <i>Diabetic Medicine</i> 1988;5:552–6. |
| Kauffmann R, Bunout D, Hidalgo C, Aicardi V, Rodriguez R, Canas L, Roessler E. A 2-year follow-up of a program for the control of cardio-vascular risk factors among asymptomatic workers. <i>Rev Med Chil</i> . 1992; 120:822–827. | Hockaday TD, Hockaday JM, Mann JI, Turner RC. Prospective comparison of modified fat-high-carbohydrate with standard low-carbohydrate dietary advice in the treatment of diabetes: one year follow-up study. <i>British Journal of Nutrition</i> 1978;39(2):357–62. |
| Sjostrom M, Karlsson AB, Kaati G, Yngve A, Green LW, Bygren LO. A four week residential program for primary health care patients to control obesity and related heart risk factors: effective application of principles of learning and lifestyle change. <i>Eur J Clin Nutr</i> . 1999;53(suppl 2):S72–S77. | Julius U, Gross P, Hanefeld M. Work absenteeism in type 2 diabetes mellitus: results of the prospective diabetes intervention study. <i>Diabetes Metabolism</i> 1993;19:202–6. |
| Black DR, Lantz CE. Spouse involvement and a possible long-term follow-up trap in weight loss. <i>Behav Res Ther</i> 1984;22:557–62. | Kaplan RM, Wilson DK, Hartwell SL, Merino KL, Wallace JP. Prospective evaluation of HDL cholesterol changes after diet and physical conditioning programs for patients with type II diabetes mellitus. <i>Diabetes Care</i> 1985;8:343–8. |
| Blonk MC, Jacobs MAJM, Biesheuvel EHE, Weeda- Mannak WL, Heine RJ. Influence on weight loss in type 2 diabetic patients: little long-term benefit from group behaviour therapy and exercise training. <i>Diabet Med</i> 1994;11:449–57. | Korhonen T, Uusitupa M, Aro A, Kumpulainen T, Siitonen O, Voutilainen E, et al. Efficacy of dietary instructions in newly diagnosed non-insulin-dependent diabetic patients. <i>Acta Medica Scandinavica</i> 1987;222: 323–31. |
| Cohen MD, D'Amico FJ, Merenstein JH. Weight reduction in obese hypertensive patients. <i>Fam Med</i> 1991;23:25–8. | Lindner J, Schmechel H, Hanefeld M, Schwanebeck U, Bauch K. Coronary heart disease and insulin concentration in type II diabetic patients—results of a diabetes intervention dy. [German]. <i>Zeitschrift für die Gesamte Innere Medizin und Ihre Grenzgebiete</i> 1992;47(6):246–50. |
| Cousins JH, Rubovits DS, Dunn JK, Reeves RS, Ramirez AG, Foreyt JP. Family versus individually oriented intervention for weight loss in Mexican American women. <i>Public Health Rep</i> 1992;107:549–55. | McCarron DA, Oparil S, Chait A, Haynes RB, Kris- Etherton P, Stern JS, et al. Nutritional management of cardiovascular risk factors. A randomized clinical trial. <i>Archives of Internal Medicine</i> 1997;157(2):169–77. |
| de Waard, 1993a (Netherlands cohort) de Waard, 1993b (Poland cohort) de Waard FD, Ramlaui R, Mulders Y, Vries TD, Waveren SV. A feasibility study on weight reduction in obese postmenopausal breast cancer patients. <i>Eur J Cancer Prev</i> 1993;2:233–8. | McCarron DA, Reusser ME. Reducing cardiovascular disease risk with diet. <i>Obesity Research</i> 2001;9:335S–40S. |
| DISH, Langford HG, Blafox MD, Oberman A, Hawkins CM, Curb JD, Cutter GR, et al. Dietary therapy slows the return of hypertension after stopping prolonged medication. <i>JAMA</i> 1985;253:657–64. | Metz JA, Kris-Etherton PM, Morris CD, Mustad VA, Stern JS, Oparil S, et al. Dietary compliance and cardiovascular risk reduction with a prepared meal plan compared with a self-selected diet. <i>American Journal of Clinical Nutrition</i> 1997;66:373–385. |
| Blafox MD, Langford HG, Oberman A, Hawkins CM, Wassertheil-Smoller SW, Cutter GR. Effect of dietary change on the return of hypertension after withdrawal of prolonged antihypertensive therapy (DISH). <i>Dietary Intervention Study of Hypertension. J Hypertens</i> 1984; 2(Suppl 3):179–81. | Metz JA, Stern JS, Kris-Etherton P, Reusser RB, Morris CD, Hatton DC, et al. A randomized trial of improved weight loss with a prepared meal plan in overweight and obese patients—impact on cardiovascular risk reduction. <i>Archives of Internal Medicine</i> 2000;160(14):215–8. |
| Wassertheil-Smoller S, Langford HG, Blafox MD, Oberman A, Hawkins M, Levine B, et al. Effective dietary intervention in hypertensives: sodium restriction and weight reduction. <i>J Am Diet Assoc</i> 1985;85:423–30. | Milne RM, Mann JI, Chisholm AW, Williams SM. Long-term comparison of three dietary prescriptions in the treatment of NIDDM. <i>Diabetes Care</i> 1994;17(1):74–80. |
| FDPs, Eriksson J, Lindstrom J, Valle T, Aunola S, Hamalainen H, Ilanne-Parikka P, et al. Prevention of type II diabetes in subjects with impaired glucose tolerance: the Diabetes Prevention Study (DPS) in Finland. Study design and 1-year interim report on the feasibility of the lifestyle intervention programme. <i>Diabetologia</i> 1999; 42:793–801. | Muchmore DB, Springer J, Miller M. Self-monitoring of blood glucose in overweight type 2 diabetic patients. <i>Acta Diabetologica</i> 1994;31:215–9. |
| Uusitupa M, Lindi V, Lindström J, Louheranta A, Laakso M, Tuomilehto J. Impact of Pro12Ala polymorphism of PPAR- gene on body weight and diabetes incidence in the Finnish Diabetes Prevention Study. <i>Int J Obes</i> 2001;25(Suppl 2):S5. | Pascale R, Wing RR, Blair EH, Harvey JR, Guare JC. The effect of weight-loss on change in waist-to-hip ratio in patients with type 2 diabetes. <i>International Journal of Obesity</i> 1992;16(1):59–65. |
| Lindstrom J, Tuomilehto J, Louheranta A, Mannelini M, Rastas M, Salminen V, et al. Prevention of type 2 diabetes by lifestyle intervention – the Finnish Diabetes Prevention Study. <i>Int J Obes</i> 2001;25(Suppl 2):S21. | Pascale R, Wing RR, Butler B, Mullen M, Bononi P. Effects of a behavioral weight loss program stressing calorie restriction versus calorie plus fat restriction in obese individuals with NIDDM or a family history of diabetes. <i>Diabetes Care</i> 1995;18:1241–8. |
| Foreyt JP, Goodrick GK, Reeves RS, Raynaud AS, Darnell L, Brown AH, et al. Response of free-living adults to behavioral treatment of obesity: attrition and compliance to exercise. <i>Behav Ther</i> 1993;24:659–69. | Smith DE, Wing RR. Diminished weight loss and behavioral compliance during repeated diets in obese patients with type II diabetes. <i>Health Psychology</i> 1991;10 (6):378–83. |
| Skender ML, Goodrick GK, Del Junco DJ, Reeves RS, Darnell L, Gotto AM, et al. Comparison of 2-year weight loss trends in behavioral treatments of obesity: diet, exercise, and combination interventions. <i>J Am Diet Assoc</i> 1996;96:342–6. | Sone H, Katagiri A, Ishibashi S, Abe R, Saito Y, Murase T, Yamashita H, et al. Effects of lifestyle modifications on patients with type 2 diabetes: the Japan Diabetes Complications Study (JDCS) study design, baseline analysis and three year-interim report. <i>Hormone and Metabolic Research</i> 2002;34(9):509. |
| Frey-Hewitt B, Vranizan KM, Dreon DM, Wood PD. The effect of weight loss by dieting or exercise on resting metabolic rate in overweight men. <i>Int J Obes</i> 1990; 14:327–34. | Trento M, Passera P, Bajardi M, Tomalino M, Grassi G, Borgo E, et al. Lifestyle intervention by group care prevents deterioration of Type II diabetes: a 4-year randomized controlled clinical trial. <i>Diabetologia</i> 2002;45(9):1231–9. |
| Hakala P, Karvetti RL. Weight reduction on lactovegetarian and mixed diets. Changes in weight, nutrient intake, skinfold thicknesses and blood pressure. <i>Eur J Clin Nutr</i> 1989;43:421–30. | Trento M, Passera P, Tomalino M, Pagnozzi F, Pomero F, Vaccari P, et al. Therapeutic group education in the follow-up of patients with non-insulin treated, non-insulin dependent diabetes mellitus. <i>Diabetes, Nutrition and Metabolism</i> 1998;11:212–6. |
| Hakala P. Weight reduction programme based on dietary and behavioural counselling – a 2-year follow-up study. <i>Int J Obes</i> 1993;17:49. | Vanninen E, Laitinen J, Uusitupa M. Physical activity and fibrinogen concentration in newly diagnosed NIDDM. <i>Diabetes Care</i> 1994;17(9):1031–8. |
| Marniemi J, Seppanen A, Hakala P. Long-term effects on lipid metabolism of weight reduction on lactovegetarian and mixed diet. <i>Int J Obes</i> 1990; 14:113–25. | Wing R, Koeske R, Epstein L, Nowalk M, Gooding W, Becker D. Long-term effects of modest weight loss in type II diabetic patients. <i>Archives of Internal Medicine</i> 1987;147: 1749–53. |
| Hakala P, Karvetti R-L, Ronnema T. Groups vs. individual weight reduction programmes in the treatment of severe obesity – a five year follow-up study. <i>Int J Obes</i> 1993;17:97–102. | Wing RR, Epstein LH, Nowalk MP, Scott N. Self-regulation in the treatment of Type II diabetes. <i>Behavior Therapy</i> 1988;19:11–23. |
| HOT, Jones DW, Miller ME, Wofford MR, Anderson DC, Cameron ME, Willoughby DL, et al. The effect of weight loss intervention on antihypertensive medication requirements in the Hypertension Optimal Treatment (HOT) study. <i>Am J Hypertens</i> 1999;12:1175–80. | Wing RR, Epstein LH, Nowalk MP, Scott N, Koeske R, Hagg S. Does self-monitoring of blood glucose levels improve dietary compliance for obese patients with type II diabetes? <i>American Journal of Medicine</i> 1986;81(5):830–6. |
| HPT, Hypertension Prevention Trial Research Group. The Hypertension Prevention Trial: three-year effects of dietary changes on blood pressure. <i>Arch Intern Med</i> 1990;150:153–62. | Zapotoczky H, Semlitsch B, Herzog G, Bahadori B, Siebenhofer A, Pieber TR, Zapotoczky HG. A controlled study of weight reduction in type 2 diabetes treated by two reinforcers. <i>International Journal of Behavioral Medicine</i> 2001;8(1):42–9. |
| Forster JL, Jeffery RW, Van Natta M, Pirie P. Hypertension prevention trial: do 24-h food records capture usual eating behavior in a dietary change study? <i>Am J Clin Nutr</i> 1990;51:253–7. | Norris, S, L; Zhang, X; Avenell, A; Gregg, E; Schmid, C, H; Lau, J Long-term non-pharmacological weight loss interventions for adults with prediabetes. <i>Cochrane database of systematic reviews (Online)</i> Jan 2005, (2): CD005270 |
| Hypertension Prevention Trial Research Group. Hypertension Prevention Trial 3 year results. <i>Circulation</i> 1988;78(4 Suppl 2):568. | Pissarek D, Panzram G, Lundershausen R, et al. Intensified therapy of newly detected maturity onset diabetes [in German]. <i>Endokrinologie</i> . 1980;75:105–115. |
| Jeffery RW, French SA, Schmid TL. Attributions for dietary failures: problems reported by participants in the Hypertension Prevention Trial. <i>Health Psychol</i> 1990; 9(3):315–29. | Baron JA, Schori A, Crow B, Carter R, Mann J. A randomized controlled trial of low carbohydrate and low fat/high fiber diets for weight loss. <i>Am J Public Health</i> 1986; 76: 1293–1296. |
| Schmid TL, Jeffery RW, Onstad L, Corrigan SA. Demographic, knowledge, physiological, and behavioral variables as predictors of compliance with dietary treatment goals in hypertension. <i>Addict Behav</i> 1991; 16:151–60. | Harvey-Berino J. The efficacy of dietary fat vs total energy restriction for weight loss. <i>Obes Res</i> 1998; 6: 202–207. |
| Shah M, Jeffery RW, Laing B, Savre SG, Natta MV, Strickland D. Hypertension Prevention Trial (HPT): food pattern changes resulting from intervention on sodium, potassium, and energy intake. <i>J Am Diet Assoc</i> 1990;90:69–76. | Harvey-Berino J. Calorie restriction is more effective for obesity treatment than dietary fat restriction. <i>Ann Behav Med</i> 1999; 21: 35–39. |
| Jalkanen L. The effect of a weight reduction program on cardiovascular risk factors among overweight hypertensives in primary health care. <i>Scand J Soc Med</i> 1991;19(1):66–71. | Lean MEJ, Han TS, Prvan T, Richmond PR, Avenell A. Weight loss with high and low carbohydrate 1200 kcal diets in free living women. <i>Eur J Clin Nutr</i> 1997; 51: 243–248. |
| | McManus K, Antinoro L, Sacks F. A randomized controlled trial of a moderate-fat, low-energy diet compared with a low fat, low-energy diet for weight loss in overweight adults. <i>Int J Obes Relat Metab Disord</i> 2001; 25: 1503–1511. |

| | |
|---|--|
| Jeffery RW, Wing RR, Thorson C, Burton LR, Raether C, Jarvey J, et al. Strengthening behavioral interventions for weight loss: a randomized trial of food provision and monetary incentives. <i>J Consult Clin Psychol</i> 1993;61:1038-45. | Poobalan, A, S; Aucott, L, S; Smith, W, C, S; Avenell, A; Jung, R; Broom, J Long-term weight loss effects on all cause mortality in overweight/obese populations. Obesity reviews : an official journal of the International Association for the Study of Obesity Nov 2007, 8 (6) : 503-13 |
| Jeffery RW, Wing RR. Long-term effects of interventions for weight loss using food provision and monetary incentives. <i>J Consult Clin Psychol</i> 1995;63:793-6. | Poobalan, A; Aucott, L; Smith, W, C, S; Avenell, A; Jung, R; Broom, J; Grant, A, M Effects of weight loss in overweight/obese individuals and long-term lipid outcomes--a systematic review. Obesity reviews : an official journal of the International Association for the Study of Obesity Feb 2004, 5 (1) : 43-50 |
| Jeffery RW, Wing RR, Mayer RR. Are smaller weight losses or more achievable weight loss goals better in the long term for obese patients? <i>J Consult Clin Psychol</i> 1998; 66:641-5. | Shaw, K; Gennat, H; O'Rourke, P; Del Mar, C Exercise for overweight or obesity. Cochrane database of systematic reviews (Online) Jan 2006, (4) : CD003817- |
| Wing RR. Insulin sensitivity as a predictor of weight regain. <i>Obes Res</i> 1997;5:24-9. | Siebenhofer, Andrea; Horvath, Karl; Jeitler, Klaus; Berghold, Andrea; Stich, Anne, K; Matyas, Eva; Pignitter, Nicole; Siering, Ulrich Long-term effects of weight-reducing drugs in hypertensive patients. Cochrane database of systematic reviews (Online) Jan 2009, (3) : CD007654- |
| Wing RR, Jeffery RW. Effect of modest weight loss on changes in cardiovascular risk factors: are there differences between men and women or between weight loss and maintenance? <i>Int J Obes Relat Metab Disord</i> 1995;19:67-73. | Thomas, D, E; Elliott, E, J; Baur, L Low glycaemic index or low glycaemic load diets for overweight and obesity. Cochrane database of systematic reviews (Online) Jan 2007, (3) : CD005105- |
| Jones, 1986c (behaviour therapy given to group) Jones, 1986d (behaviour therapy given to individual) Jones SE, Owens HM, Bennett GA. Does behaviour therapy work for diabetics? An experimental evaluation of the effects of three procedures in a weight reduction clinic. <i>Hum Nutr</i> 1986;40:272-81. | Tuah, Nik, Aa; Amiel, Cressida; Qureshi, Samrina; Car, Josip; Kaur, Balvinder; Majeed, Azeem Translational model for dietary and physical exercise modification in weight loss management for overweight and obese adults. Cochrane database of systematic reviews (Online) Jan 2011, (10) : CD008066- |
| Kaplan RM, Hartwell SL, Wilson DK, Wallace JP. Effects of diet and exercise interventions on control and quality of life in non-insulin-dependent diabetes mellitus. <i>J Gen Intern Med</i> 1987;2:220-8. | Glasgow RE, La Chance PA, Toobert DJ, Brown J, Hampson SE, Riddle MC. Long-term effects and costs of brief behavioural dietary intervention for patients with diabetes delivered from the medical office. <i>Patient Educ Couns</i> 1997; 32: 175-84. |
| Karvetti, 1992a (women) Karvetti, 1992b (men) Karvetti R-L, Hakala P. A seven-year follow-up of a weight reduction programme in Finnish primary health care. <i>Eur J Clin Nutr</i> 1992;46:743-52. | Mengham LH, Morris BF, Palmer CR, White AJS. Is intensive dietetic intervention effective for overweight patients with diabetes mellitus? A randomised controlled trial in a general practice. <i>Pract Diab Int</i> 1999; 16: 5-8. |
| Laitinen, 1993a (women) Laitinen, 1993b (men) *Laitinen JH, Ahola IE, Sarkkinen ES, Winberg RL, Harnaakorpi-Iivonen PA, Uusitupa MI. Impact of intensified dietary therapy on energy and nutrient intakes and fatty acid composition of serum lipids in patients with recently diagnosed non-insulin-dependent diabetes mellitus. <i>J Am Diet Assoc</i> 1993;93:276-83. | Toobert DJ, Glasgow RE, Radcliffe JL. Physiologic and related behavioral outcomes from the Women's Lifestyle Heart Trial. <i>Ann Behav Med</i> 2000; 22: 1-9. |
| Laitinen J, Uusitupa M, Ahola I, Laakso M, Siitonen O. Metabolic and dietary variables associated with glycaemic control in patients with recently diagnosed type II diabetes mellitus. <i>Diabetes Nutr Metab</i> 1994; 7:77-87. | Messier SP, Loeser RF, Miller GD et al. Exercise and dietary weight loss in overweight and obese older adults with knee osteoarthritis: the Arthritis, Diet, and Activity Promotion Trial. <i>Arthritis Rheum</i> 2004; 50: 1501-10. |
| Laitinen J, Uusitupa M, Ahola I, Siitonen O. Metabolic and dietary determinants of serum lipids in obese patients with recently diagnosed non-insulin-dependent diabetes. <i>Ann Med</i> 1994;26:119-24. | Rejeski WJ, Focht BC, Messier SP, Morgan T, Pahor M, Penninx B. Obese, older adults with knee osteoarthritis: weight loss, exercise, and quality of life. <i>Health Psychol</i> 2002; 21: 419-26. |
| Uusitupa MI. Early lifestyle intervention in patients with non-insulin-dependent diabetes mellitus and impaired glucose tolerance. <i>Ann Med</i> 1996;28:445-9. | Mayer-Davis EJ, D'Antonio AM, Smith SM et al. Pounds off with empowerment (POWER): a clinical trial of weight management strategies for black and white adults with diabetes who live in medically underserved rural communities. <i>Am J Public Health</i> 2004; 94: 1736-42. |
| Uusitupa M, Laitinen J, Siitonen O, Vanninen E, Pyorala K. The maintenance of improved metabolic control after intensified diet therapy in recent type 2 diabetes. <i>Diabetes Res Clin Pract</i> 1993;19:227-38. | Irwin ML, Yasui Y, Ulrich CM et al. Effect of exercise on total and intra-abdominal body fat in postmenopausal women: a randomized controlled trial. <i>JAMA</i> 2003; 289: 323-30. |
| Vanninen E, Uusitupa M, Siitonen O, Laitinen J, Lamsimies E. Habitual physical activity, aerobic capacity and metabolic control in patients with newly-diagnosed type 2 (non-insulin-dependent) diabetes mellitus: effect of 1-year diet and exercise intervention. <i>Diabetologia</i> 1992;35(4):340-6. | Frank LL, Sorensen BE, Yasui Y, Tworoger SS, Schwartz RS, Ulrich CM. Effects of exercise on metabolic risk variables in overweight postmenopausal women: a randomized clinical trial. <i>Obes Res</i> 2005; 13: 615-25. |
| Vanninen E, Uusitupa M, Lamsimies E, Siitonen O, Laitinen J. Effect of metabolic control on autonomic function in obese patients with newly diagnosed type 2 diabetes. <i>Diabet Med</i> 1993;10:66-73. | Diabetes Prevention Program Research Group Crandall J, Schade D, Ma Y et al. The influence of age on the effects of lifestyle modification and metformin in the prevention of diabetes. <i>J Gerontol A Med Sci</i> 2006; 61A: 1075-81. |
| Lindahl B, Nilsson TK, Jansson JH, Asplund K, Hallmans G. Improved fibrinolysis by intense lifestyle intervention. A randomized trial in subjects with impaired glucose tolerance. <i>J Intern Med</i> 1999; 246:105-12. | Villareal DT, Shah K, Banks MR, Sinacore DR, Klein S. Effect of weight loss and exercise therapy on bone metabolism and mass in obese older adults: a one-year randomised controlled trial. <i>J Clin Endocrinol Metab</i> 2008; 93: 2181-7. |
| Long CG, Simpson CM, Allott EA. Psychological and dietetic counselling combined in the treatment of obesity: a comparative study in a hospital outpatient clinic. <i>Hum Nutr Appl Nutr</i> 1983;37:A94-102. | Ashley, J, M; St Jeor, S, T; Schrage, J, P; Perumean-Chaney, S, E; Gilbertson, M, C; McCall, N, L; Weight control in the physician's office. <i>Archives of internal medicine</i> Jul 2001, 161 (13) : 1599-604 |
| Murphy, 1982a (couple and one-party contracts vs individual and one-party contracts) Murphy, 1982b (couple and two-party contracts vs individual and two-party contracts) *Murphy JK, Williamson DA, Buxton AE, Moody SC, Absher N, Warner M. The long-term effects of spouse involvement upon weight loss and maintenance. <i>Behav Ther</i> 1982;13:681-93. Murphy JK, Bruce BK, Williamson DA. A comparison of measured and self-reported weights in a 4-year follow-up of spouse involvement in obesity treatment. <i>Behav Ther</i> 1985;16:524-30. | Pavlou, 1989 (suffixes a-h denote exercise and four diet combinations) Pavlou KN, Krey S, Steffee WP. Exercise as an adjunct to weight loss and maintenance in moderately obese subjects. <i>Am J Clin Nutr</i> 1989;49(Suppl 5):1115-23. Pavlou, 1989 2 (published data only) Pavlou, 1989 2a (not exercise) Pavlou, 1989 2b (exercise) Pavlou KN, Krey S, Steffee WP. Exercise as an adjunct to weight loss and maintenance in moderately obese subjects. <i>Am J Clin Nutr</i> 1989;49:1115-23. |
| Narayan KM, Hoskin M, Kozak D, Kriska AM, Hanson RL, Pettitt DJ, et al. Randomized clinical trial of lifestyle interventions in Pima Indians: a pilot study. <i>Diabet Med</i> 1998;15:66-72. | Burke, Lora, E; Styn, Mindi, A; Steenkiste, Ann, R; Music, Edvin; Warziski, Melanie; Choo, Jina A randomized clinical trial testing treatment preference and two dietary options in behavioral weight management: preliminary results of the impact of diet at 6 months--PREFER study. <i>Obesity (Silver Spring, Md.)</i> Nov 2006, 14 (11) : 2007-17 |
| Ost LG, Gotestam KG. Behavioral and pharmacological treatments for obesity: an experimental comparison. <i>Addict Behav</i> 1976;1:331-8. | Due, A; Toubro, S; Skov, A, R; Astrup, A Effect of normal-fat diets, either medium or high in protein, on body weight in overweight subjects: a randomised 1-year trial. <i>International journal of obesity and related metabolic disorders : journal of the International Association for the Study of Obesity</i> Oct 2004, 28 (10) : 1283-90 |
| Burke, Lora, E; Hudson, Alana, G; Warziski, Melanie, T; Styn, Mindi, A; Music, Edvin; Elci, Okan, U; Sereika, Susan, M Effects of a vegetarian diet and treatment preference on biochemical and dietary variables in overweight and obese adults: a randomized clinical trial. <i>The American journal of clinical nutrition</i> Sep 2007, 86 (3) : 588-96 | Due, A; Toubro, S; Stender, S; Skov, A, R; Astrup, A The effect of diets high in protein or carbohydrate on inflammatory markers in overweight subjects. <i>Diabetes, obesity & metabolism</i> May 2005, 7 (3) : 223-9 |
| Pearce JW, LeBow MD, Orchard J. Role of spouse involvement in the behavioral treatment of overweight women. <i>J Consult Clin Psychol</i> 1981;49:236-44. | Phenix A. A one year follow-up of a weight loss study comparing behavioral techniques, nutrition information and exercise [PhD thesis]. Fresno, CA: California School of Professional Psychology; 1990. |
| Ebbeling, Cara, B; Leidig, Michael, M; Feldman, Henry, A; Lovesky, Margaret, M; Ludwig, David, S Effects of a low-glycemic load vs. low-fat diet in obese young adults: a randomized trial. <i>JAMA : the journal of the American Medical Association</i> May 2007, 297 (19) : 2092-102 | Esposito, Katherine; Maiorino, Maria, Ida; Ciotola, Miryam; Di Palo, Carmen; Scognamiglio, Paola; Gicchino, Maurizio; Petrizzo, Michela; Saccomanno, Franco; Beneduce, Flora; Ceriello, Antonio; Giugliano, Dario Effects of a Mediterranean-style diet on the need for antihyperglycemic drug therapy in patients with newly diagnosed type 2 diabetes: a randomized trial. <i>Annals of internal medicine</i> Sep 2009, 151 (5) : 306-14 |
| Pritchard JE, Nowson CA, Wark JD. A worksite program for overweight middle-aged men achieves lesser weight loss with exercise than with dietary change. <i>J Am Diet Assoc</i> 1997;97:37-42. Pritchard JE. The body composition diet and exercise study: the effect of weight loss on soft tissue composition [Thesis]. Melbourne: University of Melbourne; 1995. Pritchard JE, Nowson CA, Wark JD. Bone loss accompanying weight loss: a randomised controlled weight loss study using diet and exercise. <i>Proc Nutr Soc Aust</i> 1995;19:57. Pritchard JE, Saul ALF, Nowson CA, Wark JD. Body composition following diet-induced and/or exercise-induced weight loss: A randomised controlled study. <i>Int J Obes</i> 1995;19:212. Pritchard JE, Nowson CA, Wark JD. Bone loss accompanying diet-induced or exercise-induced weight loss: a randomised controlled study. <i>Int J Obes</i> 1996; 20:513-20. | Foster, Gary, D; Wyatt, Holly, R; Hill, James, O; Makris, Angela, P; Rosenbaum, Diane, L; Brill, Carrie; Stein, Richard, I; Mohammed, B, Selma; Miller, Bernard; Rader, Daniel, J; Zemel, Babette; Wadden, Thomas, A; Tenhave, Thomas; Newcomb, Craig, W; Klein, Samuel Weight and metabolic outcomes after 2 years on a low-carbohydrate versus low-fat diet: a randomized trial. <i>Annals of internal medicine</i> Aug 2010, 153 (3) : 147-57 |

| | |
|--|---|
| Pritchard, 1999a (dietitian vs control) Pritchard, 1999b (doctor and dietitian vs control) Pritchard DA, Hyndman J, Taba F. Nutritional counselling in general practice: a cost effective analysis. J Epidemiol Community Health 1999;53:311-16. | Frisch, Sabine; Zittermann, Armin; Berthold, Heiner, K; Göting, Christian; Kuhn, Joachim; Kleesiek, Knut; Stehle, Peter; Körke, Heinrich A randomized controlled trial on the efficacy of carbohydrate-reduced or fat-reduced diets in patients attending a telemedically guided weight loss program. Cardiovascular diabetology Jan 2009, 8 : 36- |
| Rosenthal B, Allen GJ, Winter C. Husband involvement in the behavioral treatment of overweight women: initial effects and long-term follow-up. Int J Obes 1980; 4:165-73. | Lejeune, Manuela, P, G, M; Kovacs, Eva, M, R; Westerterp-Plantenga, Margriet, S Additional protein intake limits weight regain after weight loss in humans. The British journal of nutrition Feb 2005, 93 (2) : 281-9 |
| Shah M, Baxter JE, McGovern PG, Garg A. Nutrient and food intake in obese women on a low-fat or low- calorie diet. Am J Health Promot 1996;10:179-82. | McAuley, K, A; Hopkins, C, M; Smith, K, J; McLay, R, T; Williams, S, M; Taylor, R, W; Mann, J, I Comparison of high-fat and high-protein diets with a high-carbohydrate diet in insulin-resistant obese women. Diabetologia Jan 2005, 48 (1) : 8-16 |
| Sikand G, Kondo A, Foreyt JP, Jones PH, Gotto AM. Two-year follow-up of patients treated with a very-low- calorie diet and exercise training. J Am Diet Assoc 1988; 88:487-8. | Pittas, Anastassios, G; Roberts, Susan, B; Das, Sai, Krupa; Gilhooly, Cheryl, H; Saltzman, Edward; Golden, Julie; Stark, Paul, C; Greenberg, Andrew, S The effects of the dietary glycemic load on type 2 diabetes risk factors during weight loss. Obesity (Silver Spring, Md.) Dec 2006, 14 (12) : 2200-9 |
| Simonen P, Gylling H, Howard AN, Miettinen TA. Introducing a new component of the metabolic syndrome: low cholesterol absorption. Am J Clin Nutr 2000;72:82-8. | Poppitt, Sally, D; Keogh, Geraldine, F; Prentice, Andrew, M; Williams, Desmond, E, M; Sonnenmans, Heidi, M, W; Valk, Esther, E, J; Robinson, Elizabeth; Wareham, Nicholas, J Long-term effects of ad libitum low-fat, high-carbohydrate diets on body weight and serum lipids in overweight subjects with metabolic syndrome. The American journal of clinical nutrition Jan 2002, 75 (1) : 11-20 |
| Stenius-Aarniala B, Poussa T, Kvarnstrom J, Gronlund EL, Ylikahri M, Mustajoki P. Immediate and long term effects of weight reduction in obese people with asthma: randomised controlled study [published erratum in BMJ 2000;320:984]. BMJ 2000;320:827-32. | Sacks, Frank, M; Bray, George, A; Carey, Vincent, J; Smith, Steven, R; Ryan, Donna, H; Anton, Stephen, D; McManus, Katherine; Champagne, Catherine, M; Bishop, Louise, M; Laranjo, Nancy; Leboff, Meryl, S; Rood, Jennifer, C; de Jonge, Lilian; Greenway, Frank, L; Loria, Catherine, M; Obarzanek, Eva; Williamson, Donald, A Comparison of weight-loss diets with different compositions of fat, protein, and carbohydrates. The New England journal of medicine Feb 2009, 360 (9) : 859-73 |
| Straw, 1983a (weigh-in maintenance) Straw, 1983b (individual problem-solving maintenance) Straw MK, Terre L. An evaluation of individualized behavioral obesity treatment and maintenance strategies. Behav Ther 1983;14:255-66. | Skov, A, R; Toubro, S; Bülow, J; Krabbe, K; Parving, H, H; Astrup, A Changes in renal function during weight loss induced by high vs low-protein low-fat diets in overweight subjects. International journal of obesity and related metabolic disorders : journal of the International Association for the Study of Obesity Nov 1999, 23 (11) : 1170-7 |
| Swinburn BA, Metcalf P, Ley SJ. Long-term (5-year) effects of a reduced-fat diet intervention in individuals with glucose intolerance. Diabetes Care 2001;24:619-24. Swinburn BA, Woollard GA, Chang EC, Wilson MR. Effects of reduced-fat diets consumed ad libitum on intake of nutrients, particularly antioxidant vitamins. J Am Diet Assoc 1999;99:1400-5. | Skov, A, R; Toubro, S; Rønn, B; Holm, L; Astrup, A Randomized trial on protein vs carbohydrate in ad libitum fat reduced diet for the treatment of obesity. International journal of obesity and related metabolic disorders : journal of the International Association for the Study of Obesity May 1999, 23 (5) : 528-36 |
| TOHP I, 1992 (published data only) *Trials of Hypertension Prevention Collaborative Research Group. The effects of nonpharmacologic interventions on blood pressure of persons with high normal levels. JAMA 1992;267:1213-20. He J, Whelton PK, Appel LJ, Charleston J, Klag MJ. Long-term effects of weight loss and dietary sodium reduction on incidence of hypertension. Hypertension 2000;35:544-49. Mattfeldt-Beman MK, Corrigan SA, Stevens VJ, Sugars CP, Dalcin AT, Givi MJ, et al. Participants' evaluation of a weight-loss program. J Am Diet Assoc 1999;99:66-71. Satterfield S, Cutler JA, Langford HG, Applegate WB, Borhani NO, Brittain E, et al., for the Trials of Hypertension Prevention Collaborative Research Group. Trials of Hypertension Prevention. Phase I design. Ann Epidemiol 1991;1(5):455-71. Stevens VJ, Corrigan SA, Obarzanek E, Bernauer E, Cook NR, Hebert P, et al. Weight loss intervention in phase 1 of the Trials of Hypertension Prevention. The TOHP Collaborative Research Group. Arch Intern Med 1993;153:849-58. TOHP collaborative research group. Phase I results of the Trials of Hypertension Prevention. TOHP. Circulation 1990;82(4 Suppl 3):III-553. Whelton PK, Kumanyika SK, Cook NR, Cutler JA, Borhani NO, Hennekens CH, et al., for the Trials of Hypertension Prevention Collaborative Group. Efficacy of nonpharmacologic interventions in adults with high- normal blood pressure: results from phase 1 of the trials of hypertension prevention. Am J Clin Nutr 1997; 65(Suppl):652-60S. | TOHP, II 1997 (published data only) *Trials of Hypertension Prevention Collaborative Research Group. Effects of weight loss and sodium reduction intervention on blood pressure and hypertension incidence in overweight people with high- normal blood pressure. The Trials of Hypertension Prevention, Phase II. Arch Intern Med 1997;157:657-67. Appel LJ, Hebert PR, Cohen JD, Obarzanek E, Yamamoto M, Buring J, et al. Baseline characteristics of participants in phase II of the Trials of Hypertension Prevention (TOHP II). Trials of Hypertension Prevention (TOHP) Collaborative Research Group. Ann Epidemiol 1995;5:149-55. Hebert PR, Bolt RJ, Borhani NO, Cook NR, Cohen JD, Cutler JA, et al. Design of a multicenter trial to evaluate long-term life-style intervention in adults with high- normal blood pressure levels. Trials of Hypertension Prevention (phase II). Trials of Hypertension Prevention (TOHP) Collaborative Research Group. Ann Epidemiol 1995;5:130-9. Hollis JF, Satterfield S, Smith F, Fouad M, Allender PS, Borhani N, et al. Recruitment for phase II of the Trials of Hypertension Prevention. Effective strategies and predictors of randomization. Trials of Hypertension Prevention (TOHP) Collaborative Research Group. Ann Epidemiol 1995;5(2):140-8. Lasser VI, Raczynski JM, Stevens VJ, Mattfeldt-Beman MK, Kumanyika S, Evans M, et al. Trials of Hypertension Prevention, Phase II. Structure and content of the weight loss and dietary sodium reduction interventions. Trials of Hypertension Prevention (TOHP) Collaborative Research Group. Ann Epidemiol 1995;5:156-64. Stevens VJ, Obarzanek E, Cook NR, Lee I-M, Appel LJ, Smith West D, et al. for the Trials of Hypertension Prevention Research Group. Long-term weight loss and changes in blood pressure: results of the Trials of Hypertension Prevention, Phase II. Ann Intern Med 2001;134:1-11. |
| Skov, Annebeth, R; Haulrik, Nikolaj; Toubro, Søren; Mølgaard, Christian; Astrup, Arne Effect of protein intake on bone mineralization during weight loss: a 6-month trial. Obesity research Jun 2002, 10 (6) : 432-8 | Thompson, Warren, G; Rostad Holdman, Nicole; Janzow, Denise, J; Slezak, Jeffrey, M; Morris, Kristin, L; Zemel, Michael, B Effect of energy-reduced diets high in dairy products and fiber on weight loss in obese adults. Obesity research Aug 2005, 13 (8) : 1344-53 |
| Torgerson JS, Lissner L, Lindroos AK, Kruijer H, Sjostrom L. VLCD plus dietary and behavioural support versus support alone in the treatment of severe obesity. A randomised two-year clinical trial. Int J Obes 1997; 21:987-94. | Turner-McGrievy, Gabrielle, M; Barnard, Neal, D; Scialli, Anthony, R A two-year randomized weight loss trial comparing a vegan diet to a more moderate low-fat diet. Obesity (Silver Spring, Md.) Sep 2007, 15 (9) : 2276-81 |
| Torgerson JS, Agren L, Sjostrom L. Effects on body weight of strict or liberal adherence to an initial period of VLCD treatment. A randomised, one-year clinical trial of obese subjects. Int J Obes 1999;23:190. | Turner-McGrievy, Gabrielle, M; Barnard, Neal, D; Scialli, Anthony, R; Lanou, Amy, J Effects of a low-fat vegan diet and a Step II diet on macro- and micronutrient intakes in overweight postmenopausal women. Nutrition (Burbank, Los Angeles County, Calif.) Sep 2004, 20 (9) : 738-46 |
| Tucker JA, Samo JA, Rand CS, Woodward ER. Behavioral interventions to promote adaptive eating behavior and lifestyle changes following surgery for obesity: results of a two-year evaluation. Int J Eat Disord 1991;10:689-98. | Wadden, Thomas, A; Foster, Gary, D; Sarwer, David, B; Anderson, Drew, A; Gladis, Madeline; Sanderson, Rebecca, S; Letchak, R, V; Berkowitz, Robert, I; Phelan, Suzanne Dieting and the development of eating disorders in obese women: results of a randomized controlled trial. The American journal of clinical nutrition Sep 2004, 80 (3) : 560-8 |
| Viegner BJ, Perri MG, Nezu AM, Renjilian DA, McKelvey WF, Schein RL. Effects of an intermittent, low-fat, low-calorie diet in the behavioral treatment of obesity. Behav Ther 1990;21:499-509. | Wien, M, A; Sabaté, J, M; Iké, D, N; Cole, S, E; Kandeel, F, R Almonds vs complex carbohydrates in a weight reduction program. International journal of obesity and related metabolic disorders : journal of the International Association for the Study of Obesity Nov 2003, 27 (11) : 1365-72 |
| Wadden TA, Sternberg JA, Letizia KA, Stunkard AJ, Foster GD. Treatment of obesity by very low calorie diet, behavior therapy, and their combination: a five-year perspective. Int J Obes 1989;13(Suppl 2):39-46. Wadden TA, Stunkard AJ. Controlled trial of very low calorie diet, behavior therapy, and their combination in the treatment of obesity. J Consult Clin Psychol 1986; 54:482-8. Wadden TA, Stunkard AJ, Day SC, Gould RA, Rubin CJ. Less food, less hunger: reports of appetite and symptoms in a controlled study of a protein-sparing modified fast. Int J Obes 1987;11:239-49. Wadden TA, Stunkard AJ, Liebschutz J. Three-year follow-up of the treatment of obesity by very low calorie diet, behavior therapy, and their combination. J Consult Clin Psychol 1988;56:925-8. | Andersen, R, E; Wadden, T, A; Bartlett, S, J; Zemel, B; Verde, T, J; Franckowiak, S, C Effects of lifestyle activity vs structured aerobic exercise in obese women: a randomized trial. JAMA : the journal of the American Medical Association Jan 1999, 281 (4) : 335-40 |
| Wadden TA, Foster GD, Letizia KA. One-year behavioral treatment of obesity: comparison of moderate and severe caloric restriction and the effects of weight maintenance therapy. J Consult Clin Psychol 1994;62:165-71. Foster GD, Wadden TA, Kendall PC, Stunkard AJ, Vogt RA. Psychological effects of weight loss and regain: a prospective evaluation. J Consult Clin Psychol 1996; 64:752-7. | Appel, Lawrence, J; Clark, Jeanne, M; Yeh, Hsin-Chieh; Wang, Nae-Yuh; Coughlin, Janelle, W; Daumit, Gail; Miller, Edgar, R; Dalcin, Arlene; Jerome, Gerald, J; Geller, Steven; Noronha, Gary; Pozefsky, Thomas; Charleston, Jeanne; Reynolds, Jeffrey, B; Durkin, Nowella; Rubin, Richard, R; Louis, Thomas, A; Brancati, Frederick, L Comparative effectiveness of weight-loss interventions in clinical practice. The New England journal of medicine Nov 2011, 365 (21) : 1959-68 |
| Greaves, Colin, J; Middlebrooke, Andrew; O'Loughlin, Lucy; Holland, Sandra; Piper, Jane; Steele, Anna; Gale, Tracy; Hammerton, Fenella; Daly, Mark Motivational interviewing for modifying diabetes risk: a randomised controlled trial. The British journal of general practice : the journal of the Royal College of General Practitioners Aug 2008, 58 (553) : 535-40 | Blumenthal, J, A; Sherwood, A; Gullette, E, C; Babyak, M; Waugh, R; Georgiades, A; Craighead, L, W; Tweedy, D; Feinglos, M; Appelbaum, M; Hayano, J; Hinderliter, A Exercise and weight loss reduce blood pressure in men and women with mild hypertension: effects on cardiovascular, metabolic, and hemodynamic functioning. Archives of internal medicine Jul 2000, 160 (13) : 1947-58 |

| | |
|--|---|
| Wadden TA, Berkowitz RI, Sarwer DB, Prus- Wisniewski R, Steinberg C. Benefits of lifestyle modification in the pharmacologic treatment of obesity: a randomized trial. Arch Intern Med 2001;161:218-27. | Borg, P; Kukkonen-Harjula, K; Fogelholm, M; Pasanen, M Effects of walking or resistance training on weight loss maintenance in obese, middle-aged men: a randomized trial. International journal of obesity and related metabolic disorders : journal of the International Association for the Study of Obesity May 2002, 26 (5) : 676-83 |
| Wadden TA, Berkowitz RI, Womble LG, Sarwer DB, Arnold ME, Steinberg CM. Effects of sibutramine plus orlistat in obese women following 1 year of treatment by sibutramine alone: a placebo-controlled trial. Obes Res 2000;8:431-7. | Byrne, Nuala, M; Meerklin, Jarrod, D; Laukkanen, Raija; Ross, Robert; Fogelholm, Mikael; Hills, Andrew, P Weight loss strategies for obese adults: personalized weight management program vs. standard care. Obesity (Silver Spring, Md.) Oct 2006, 14 (10) : 1777-88 |
| Wing, 1984a (concentrated behavioural booster sessions) Wing RR, Epstein LH, Marcus MD, Koeske R. Intermittent low-calorie regimen and booster sessions in the treatment of obesity. Behav Res Ther 1984;22:445-9. | Christian, James, G; Bessesen, Daniel, H; Byers, Tim, E; Christian, Kyle, K; Goldstein, Michael, G; Bock, Beth, C Clinic-based support to help overweight patients with type 2 diabetes increase physical activity and lose weight. Archives of internal medicine Jan 2008, 168 (2) : 141-6 |
| Wing, 1988a (placebo exercise for control) Wing, 1988b (no exercise for control) Wing RR, Epstein LH, Paternostro-Bayles M, Kriska A, Nowalk MP, Gooding W. Exercise in a behavioural weight control programme for obese patients with type 2 (non-insulin-dependent) diabetes. Diabetologia 1988; 31:902-9. | Cussler, Ellen, C; Teixeira, Pedro, J; Going, Scott, B; Houtkooper, Linda, B; Metcalfe, Lauve, L; Blew, Robert, M; Ricketts, Jennifer, R; Lohman, J'Fleur; Stanford, Vanessa, A; Lohman, Timothy, G Maintenance of weight loss in overweight middle-aged women through the Internet. Obesity (Silver Spring, Md.) May 2008, 16 (5) : 1052-60 |
| Wing RR, Marcus MD, Salata R, Epstein LH, Miskiewicz S, Blair EH. Effects of a very-low-calorie diet on long-term glycemic control in obese type 2 diabetic subjects. Arch Intern Med 1991;151:1334-40. | Dale, Kelly, S; McAuley, Kirsten, A; Taylor, Rachael, W; Williams, Sheila, M; Farmer, Victoria, L; Hansen, Paul; Vorges, Sue, M; Chisholm, Alexandra, W; Mann, Jim, I Determining optimal approaches for weight maintenance: a randomized controlled trial. CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne May 2009, 180 (10) : E39-46 |
| Marcus MD, Wing RR, Guare J, Blair EH, Jawad A. Lifetime prevalence of major depression and its effect on treatment outcome in obese type II diabetic patients. Diabetes Care 1992;15:253-5. | Diabetes Prevention Program Research Group; Knowler, William, C; Fowler, Sarah, E; Hamman, Richard, F; Christophi, Costas, A; Hoffman, Heather, J; Brenneman, Anne, T; Brown-Friday, Janet, O; Goldberg, Ronald; Venditti, Elizabeth; Nathan, David, M 10-year follow-up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study. Lancet Nov 2009, 374 (9702) : 1677-86 |
| Wing, 1991b (published data only) Wing RR, Marcus MD, Epstein LH, Jawad A. A 'family- based' approach to the treatment of obese type II diabetic patients. J Consult Clin Psychol 1991;59:156-62. | Esposito, Katherine; Giugliano, Francesco; Di Palo, Carmen; Giugliano, Giovanni; Marfella, Raffaele; D'Andrea, Francesco; D'Armiento, Massimo; Giugliano, Dario Effect of lifestyle changes on erectile dysfunction in obese men: a randomized controlled trial. JAMA : the journal of the American Medical Association Jun 2004, 291 (24) : 2978-84 |
| Wing RR, Blair E, Marcus M, Epstein LH, Harvey J. Year-long weight loss treatment for obese patients with type II diabetes: does including an intermittent very-low calorie diet improve outcome? Am J Med 1994; 97:354-62. | Esposito, Katherine; Pontillo, Alessandro; Di Palo, Carmen; Giugliano, Giovanni; Masella, Mariangela; Marfella, Raffaele; Giugliano, Dario Effect of weight loss and lifestyle changes on vascular inflammatory markers in obese women: a randomized trial. JAMA : the journal of the American Medical Association Apr 2003, 289 (14) : 1799-804 |
| Wing RR, Anglin K. Effectiveness of a behavioral weight control program for blacks and whites with NIDDM. Diabetes Care 1996;19:409-13. | Fitzgibbon, Marian, L; Stolley, Melinda, R; Schiffer, Linda; Sharp, Lisa, K; Singh, Vicky; Dyer, Alan Obesity reduction black intervention trial (ORBIT): 18-month results. Obesity (Silver Spring, Md.) Dec 2010, 18 (12) : 2317-25 |
| Wing RR, Shifman S, Drapkin RG, Grilo CM, McDermott M. Moderate versus restrictive diets: implications for relapse. Behav Ther 1995;26:5-24. | Fogelholm, M; Kukkonen-Harjula, K; Nenonen, A; Pasanen, M Effects of walking training on weight maintenance after a very-low-energy diet in premenopausal obese women: a randomized controlled trial. Archives of internal medicine Jul 2000, 160 (14) : 2177-84 |
| Polley BA, Jakicic JM, Venditti EM, Barr S, Wing RR. The effects of health beliefs on weight loss in individuals at high risk for NIDDM. Diabetes Care 1997;20:1533-8. | Gold, Beth, Casey; Burke, Susan; Pintauro, Stephen; Buzzell, Paul; Harvey-Berino, Jean Weight loss on the web: A pilot study comparing a structured behavioral intervention to a commercial program. Obesity (Silver Spring, Md.) Jan 2007, 15 (1) : 155-64 |
| Wing RR, Jeffery RW. Benefits of recruiting participants with friends and increasing social support for weight loss and maintenance. J Consult Clin Psychol 1999; 67:132-8. | Wadden, 1998a (aerobic exercise) Wadden, 1998b (strength exercise) Wadden, 1998c (aerobic and strength exercise) *Wadden TA, Vogt RA, Foster GD, Anderson DA. Exercise and the maintenance of weight loss: 1-year follow-up of a controlled clinical trial. J Consult Clin Psychol 1998;66:429-33. |
| Wood PD, Stefanick ML, Dreon DM, Frey-Hewitt B, Garay SC, Williams PT, et al. Changes in plasma lipids and lipoproteins in overweight men during weight loss through dieting as compared with exercise. N Engl J Med 1988;319:1173-9. | Ashtosh K, Methrotra K, Fragale-Jackson J. Effect of sustained weight loss and exercise on aerobic fitness in obese women. J Sports Med Phys Fitness 1997;37:252-7. |
| Fortmann SP, Haskell WL, Wood PD, Stanford Weight Control Project. Effects of weight loss on clinic and ambulatory blood pressure in normotensive men. Am J Cardiol 1988;62(1):89-93. | Gladis MM, Waden TA, Vogt R, Foster G, Kuehnel RH, Bartlett SJ. Behavioral treatment of obese binge eaters: do they need different care? J Psychosom Res 1998; 44:375-84. |
| King AC, Frey-Hewitt B, Dreon DM, Wood PD. Diet vs exercise in weight maintenance. The effects of minimal intervention strategies on long-term outcomes in men. Arch Intern Med 1989;149:2741-6. | Wadden TA, Anderson DA, Foster GD. Two-year changes in lipids and lipoproteins associated with maintenance of a 5% to 10% reduction in initial weight: some findings and questions. Obes Res 1999;7:170-8. |
| Williams PT, Krauss RM, Vranizan KM, Wood PD. Changes in lipoprotein subfractions during diet-induced and exercise-induced weight loss in moderately overweight men. Circulation 1990;81:1293-304. | Weinstock RS, Huiliang D, Wadden TA. Diet and exercise in the treatment of obesity. Effects of 3 interventions on insulin resistance. Arch Intern Med 1998;158:2477-83. |
| Williams PT, Krauss RM, Vranizan KM, Albers JJ, Wood PD. Effects of weight-loss by exercise and by diet on apolipoproteins A-I and A-II and the particle-size distribution of high-density lipoproteins in men. Metabolism 1992;41:441-9. | Lindström, Jaana; Eriksson, Johan, G; Valle, Timo, T; Aunola, Sirkka; Cepaitis, Zygimantas; Hakumäki, Martti; Hämmäläinen, Helena; Ilanne-Parikka, Pirjo; Keinänen-Kiukkaanniemi, Sirkka; Laakso, Mauri; Louheranta, Anne; Mannelin, Marjo; Martikkala, Vesa; Moltchanov, Vladislav; Rastas, Merja; Salminen, Virpi; Sundvall, Jouko; Uusitupa, Matti; Tuomilehto, Jaakko Prevention of diabetes mellitus in subjects with impaired glucose tolerance in the Finnish Diabetes Prevention Study: results from a randomized clinical trial. Journal of the American Society of Nephrology : JASN Jul 2003, 14 (7 Suppl 2) : S108-13 |
| Williams PT, Stefanick ML, Vranizan KM, Wood PD. The effects of weight loss by exercise or by dieting on plasma high-density lipoprotein (HDL) levels in men with low, intermediate, and normal-to-high HDL at baseline. Metabolism 1994;43:917-24. | Wood, 1991a (females) Wood, 1991b (males) *Wood PD, Stefanick ML, Williams PT, Haskell WL. The effects on plasma lipoproteins of a prudent weight- reducing diet, with or without exercise, in overweight men and women. N Engl J Med 1991;325:461-6. |
| Kiernan M, King AC, Kraemer HC, Stefanick ML, Killen JD. Characteristics of successful and unsuccessful dieters: an application of signal detection methodology. Ann Behav Med 1998;20:1-6. | Kiernan M, King AC, Kraemer HC, Stefanick ML, Killen JD. Characteristics of successful and unsuccessful dieters: an application of signal detection methodology. Ann Behav Med 1998;20:1-6. |
| Williams PT, Krauss RM, Stefanick ML, Vranizan KM, Wood PD. Effects of low-fat diet, calorie restriction, and running on lipoprotein subfraction concentrations in moderately overweight men. Metabolism 1994;43:655-63. | Wood, PD, Stefanick ML, Haskell WL. Exercise offsets adverse lipoprotein effects of a 'heart healthy' diet for weight loss. Arteriosclerosis 1989;9:773A |
| Wood, PD, Stefanick ML, Haskell WL. Exercise offsets adverse lipoprotein effects of a 'heart healthy' diet for weight loss. Arteriosclerosis 1989;9:773A | Adams SO, Grady KE, Lund AK, Mukaida C, Wolk CH. Weight loss: long-term results in an ambulatory setting. J Am Diet Assoc 1983; 83: 306-310. |
| Adams SO, Grady KE, Lund AK, Mukaida C, Wolk CH. Weight loss: long-term results in an ambulatory setting. J Am Diet Assoc 1983; 83: 306-310. | Harvey-Berino, Jean; Pintauro, Stephen; Buzzell, Paul; Gold, Elizabeth, Casey Effect of internet support on the long-term maintenance of weight loss. Obesity research Feb 2004, 12 (2) : 320-9 |
| Kramer FM, Jeffrey RW, Forster JL, Snell MK. Long-term follow-up of behavioral treatment for obesity: patterns of weight regain among men and women. Int J Obes Relat Metab Disord 1989; 13: 123-136. | Harvey-Berino, Jean; West, Delia; Krukowski, Rebecca; Prewitt, Elaine; VanBiervliet, Alan; Ashikaga, Takamaru; Skelly, Joan Internet delivered behavioral obesity treatment. Preventive medicine Aug 2010, 51 (2) : 123-8 |
| Anderson JW, Hamilton CC, Crown-Weber E, Riddlemoser M, Gustafson NJ. Safety and effectiveness of a multidisciplinary very-low calorie diet program for selected obese individuals. J Am Diet Assoc 1991; 91: 1582-1584. | Heshka, S; Greenway, F; Anderson, J, W; Atkinson, R, L; Hill, J, O; Phinney, S, D; Miller-Kovach, K; Xavier Pi-Sunyer, F Self-help weight loss versus a structured commercial program after 26 weeks: a randomized controlled study. The American journal of medicine Sep 2000, 109 (4) : 282-7 |
| Fitzwater SL, Weinsier RL, Wooldridge NH, Birch R, Liu C, Bartolucci AA. Evaluation of long-term weight changes after a multidisciplinary weight control program. J Am Diet Assoc 1991; 91: 421-426. | Heshka, Stanley; Anderson, James, W; Atkinson, Richard, L; Greenway, Frank, L; Hill, James, O; Phinney, Stephen, D; Kolotkin, Ronette, L; Miller-Kovach, Karen; Pi-Sunyer, F, Xavier Weight loss with self-help compared with a structured commercial program: a randomized trial. JAMA : the journal of the American Medical Association Apr 2003, 289 (14) : 1792-8 |
| Eriksson KF, Lindgärde F. Prevention of type 2 (non-insulin- dependent) diabetes mellitus by diet and physical exercise. Diabetologia 1991; 34: 891-898. | Hunter, Christine, M; Peterson, Alan, L; Alvarez, Lisa, M; Poston, Walker, C; Brundige, Antoinette, R; Haddock, C, Keith; Van Brunt, David, L; Foreyt, John, P Weight management using the internet a randomized controlled trial. American journal of preventive medicine Feb 2008, 34 (2) : 119-26 |

| | |
|---|---|
| Elmer PJ, Grimm R, Laing B, Grandits G, Svendsen K, Van Heel N, Betz E, Raines J, Link M, Stamler J. Lifestyle intervention: results of the Treatment of Mild Hypertension Study (TOMHS). <i>Prev Med</i> 1995; 24: 378–388. | Jakicic, J, M; Winters, C; Lang, W; Wing, R, R Effects of intermittent exercise and use of home exercise equipment on adherence, weight loss, and fitness in overweight women: a randomized trial. <i>JAMA : the journal of the American Medical Association</i> Oct 1999, 282 (16) : 1554-60 |
| Ditschuneit HH, Flechtner-Mors M, Johnson TD, Adler G. Metabolic and weight-loss effects of a long-term dietary intervention in obese patients. <i>Am J Clin Nutr</i> 1999; 69: 198– 204. | Jakicic, John, M; Marcus, Bess, H; Gallagher, Kara, I; Napolitano, Melissa; Lang, Wei Effect of exercise duration and intensity on weight loss in overweight, sedentary women: a randomized trial. <i>JAMA : the journal of the American Medical Association</i> Sep 2003, 290 (10) : 1323-30 |
| Flechtner-Mors M, Ditschuneit HH, Johnson TD, Suchard MA, Adler G. Metabolic and weight loss effects of long-term dietary intervention in obese patients: four-year results. <i>Obes Res</i> 2000; 8: 399–402. | Jakicic, John, M; Marcus, Bess, H; Lang, Wei; Janney, Carol Effect of exercise on 24-month weight loss maintenance in overweight women. <i>Archives of internal medicine</i> Jul 2008, 168 (14) : 1550-9 |
| Stamler R, Stamler J, Grimm R, Gosch FC, Elmer P, Dyer A, Berman R, Fishman J, Van Heel N, Civinelli J, McDonald A. Nutritional therapy for high blood pressure. Final report of a four-year randomized controlled trial. <i>The Hypertension Control Program. JAMA</i> 1987; 257: 1484–1491. | Jeffery, Robert, W; Wing, Rena, R; Sherwood, Nancy, E; Tate, Deborah, F Physical activity and weight loss: does prescribing higher physical activity goals improve outcome? <i>The American journal of clinical nutrition</i> Oct 2003, 78 (4) : 684-9 |
| Burke V, Beilin LJ, Cutt HE, Mansour J, Wilson A, Mori TA (2005). Effects of a lifestyle programme on ambulatory blood pressure and drug dosage in treated hypertensive patients: a randomized controlled trial. <i>J Hypertens.</i> 23(6): 1241–9. | Dyson PA, Hammersley MS, Moris RJ, Holman RR, Turner RC. (1997). The fasting hypercalcaemia study: II Randomized controlled trial of reinforced healthy-living advice in subjects with increased but not diabetic fasting plasma glucose. <i>Metabolism</i> 46 (12 Suppl.1): 50–5. |
| Carr DB, Utzschneider KM, Boyko EJ et al. (2005). A reduced-fat diet and aerobic exercise in Japanese Americans with impaired glucose tolerance decreases intra-abdominal fat and improves insulin sensitivity but not b-cell function. <i>Diabetes</i> 54(2): 340–47. | Kaukua, Jarmo; Pekkarinen, Tuula; Sane, Timo; Mustajoki, Pertti Sex hormones and sexual function in obese men losing weight. <i>Obesity research</i> Jun 2003, 11 (6) : 689-94 |
| Kaukua, J; Pekkarinen, T; Sane, T; Mustajoki, P Health-related quality of life in WHO class II-III obese men losing weight with very-low-energy diet and behaviour modification: a randomised clinical trial. <i>International journal of obesity and related metabolic disorders : journal of the International Association for the Study of Obesity</i> Apr 2002, 26 (4) : 487-95 | Kulzer, Bernhard; Hermanns, Norbert; Gorges, Daniela; Schwarz, Peter; Haak, Thomas Prevention of diabetes self-management program (PREDIAS): effects on weight, metabolic risk factors, and behavioral outcomes. <i>Diabetes care</i> Jul 2009, 32 (7) : 1143-6 |
| Kastarinen M, Puska MP, Korhonen MH et al., LIEHEF Study Group (2002). Non-pharmacological treatment of hypertension in primary health care: a 2-year open randomized controlled trial of lifestyle intervention against hypertension in eastern Finland. <i>J Hypertens</i> 20(12): 2505–12. | Leermakers, E, A; Perri, M, G; Shigaki, C, L; Fuller, P, R Effects of exercise-focused versus weight-focused maintenance programs on the management of obesity. <i>Addictive behaviors</i> Mar 1999, 24 (2) : 219-27 |
| Ketola E, Makela M, Klockars M (2001). Individualized multifactorial lifestyle intervention trial for high-risk cardiovascular patients in primary care. <i>Br J Gen Pract</i> 51(465): 291–4. | Haapala, Irja; Barengo, Noël, C; Biggs, Simon; Surakka, Leena; Manninen, Pirjo Weight loss by mobile phone: a 1-year effectiveness study. <i>Public health nutrition</i> Dec 2009, 12 (12) : 2382-91 |
| Liao D, Asberry PJ, Shofer JB et al. (2002). Improvement of BMI, body composition, body fat distribution with lifestyle modification in Japanese Americans with impaired glucose tolerance. <i>Diabetes Care</i> 25(9): 1504–10. | Lindström, Jaana; Louheranta, Anne; Mannelin, Marjo; Rastas, Merja; Salminen, Virpi; Eriksson, Johan; Uusitupa, Matti; Tuomilehto, Jaakko; Finnish Diabetes Prevention Study Group The Finnish Diabetes Prevention Study (DPS): Lifestyle intervention and 3-year results on diet and physical activity. <i>Diabetes care</i> Dec 2003, 26 (12) : 3230-6 |
| Mensink M, Feskens EJ, Saris WH, de Bruin TW, Blaak EE (2003a). Study on lifestyle-intervention and impaired glucose tolerance Maastricht (SLIM): preliminary results after one year. <i>Int J Obes Relat Metab Disord</i> 27(3): 377–84. | Logue, Everett; Sutton, Karen; Jarjoura, David; Snuckner, William; Baughman, Kristin; Capers, Cynthia Transtheoretical model-chronic disease care for obesity in primary care: a randomized trial. <i>Obesity research</i> May 2005, 13 (5) : 917-27 |
| Mensink M, Blaak EE, Corpeleijn E, Saris WH, de Bruin TW, Feskens EJ (2003b). Lifestyle intervention according to general recommendations improves glucose tolerance. <i>Obesity Research</i> 11(12): 1588–96 | Miller, G, D; Nicklas, B, J; Davis, C, C; Ambrosius, W, T; Loeser, R, F; Messier, S, P Is serum leptin related to physical function and is it modifiable through weight loss and exercise in older adults with knee osteoarthritis? <i>International journal of obesity and related metabolic disorders : journal of the International Association for the Study of Obesity</i> Nov 2004, 28 (11) : 1383-90 |
| Pan XR, Li GW, Hu YH et al. (1997). Effects of diet and exercise in preventing NIDDM in people with impaired glucose tolerance. The Da Qing IGT and diabetes study. <i>Diabetes Care</i> 20(4): 537–44. | Miller, Gary, D; Rejeski, W, Jack; Williamson, Jeff, D; Morgan, Timothy; Seveck, Mary, Ann; Loeser, Richard, F; Eitinger, Walt, H; Messier, Stephen, P; ADAPT Investigators The Arthritis, Diet and Activity Promotion Trial (ADAPT): design, rationale, and baseline results. <i>Controlled clinical trials</i> Aug 2003, 24 (4) : 462-80 |
| Sinkin-Silverman LR, Wing RR, Boraz MA, Kuller LH (2003). Lifestyle intervention can prevent weight gain during menopause: results from a 5-year randomised clinical trial. <i>Ann Behav Med</i> 26(3): 212–20. | Morgan, Philip, J; Lubans, David, R; Collins, Clare, E; Warren, Janet, M; Callister, Robin The SHED-IT randomized controlled trial: evaluation of an Internet-based weight-loss program for men. <i>Obesity (Silver Spring, Md.)</i> Nov 2009, 17 (11) : 2025-32 |
| Stefanick ML, Mackey S, Sheehan M, Ellsworth N, Haskell WL, Wood PD (1998). Effects of diet and exercise in men and postmenopausal women with low levels of HDL cholesterol and with high levels of LDL cholesterol. <i>N Engl J Med</i> 339(1): 12–20. | Nicklas, Barbara, J; Ambrosius, Walter; Messier, Stephen, P; Miller, Gary, D; Penninx, Brenda, W, J, H; Loeser, Richard, F; Palla, Shana; Blecker, Eugene; Pahor, Marco Diet-induced weight loss, exercise, and chronic inflammation in older, obese adults: a randomized controlled clinical trial. <i>The American journal of clinical nutrition</i> Apr 2004, 79 (4) : 544-51 |
| Trento M, Passera P, Tomalino M et al. (2001). Group visits improve metabolic control in type 2 diabetes: a 2-year follow-up. <i>Diabetes Care</i> 24(6): 995–1000. | Perri, M, G; Nezu, A, M; McKelvey, W, F; Shermer, R, L; Renjilian, D, A; Viegner, B, J Relapse prevention training and problem-solving therapy in the long-term management of obesity. <i>Journal of consulting and clinical psychology</i> Aug 2001, 69 (4) : 722-6 |
| Croft PR, Brigg D, Smith S, Harrison CB, Branthwaite A, Collins MF How useful is weight reduction in the management of hypertension? <i>J R Coll Gen Pract</i> 1986;36 (291) 445- 448 | Perri, Michael, G; Limacher, Marian, C; Durning, Patricia, E; Janicke, David, M; Lutes, Lesley, D; Boboff, Linda, B; Dale, Martha, Sue; Daniels, Michael, J; Radcliff, Tiffany, A; Martin, A, Daniel Extended-care programs for weight management in rural communities: the treatment of obesity in underserved rural settings (TOURS) randomized trial. <i>Archives of internal medicine</i> Nov 2008, 168 (21):2347-54 |
| The Oslo Diet and Exercise Study (ODES): design and objectives. <i>Control Clin Trials</i> 1993;14 (3) 229- 243 | Rock, Cheryl, L; Flatt, Shirley, W; Sherwood, Nancy, E; Karanja, Njeri; Pakiz, Bilge; Thomson, Cynthia, A Effect of a free prepared meal and incentivized weight loss program on weight loss and weight loss maintenance in obese and overweight women: a randomized controlled trial. <i>JAMA : the journal of the American Medical Association</i> Oct 2010, 304 (16) : 1803-10 |
| Anderssen S, Holme I, Urdal P, Hjermann I Diet and exercise intervention have favourable effects on blood pressure in mild hypertensives: the Oslo Diet and Exercise Study (ODES). <i>Blood Press</i> 1995;4 (6) 343- 349 | Rock, Cheryl, L; Pakiz, Bilge; Flatt, Shirley, W; Quintana, Elizabeth, L Randomized trial of a multifaceted commercial weight loss program. <i>Obesity (Silver Spring, Md.)</i> Apr 2007, 15 (4) : 939-49 |
| Anderssen SA, Hjermann I, Urdal P, Torjesen PA, Holme I Improved carbohydrate metabolism after physical training and dietary intervention in individuals with the "atherothrombotic syndrome": Oslo Diet and Exercise Study (ODES): a randomized trial. <i>J Intern Med</i> 1996;240 (4) 203- 209 | Subak, Leslee, L; Wing, Rena; West, Delia, Smith; Franklin, Frank; Vittinghoff, Eric; Creasman, Jennifer, M; Richter, Holly, E; Myers, Deborah; Burgio, Kathryn, L; Gorin, Amy, A; Macer, Judith; Kusek, John, W; Grady, Deborah; PRIDE Investigators Weight loss to treat urinary incontinence in overweight and obese women. <i>The New England journal of medicine</i> Jan 2009, 360 (5) : 481-90 |
| Anderssen SA, Haaland A, Hjermann I, Urdal P, Gjelsdal K, Holme I Oslo Diet and Exercise Study: a one year randomized intervention trial: effect on haemostatic variables and other coronary risk factors. <i>Nutr Metab Cardiovasc Dis</i> 1995;5:189- 200 | Svetkey, Laura, P; Stevens, Victor, J; Brantley, Phillip, J; Appel, Lawrence, J; Hollis, Jack, F; Loria, Catherine, M; Vollmer, William, M; Gullion, Christina, M; Funk, Kristine; Smith, Patti; Samuel-Hodge, Carmen; Myers, Valerie; Lien, Lillian, F; Laferriere, Daniel; Kennedy, Betty; Jerome, Gerald, J; Heinith, Fran; Harsha, David, W; Evans, Pamela; Erlinger, Thomas, P; Dalcin, Arline, T; Coughlin, Janelle; Charleston, Jeanne; Champagne, Catherine, M; Bauck, Alan; Ard, Jany, D; Aicher, Kathleen; Weight Loss Maintenance Collaborative Research Group Comparison of strategies for sustaining weight loss: the weight loss maintenance randomized controlled trial. <i>JAMA : the journal of the American Medical Association</i> Mar 2008, 299 (10): 1139-48 |
| Reseland JE, Anderssen SA, Solvoll K et al. Effect of long-term changes in diet and exercise on plasma leptin concentrations. <i>Am J Clin Nutr</i> 2001;73 (2) 240- 245 | Tate, Deborah, F; Jackvony, Elizabeth, H; Wing, Rena, R Effects of Internet behavioral counseling on weight loss in adults at risk for type 2 diabetes: a randomized trial. <i>JAMA : the journal of the American Medical Association</i> Apr 2003, 289 (14) : 1833-6 |
| Sørensen M, Anderssen S, Hjerman I, Holme I, Ursin H Exercise and diet interventions improve perceptions of self in middle-aged adults. <i>Scand J Med Sci Sports</i> 1997;7 (5) 312- 320 | Tate, Deborah, F; Jackvony, Elizabeth, H; Wing, Rena, R A randomized trial comparing human e-mail counseling, computer-automated tailored counseling, and no counseling in an Internet weight loss program. <i>Archives of internal medicine</i> Jan 2006, 166 (15) : 1620-5 |
| Sørensen M, Anderssen S, Hjerman I, Holme I, Ursin H The effect of exercise and diet on mental health and quality of life in middle-aged individuals with elevated risk factors for cardiovascular disease. <i>J Sports Sci</i> 1999;17 (5) 369- 377 | |

| | |
|---|--|
| Torjesen PA Birkeland KI Anderssen SA Hjermann I Holme I Urdal P Lifestyle changes may reverse development of the insulin resistance syndrome: the Oslo Diet and Exercise Study: a randomized trial. <i>Diabetes Care</i> 1997;20 (1) 26- 31 | Tate, Deborah, F; Jeffery, Robert, W; Sherwood, Nancy, E; Wing, Rena, R Long-term weight losses associated with prescription of higher physical activity goals. Are higher levels of physical activity protective against weight regain? <i>The American journal of clinical nutrition</i> Apr 2007, 85 (4) : 954-9 |
| Blaufox MD Lee HB Davis B Oberman A Wassertheil-Smolter S Langford H Renin predicts diastolic blood pressure response to nonpharmacologic and pharmacologic therapy. <i>JAMA</i> 1992;267 (9) 1221- 1225 | Teixeira, Pedro, J; Silva, Marlene, N; Coutinho, Sílvia, R; Palmeira, António, L; Mata, Jutta; Vieira, Paulo, N; Carraça, Eliana, V; Santos, Teresa, C; Sardinha, Luís, B Mediators of weight loss and weight loss maintenance in middle-aged women. <i>Obesity (Silver Spring, Md.)</i> Apr 2010, 18 (4) : 725-35 |
| Davis BR Blaufox MD Hawkins CM et al. Trial of antihypertensive interventions and management: design, methods, and selected baseline results. <i>Control Clin Trials</i> 1989;10 (1) 11- 30 | ter Bogt, Nancy, C, W; Bemelmans, Wanda, J, E; Beltman, Frank, W; Broer, Jan; Smit, Andries, J; van der Meer, Klaas Preventing weight gain: one-year results of a randomized lifestyle intervention. <i>American journal of preventive medicine</i> Oct 2009, 37 (4) : 270-7 |
| Davis BR Oberman A Blaufox MD et al. Trial of Antihypertensive Interventions and Management Research Group, Effect of antihypertensive therapy on weight loss. <i>Hypertension</i> 1992;19 (4) 393- 399 | Truby, Helen; Baic, Sue; deLooy, Anne; Fox, Kenneth, R; Livingstone, M, Barbara, E; Logan, Catherine, M; Macdonald, Ian, A; Morgan, Linda, M; Taylor, Moira, A; Millward, D, Joe Randomised controlled trial of four commercial weight loss programmes in the UK: initial findings from the BBC "diet trials". <i>BMJ (Clinical research ed.)</i> Jun 2006, 332 (7553) : 1309-14 |
| Davis BR Blaufox MD Oberman A et al. Reduction in long-term antihypertensive medication requirements: effects of weight reduction by dietary intervention in overweight persons with mild hypertension. <i>Arch Intern Med</i> 1993;153 (15) 1773- 1782 | Uusitupa, M; Louheranta, A; Lindström, J; Valle, T; Sundvall, J; Eriksson, J; Tuomilehto, J The Finnish Diabetes Prevention Study. <i>The British journal of nutrition</i> Mar 2000, 83 Suppl 1 : S137-42 |
| Davis BR Oberman A Blaufox MD et al. Lack of effectiveness of a low-sodium/high-potassium diet in reducing antihypertensive medication requirements in overweight persons with mild hypertension: TAIM Research Group: Trial of Antihypertensive Interventions and Management. <i>Am J Hypertens</i> 1994;7 (10, pt 1) 926- 932 | Wadden, Thomas, A; Volger, Sheri; Sarwer, David, B; Vetter, Marion, L; Tsai, Adam, G; Berkowitz, Robert, I; Kumanyika, Shiriki; Schmitz, Kathryn, H; Diewald, Lisa, K; Barg, Ronald; Chittams, Jesse; Moore, Reneé, H A two-year randomized trial of obesity treatment in primary care practice. <i>The New England journal of medicine</i> Nov 2011, 365 (21) : 1969-79 |
| Langford HG Davis BR Blaufox D et al. TAIM Research Group, Effect of drug and diet treatment of mild hypertension on diastolic blood pressure. <i>Hypertension</i> 1991;17 (2) 210- 217 | West, D, S; Gorin, A, A; Subak, L, L; Foster, G; Bragg, C; Hecht, J; Schembri, M; Wing, R, R; Program to Reduce Incontinence by Diet and Exercise (PRIDE) Research Group A motivation-focused weight loss maintenance program is an effective alternative to a skill-based approach. <i>International journal of obesity</i> (2005) Feb 2011, 35 (2) : 259-69 |
| Oberman A Wassertheil-Smolter S Langford HG et al. Pharmacologic and nutritional treatment of mild hypertension: changes in cardiovascular risk status. <i>Ann Intern Med</i> 1990;112 (2) 89- 95 | West, Delia, S; Elaine Prewitt, T; Bursac, Zoran; Felix, Holly, C Weight loss of black, white, and Hispanic men and women in the Diabetes Prevention Program. <i>Obesity (Silver Spring, Md.)</i> Jun 2008, 16 (6) : 1413-20 |
| Wassertheil-Smolter S Davis BR Oberman A The TAIM Study: sex-race differences in effects of diet and drugs on cardiovascular risk. <i>Cardiovascular Risk Factors</i> 1991;1427- 435 | West, Delia, Smith; DiLillo, Vicki; Bursac, Zoran; Gore, Stacy, A; Greene, Paul, G Motivational interviewing improves weight loss in women with type 2 diabetes. <i>Diabetes care</i> May 2007, 30 (5) : 1081-7 |
| Wassertheil-Smolter S Blaufox MD Oberman A et al. Effect of antihypertensives on sexual function and quality of life: the TAIM Study. <i>Ann Intern Med</i> 1991;114 (8) 613- 620 | Wing, Rena, R; Tate, Deborah, F; Gorin, Amy, A; Raynor, Hollie, A; Fava, Joseph, L A self-regulation program for maintenance of weight loss. <i>The New England journal of medicine</i> Oct 2006, 355 (15) : 1563-71 |
| Wassertheil-Smolter S Oberman A Blaufox MD Davis B Langford H The Trial of Antihypertensive Interventions and Management (TAIM) study: final results with regard to blood pressure, cardiovascular risk, and quality of life. <i>Am J Hypertens</i> 1992;5 (1) 37- 44 | Wolf, Anne, M; Conaway, Mark, R; Crowther, Jayne, Q; Hazen, Kristen, Y; L Nadler, Jerry; Oneida, Beverly; Bovbjerg, Viktor, E; Improving Control with Activity and Nutrition (ICAN) Study Translating lifestyle intervention to practice in obese patients with type 2 diabetes: Improving Control with Activity and Nutrition (ICAN) study. <i>Diabetes care</i> Jul 2004, 27 (7) : 1570-6 |
| Wassertheil-Smolter S Blaufox MD Oberman AS Langford HG Davis BR Wylie-Rosett J The Trial of Antihypertensive Interventions and Management (TAIM) study: adequate weight loss, alone and combined with drug therapy in the treatment of mild hypertension. <i>Arch Intern Med</i> 1992;152 (1) 131- 136 | Womble, Leslie, G; Wadden, Thomas, A; McGuckin, Brian, G; Sargent, Stephanie, L; Rothman, Rebecca, A; Krauthamer-Ewing, E, Stephanie A randomized controlled trial of a commercial internet weight loss program. <i>Obesity research</i> Jun 2004, 12 (6) : 1011-8 |
| Wylie-Rosett J Wassertheil-Smolter S Blaufox MD et al. Trial of antihypertensive intervention and management: greater efficacy with weight reduction than with a sodium-potassium intervention. <i>J Am Diet Assoc</i> 1993;93 (4) 408- 415 | Kumanyika SK Espeland MA Bahnson JL et al. Ethnic comparison of weight loss in the Trial of Nonpharmacologic Interventions in the Elderly. <i>Obes Res</i> 2002;10 (2) 96- 106 |
| Appel LJ Espeland M Whelton PK et al. Trial of Nonpharmacologic Interventions in the Elderly (TONE): design and rationale of a blood pressure control trial. <i>Ann Epidemiol</i> 1995;5 (2) 119- 129 | Whelton PK Babnson J Appel LJ et al. Recruitment in the Trial of Nonpharmacologic Interventions in the Elderly (TONE). <i>J Am Geriatr Soc</i> 1997;45 (2) 185- 193 |
| Appel LJ Espeland MA Easter L Wilson AC Folmar S Lacy CR Effects of reduced sodium intake on hypertension control in older individuals: results from the Trial of Nonpharmacologic Interventions in the Elderly (TONE). <i>Arch Intern Med</i> 2001;161 (5) 685- 693 | Whelton PK Appel LJ Espeland MA et al. Sodium reduction and weight loss in the treatment of hypertension in older persons: a randomized controlled Trial of Nonpharmacologic Interventions in the Elderly (TONE). <i>JAMA</i> 1998;279 (11) 839- 846 |
| Bahnson JL Whelton PK Appel LJ et al. Baseline characteristics of randomized participants in the Trial of Nonpharmacologic Interventions in the Elderly (TONE). <i>Dis Manage Clin Outcomes</i> 1997;1 (2) 61- 68 | Look AHEAD Research Group; Wing, Rena, R/Long-term effects of a lifestyle intervention on weight and cardiovascular risk factors in individuals with type 2 diabetes mellitus: four-year results of the Look AHEAD trial. /Long-term effects of a lifestyle intervention on weight and cardiovascular risk factors in individuals with type 2 diabetes mellitus: four-year results of the Look AHEAD trial. 2010 |
| Chao D Espeland MA Farmer D et al. Effect of voluntary weight loss on bone mineral density in older overweight women. <i>J Am Geriatr Soc</i> 2000;48 (7) 753- 759 | Hanefeld M, Haller H, Schulze J, Julius U, Fischer S, Rothe G. The diabetes intervention study - a multicentre, multi- intervention study in type II diabetics. I. Conception, diagnostic, therapeutic programme, outcome of screening and epidemiological results on entrance to the study [German]. <i>Deutsche Gesundheitswesen</i> 1984;39(48): 1889-94. |
| Espeland MA Kumanyika S Kostis JB et al. Antihypertensive medication use among recruits for the Trial of Nonpharmacologic Interventions in the Elderly (TONE). <i>J Am Geriatr Soc</i> 1996;44 (10) 1183- 1189 | Hanefeld M, Schulze J, Fischer S, Rossger G, Lindner J, Groh G, et al. Intensified basic treatment reduces the need for drugs and improves glucose control: an important result of the Diabetes Intervention Study. <i>Zeitschrift für die Gesamte Innere Medizin und Ihre Grenzgebiete</i> 1988;43(24): 700-2. |
| Fessler B Sodium reduction and weight loss instead of treatment with antihypertensive agents [in German]. <i>Dtsch Apoth Ztg</i> 1998;13836- 39 | Hanefeld M, Fischer S, Schmechel H, Rothe G, Schulze J, Dude H, et al. Diabetes Intervention Study: Multi- intervention trial in newly diagnosed NIDDM. <i>Diabetes Care</i> 1991;14:308-17. |
| Kostis JB Espeland MA Appel L Johnson KC Pierce J Wofford JL Does withdrawal of antihypertensive medication increase the risk of cardiovascular events? <i>Am J Cardiol</i> 1998;82 (12) 1501- 1508 | Kostis JB Wilson AC Shindler DM Cosgrove NM Lacy CR Persistence of normotension after discontinuation of lifestyle intervention in the trial of TONE. <i>Am J Hypertens</i> 2002;15 (8) 732- 734 |

Table 7: 48 included references added into the research matrix for 2015 NICE guideline.

| Guideline # 6 NICE: Included references added into the research matrix | | |
|---|--|---|
| Malik et al. 2013 (++) Malik VS, Pan A, Willett WC et al. Sugar-sweetened beverages and weight gain in children and adults: a systematic review and meta-analysis. American Journal of Clinical Nutrition. 2013 20130821 [Epub ahead of print];98(4):1084-102. | USDA 2010i (++) U.S. Department of Agriculture. What is the relationship between screen time and body weight? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010i. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250317 . | Ye et al. 2012 (+) Ye EQ, Chacko SA, Chou EL et al. Greater whole-grain intake is associated with lower risk of type 2 diabetes, cardiovascular disease, and weight gain. Journal of Nutrition. 2012 20120530 [Epub ahead of print];142(7):1304-13. |
| Kaiser et al. 2013 (++) Kaiser KA, Shikany JM, Keating KD et al. Will reducing sugar-sweetened beverage consumption reduce obesity? Evidence supporting conjecture is strong, but evidence when testing effect is weak. Obesity Reviews. 2013 23742715 [Epub ahead of print];14(8):SP-620. | Costigan et al. 2013 (++) Costigan SA, Barnett L, Plotnikoff RC et al. The health indicators associated with screen-based sedentary behavior among adolescent girls: a systematic review. Journal of Adolescent Health. 2013;52(4):382-92. | Wanders et al. 2011 (++) Wanders AJ, van den Borne JJ, de GC et al. Effects of dietary fibre on subjective appetite, energy intake and body weight: a systematic review of randomized controlled trials. Obesity Reviews. 2011 20110616 [Epub ahead of print];12(9):724-39. |
| Te Morenga et al. 2012 (++) Te Morenga L, Mallard S, Mann J. Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies. BMJ. 2013 20120115 [Epub ahead of print];346:e7492. | Malik et al. 2013 (++) Malik VS, Pan A, Willett WC et al. Sugar-sweetened beverages and weight gain in children and adults: a systematic review and meta-analysis. American Journal of Clinical Nutrition. 2013 20130821 [Epub ahead of print];98(4):1084-102. | USDA 2010c (++) U.S. Department of Agriculture. How are non-caloric sweeteners related to energy intake and body weight? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010c. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250279 . |
| Fogelholm et al. 2012 (++) Fogelholm M, Andersson S, Gunnarsdottir I et al. Dietary macronutrients and food consumption as determinants of long-term weight change in adult populations: a systematic literature review. Food & Nutrition Research. 2012;56. | Kaiser et al. 2013 (++) Kaiser KA, Shikany JM, Keating KD et al. Will reducing sugar-sweetened beverage consumption reduce obesity? Evidence supporting conjecture is strong, but evidence when testing effect is weak. Obesity Reviews. 2013 23742715 [Epub ahead of print];14(8):SP-620. | Wiebe et al. 2011 (++) Wiebe N, Padwal R, Field C et al. A systematic review on the effect of sweeteners on glycemic response and clinically relevant outcomes. BMC Medicine. 2011 20111117 [Epub ahead of print];9:123. |
| Vadiveloo et al. 2013 (++) Vadiveloo M, Dixon LB, Parekh N. Associations between dietary variety and measures of body adiposity: a systematic review of epidemiological studies. British Journal of Nutrition. 2013 20130227 [Epub ahead of print];109(9):1557-72. | Te Morenga et al. 2012 (++) Te Morenga L, Mallard S, Mann J. Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies. BMJ. 2013 20120115 [Epub ahead of print];346:e7492. | Te Morenga et al. 2013 (++) Te Morenga L, Mallard S, Mann J. Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies. BMJ. 2013 20120115 [Epub ahead of print];346:e7492. |
| Summerbell et al. 2009 (++) Summerbell CD, Douthwaite W, Whittaker V et al. The association between diet and physical activity and subsequent excess weight gain and obesity assessed at 5 years of age or older: a systematic review of the epidemiological evidence. International Journal of Obesity. 2009;33 Suppl 3:S1-92. | Muckelbauer et al. 2013 (++) Muckelbauer R, Sarganas G, Gruneis A et al. Association between water consumption and body weight outcomes: a systematic review. American Journal of Clinical Nutrition. 2013 20130626 [Epub ahead of print];98(2):282-99. | Sievenpiper et al. 2012 (++) Sievenpiper JL, de Souza RJ, Mirrahimi A et al. Effect of fructose on body weight in controlled feeding trials: a systematic review and meta-analysis. Annals of Internal Medicine. 2012;156(4):291-304. |
| Johnson et al. 2009 (++) Johnson L, Wilks DC, Lindroos AK et al. Reflections from a systematic review of dietary energy density and weight gain: is the inclusion of drinks valid? Obesity Reviews. 2009 20090401 [Epub ahead of print];10(6):681-92. | Abargouei et al. 2012 (++) Abargouei AS, Janghorbani M, Salehi-Marzjariani M et al. Effect of dairy consumption on weight and body composition in adults: a systematic review and meta-analysis of randomized controlled clinical trials. International Journal of Obesity. 2012 20120117 [Epub ahead of print];36(12):1485-93. | Wiebe et al. 2011 (++) Wiebe N, Padwal R, Field C et al. A systematic review on the effect of sweeteners on glycemic response and clinically relevant outcomes. BMC Medicine. 2011 20111117 [Epub ahead of print];9:123. |
| Mesas et al. 2012 (++) Mesas AE, Munoz-Pareja M, Lopez-Garcia E et al. Selected eating behaviours and excess body weight: a systematic review. Obesity Reviews. 2012 20110928 [Epub ahead of print];13(2):106-35. | Louie et al. 2011 (++) Louie JC, Flood VM, Hector DJ et al. Dairy consumption and overweight and obesity: a systematic review of prospective cohort studies. Obesity Reviews. 2011 20110427 [Epub ahead of print];12(7):e582-e592. | Phung et al. 2010 (++) Phung OJ, Baker WL, Matthews LJ et al. Effect of green tea catechins with or without caffeine on anthropometric measures: a systematic review and meta-analysis. American Journal of Clinical Nutrition. 2010 20091111 [Epub ahead of print];91(1):73-81. |
| USDA 2010m (++) U.S. Department of Agriculture. What is the relationship between snacking and body weight? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010m. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250319&highlight=snacking&home=1 . | Bautista-Castano and Serra-Majem 2012 (++) Bautista-Castano I, Serra-Majem L. Relationship between bread consumption, body weight, and abdominal fat distribution: evidence from epidemiological studies. Nutrition Reviews. 2012;70(4):218-33. | Bezerra et al. 2012 (++) Bezerra IN, Curioni C, Sichieri R. Association between eating out of home and body weight. Nutrition Reviews. 2012;70(2):65-79. |
| Saunders et al. 2013 (++) Saunders LE, Green JM, Petticrew MP et al. What are the health benefits of active travel? A systematic review of trials and cohort studies. PLoS ONE [Electronic Resource]. 2013 20130815 [Epub ahead of print];8(8):e69912. | Pol et al. 2013 (++) Pol K, Christensen R, Bartels EM et al. Whole grain and body weight changes in apparently healthy adults: a systematic review and meta-analysis of randomized controlled studies. American Journal of Clinical Nutrition. 2013 20130814 [Epub ahead of print];98(4):872-84. | USDA 2010i (++) U.S. Department of Agriculture. What is the relationship between eating out and body weight? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010i. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250315&highlight=eating%20out&home=1 . |
| Murphy et al. 2007 (++) Murphy MH, Nevill AM, Murtagh EM et al. The effect of walking on fitness, fatness and resting blood pressure: a meta-analysis of randomised, controlled trials. Preventive Medicine. 2007 20061224 [Epub ahead of print];44(5):377-85. | USDA 2010e (++) U.S. Department of Agriculture. In adults, what is the relationship between the intake of vegetables and fruits, not including juice, and body weight? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010e. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250343&highlight=vegetables&home=1 . | Magee and Hale 2012 (++) Magee L, Hale L. Longitudinal associations between sleep duration and subsequent weight gain: a systematic review. Sleep Medicine Reviews. 2012 20110723 [Epub ahead of print];16(3):231-41. |
| Oja et al. 2011 (++) Oja P, Titz S, Bauman A et al. Health benefits of cycling: A systematic review. Scandinavian Journal of Medicine and Science in Sports. 2011 21496106 [Epub ahead of print];21(4):SP-496 | USDA 2010o (++) U.S. Department of Agriculture. What is the relationship between the intake of cooked dry beans and peas and body weight? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010o. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250357&highlight=cooked%20dry%20beans&home=1 . | USDA 2010x (++) U.S. Department of Agriculture. What is the relationship between alcohol intake and weight gain? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010x. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250128&highlight=alcohol&home=1 . |
| WCRF 2006 (++) (WCRF) Kelly S, Hillier F, Whittaker V et al. The associations between food, nutrition, physical activity and the risk of weight gain, overweight and obesity and underlying mechanisms. London: World Cancer Research Fund International; 2006. Available from: http://www.dietandcancerreport.org/cancer_resource_center/downloads/SLR/Obesity_SLR.pdf . | Flores-Mateo et al. 2013 (++) Flores-Mateo G, Rojas-Rueda D, Basora J et al. Nut intake and adiposity: meta-analysis of clinical trials. American Journal of Clinical Nutrition. 2013 20130417 [Epub ahead of print];97(6):1346-55. | Bendsen et al. 2013 (++) Bendsen NT, Christensen R, Bartels EM et al. Is beer consumption related to measures of abdominal and general obesity? A systematic review and meta-analysis. Nutrition Reviews. 2013 20121213 [Epub ahead of print];71(2):67-87. |
| Ismail et al. 2012 (++) Ismail I, Keating SE, Baker MK et al. A systematic review and meta-analysis of the effect of aerobic vs. resistance exercise training on visceral fat. Obesity Reviews. 2012 20110926 [Epub ahead of print];13(1):68-91. | USDA 2010v (++) U.S. Department of Agriculture. How do the health outcomes of a vegetarian diet compare to that of a diet which customarily includes animal products? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010v. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250356&highlight=how%20do%20the%20health%20outcomes%20of%20a%20vegetarian&home=1 . | Sayon-Orea et al. 2011 (++) Sayon-Orea C, Martinez-Gonzalez MA, Bes-Rastrollo M. Alcohol consumption and body weight: a systematic review. Nutrition Reviews. 2011;69(8):419-31. |
| Kelley and Kelley 2006 (++) Kelley GA, Kelley KS. Effects of aerobic exercise on C-reactive protein, body composition, and maximum oxygen consumption in adults: a meta-analysis of randomized controlled trials. Metabolism: Clinical & Experimental. 2006;55(11):1500-7. | Hooper et al. 2012 (++) Hooper L, Abdelhamid A, Moore HJ et al. Effect of reducing total fat intake on body weight: systematic review and meta-analysis of randomised controlled trials and cohort studies. BMJ. 2012 20121206 [Epub ahead of print];345:e7666. | Bravata et al. 2007 (++) Bravata DM, Smith-Spangler C, Sundaram V et al. Using pedometers to increase physical activity and improve health: a systematic review. JAMA. 2007;298(19):2296-304. |
| Murphy et al. 2009 (++) Murphy MH, Blair SN, Murtagh EM. Accumulated versus continuous exercise for health benefit: a review of empirical studies. Sports Medicine. 2009;39(1):29-43. | Santesso et al. 2012 (++) Santesso N, Akl EA, Bianchi M et al. Effects of higher- versus lower-protein diets on health outcomes: a systematic review and meta-analysis. European Journal of Clinical Nutrition. 2012 20120418 [Epub ahead of print];66(7):780-8. | USDA 2010j (++) U.S. Department of Agriculture. What is the relationship between glycemic index or glycemic load and body weight? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010j. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250355 . |

IV) **Discussion:**

a) **Main results:**

During step 11 of the ADAPTE procedure, the AGREE II instrument was used to assess the methodological quality of the 5 guidelines assigned. Based on OA score, two guidelines were included, the 2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adults (21) and the 2012 WHO: Prevention and control of non-communicable diseases: guidelines for primary health care in low resource settings (25).

During step 13 of the ADAPTE procedure, the recommendations of the 2 assigned guidelines were selected:

- For the 2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adults (21): 11 recommendations were retained and 268 references related to these recommendations were included into the research matrix.
- For the 2015 NICE guideline (26): Preventing excess weight gain: 6 recommendations were retained and 48 references related to these recommendations were included into the research matrix.

b) **Limits and biases:**

Some limits and biases in the method may have occurred. Some **information biases** could occur as studies could be not listed by guidelines. This was managed as the research team focused on effective interventions and recent guidelines. A **confusion bias** was also possible when assessing the guidelines with the AGREE II tool because of the subjectivity between appraisers' evaluation. This was controlled by a double-blind evaluation and a consensus meeting. **Information bias** was also possible because there was no standardized format for guidelines. We had trouble analyzing and retrieving the data. Some **confusion biases** may have occurred. The choice of OA score as an inclusion criteria could be discussed as some items seemed more influential or relevant for implementation research. Major limitation of this study was the lack of time. To complete this work, it will be necessary to finalize the draft matrix.

Limits and biases related to studied material:

Guidelines:

Considering the time needed to publish a guideline, an **information bias** was possible as studies published after the publication of the guideline could not be considered. To limit this bias, we selected recent guidelines.

Another **information bias** was possible. We considered that existing recommendations on the subject were based on the best available level of evidence and that irrelevant studies had been eliminated (28)(29). There may have been a "positive" selection of the studies used to establish the recommendations by the authors of the guidelines assigned for the ADAPTE step 13. Similarly, when we created our research matrix, the studies that were selected and then included were those with "positive" results. Thus, it is possible that some studies whose results do not support the effectiveness of the intervention in terms of morbi-mortality in primary cardiovascular prevention have been forgotten due to this double "positive" selection.

Recommendations and references:

Information bias was also possible. Among the 2 assigned guidelines, each had a specific structure. In this study, the lack of formalization of the structure of the guidelines was a problem for two reasons. First, in the selection of the recommendations because the gradation of the recommendations was not consistent between the 2 guidelines and it was sometimes difficult to define which recommendation was of sufficient quality to be included. For the guideline # 6 NICE (26), the recommendations were presented without grading system, for the guideline # 1 AHA / ACC / TOS (21), the strength of the recommendations was presented according to the NHLBI grading of recommendation methodology by Class and level. Then, it was difficult to track the references related to the recommendations. There was no direct link between the recommendations and the related references for the 2 assigned guidelines. The reading of several appendix was necessary to associate the references and recommendations.

In this study, the number of references included in the research matrix and the reference difference included between guideline # 1 AHA/ACC/TOS (21) (268 references retained) and

guideline # 6 NICE (26) (48 references retained). This could raise an uncertainty about the exhaustiveness of the bibliography. In this study, guidelines analyzed were of very good quality but the number of references that have been retained in the research matrix was high as 316 references were retained. In H  l  ne Roux study (30), analyzed guidelines were of very good quality but 22 references only were retained in the research matrix.

Limits and biases related to our work:

ADAPTE procedure:

One of the main limitations of this work was the time required to carry out a review of the literature with the ADAPTE procedure. We have assumed that using existing literature integrated within guidelines would save time by avoiding a new systematic review of the literature on the subject. In this study, we found that the use of the ADAPTE procedure was very time consuming. It was originally planned to do steps 14 and 15 of the ADAPTE procedure to obtain the SPICES basket of cost-effective interventions with morbidity and mortality efficacy for non-pharmacological primary cardiovascular prevention but this could not be done in this study due to workload. The time required for the evaluation of the guidelines was evaluated as reasonable in the 2003 study "development and validation of international appraisal instrument for assessing the quality of clinical practice guideline: the AGREE project" (31). The estimated average time for evaluating a guideline with the AGREE II tool was 1h30. Then, a pan-Canadian study had concluded that « Guideline adaptation is a positive initial step toward evidence-informed care, but adaptation (vs. "de novo" development) did not meet expectations for reducing time or resource commitments » (32). It was a too broad work compared to the usual time allocated for a medical thesis. The trainees had to stop before creating the final matrix. To complete the literature review on the subject, it will be necessary for new members of the thesis working group to work on the research matrix and to rank the interventions and implementation strategies according to their reliability and effectiveness. The division of tasks between SPICES teams and between medical trainees and senior researchers facilitated the control of time and resources needed to complete the project.

AGREE:

Some **confusion biases** may have occurred. The choice of the OA as a selection criterion can be discussed. Despite the organization of AGREE II instrument in 23 items, the OA score was not calculated on average of item scores but had to be estimated independently. To bypass the subjective nature of the OA score, we could have based our selection on a specific domain. The AGREE II tool was used with the aim of solving the problem of variability in the methodological quality of the guidelines. A specific domain score among the six domains scores could have led the selection of guidelines. Domain 3 "Rigor of Development" as well as domain 6 "Editorial Independance" seemed suitable to select methodologically rigorous guidelines whose authors' conflicts of interest do not influence the results. In a recent study, it has been suggested that the domain « Rigour of development » and « Editorial independence » seem to have the strongest influence on the two global assessments (33). In this study, the third domain obtained a score > 50% for the 2 included guidelines and a score < 35% for the 3 excluded guidelines. The score of the sixth domain was not correlated with the inclusion of the guidelines. Domain 5 "Applicability" could also have been a selection criterion because an implementation study such as the SPICES project needs an adaptation of the guidelines recommendations to the local context (34)(35). However, the number of selected guidelines could have been limited because the science of implementation is recent and was still poorly developped in the guidelines which were scored (36). Another domain that could encounter implementation objectives was the views of the target population. In the scored guidelines, the experiences and expectations of the target population was not considered enough. The score obtained for the item 5 " The views and preferences of the target population " was only 1 for all the guidelines assigned except for guideline # 5 developed by the WHO which was scored 4.

Despite the potential biases related to the choice of the overall assesement, AGREE II instrument has been validated and tested internationally on a large number of guidelines. It has become a reference for assessing the quality of the guidelines (37). AGREE II has been used successfully on many guidelines and more and more learned society of the medical community uses this tool. In 2012, the WHO evaluated the quality of four of its guidelines in maternal health (38) and in 2013 a team from the United Kingdoms evaluated the quality of 101 guidelines in cardiac clinical pratice using AGREE II instrument (39).

Information biases were possible with regard to OA score and item rating due to the difference of experience in the evaluation of the guidelines between medical trainees and senior researcher. There could have been a significant difference in the OA score and item rating by each of the appraisers. On another hand, depending on the order and quality of the evaluated guidelines, the item rating could be different. Starting the evaluation with a guideline with a poor methodology could have influenced upwards the rating of the next guidelines to score for the same appraiser. To limit these biases, the research team trained on a first guideline and the guidelines were evaluated by at least 2 appraisers including a medical trainee and a more experienced senior researcher. A discussion between medical trainees and senior researchers was sometimes necessary to clarify the rating of an item. An opportunity was given to change the scores after discussion between the appraisers and the OA final score was given after a consensus between the 2 appraisers. In this study, the OA score of the 2 appraisers were close together and did not show more than 1-point difference.

c) Strengths and originality:

A new and original methodological approach using AGREE II and ADAPTE procedures were chosen to do a systematic review on primary CVD prevention compared to a more conventional methodology using the PRISMA criteria (40). The advantage of the PRISMA criteria was to seek for quantified data from meta-analyses, but its weakness was to obtain an unprecise and broad description of the interventions and run the risk of an inability to implement chosen strategies. Compared to other literature reviews, ADAPTE is related to the implementation objective to apply recommendations at the local level.

In comparison with a literature review carried out following the PRISMA criteria, additional time was needed for the multiplicity of steps:

- Selection of the guidelines with a different search base,
- Familiarization ourselves with a new tool,
- Solving of the divergent evaluations of the guidelines by consensus,
- Extraction of the recommendations and their related references,
- Elimination of duplicates,
- Creation of a search matrix.

This multiplicity was a difficulty as a strength as it conducted to an in-depth sight of guidelines via the AGREE tool. This allowed the research team to better understand the structure of a guideline, to characterize the quality of a guideline.

One of the strengths of this study and the SPICES project is that we were the first to have carried out an overview of the literature of guidelines on the subject. This created a global vision of what nonpharmacological primary cardiovascular prevention should be and underlines choices of each guidelines developer for guidance (as physical activity to promote or dietary improvement to promote).

ADAPTE and AGREE II open up prospects in terms of teaching and clinical practice. In the teaching objectives of the medical studies second cycle, recommendations from French guidelines serve as an inescapable basis for learning. However, when we evaluated the quality of the guidelines and references related to the recommendations, we discovered a great disparity. Training in handling tools like AGREE II and ADAPTE could be useful for medical learning to develop the critical thinking of medical students. Before applying guideline-based recommendations in clinical practice, it seems important to understand how these guidelines were developed, to assess their quality and limits, to know how to check levels of evidence underlying their recommendations and identify their applicability criteria. From the clinical practice perspective, this review highlights gaps between guidelines and practice. The application of many recommendations even from good quality guidelines into routine practice in primary care seem difficult without an adaptation of these to the local context (41).

V) Conclusion:

This study, was part of the SPICES Project, participated to the overview of the literature on the non-pharmacological primary cardiovascular prevention using an original approach using AGREE II and ADAPTE procedures.

The final objective was to select the most effective primary care prevention interventions to reduce the occurrence of CVD in a target population.

Implementation of interventions were not described in the recommendations and references related to the selected recommendations had to be analyzed. 17 recommendations on the subject were included and a total of 316 references related to these recommendations were added into a research matrix.

This study showed a disparity in the quality of the guidelines and references as well a lack of standardization of the guidelines structures. This disparity could question our teaching practices particularly the use of guidelines as an inescapable basis for medical learning. Progress on the development of the guidelines seems necessary. AGREE II would help improving harmonization and quality of guidelines.

References:

1. World Health Organization. Global status report on noncommunicable diseases 2014. Geneva: WHO; 2014.
2. Mendis S, Puska P NB. Global Atlas on Cardiovascular disease prevention and control. Geneva: WHO, WSO, WHF; 2011.
3. Townsend N, Wilson L, Bhatnagar P, Wickramasinghe K, Rayner M, Nichols M. Cardiovascular disease in Europe: Epidemiological update 2016. *Eur Heart J*. 2016;37(42):3232–45.
4. Lecoffre C, Decool E, Olié V. Hospitalisations pour maladies cardio-neuro-vasculaires et désavantage social en France en 2013. *Bull Epidémiol Hebd*. 2016;(20–21):359–66.
5. World Health Organization. Noncommunicable Diseases (NCD) Country Profiles. Geneva: WHO; 2014.
6. World Health Organization. Top 10 causes of death. Geneva: WHO; 2018. Available from: http://www.who.int/gho/mortality_burden_disease/causes_death/top_10/en/. (cited 2018 Feb 12).
7. Mathers CD, Loncar D. Projections of Global Mortality and Burden of Disease from 2002 to 2030. *PLoS Med*. 2006;3(11):e442.
8. WHO. Cardiovascular diseases (CVDs). Geneva: WHO; 2017. Available from: <http://www.who.int/mediacentre/factsheets/fs317/en/>. (cited 2018 Feb 12).
9. World Health Organization. A healthy lifestyle. Geneva: WHO; 2018. Available from: <http://www.euro.who.int/en/health-topics/disease-prevention/nutrition/a-healthy-lifestyle>. (cited 2018 Feb 12).
10. Haute Autorité de Santé. Fiche Mémo - Modifications du mode de vie dans la prise en charge du risque cardio-vasculaire. Saint-Denis La Plaine: HAS; 2017.
11. Peters DH, El-Saharty S, Siadat B, Janovsky K, Vujicic M. Improving Health Service Delivery in Developing Countries From Evidence to Action. Washington DC: World Bank; 2009. 366 p.
12. World Health Organization. Global action plan for the prevention and control of NCDs 2013-2020. Geneva: WHO; 2013.
13. Eccles MP, Mittman BS. Welcome to Implementation Science. *Implement Sci*. 2006;1:1.
14. World Health Organization. Innovative Care for Chronic Conditions : Building Blocks for Action. Geneva: WHO; 2002.
15. Olmen J van, Schellevis F, Damme W Van, Kegels G, Rasschaert F. Management of chronic diseases in sub-Saharan Africa: Cross-fertilisation between HIV/AIDS and diabetes care. *J Trop Med*. 2012;2012:349312.
16. Bemelmans M., Van Den Akker T., Ford N. et al. Providing universal access to antiretroviral therapy in Thyolo, Malawi through task shifting and decentralization of HIV/AIDS care. *Trop Med Int Heal*. 2010;15(12):1413–20.
17. Boulle A, Cutsem G Van, Hilderbrand K, et al. Seven-year experience of a primary care antiretroviral treatment programme in Khayelitsha, South Africa. *AIDS*. 2010;24(4):563–72.

18. Stringer JSA, Zulu I, Levy J, et al. Rapid Scale-up of Antiretroviral Therapy at Primary Care Sites in Zambia. *JAMA*. 2006;296(7):782.
19. Fox MP, Rosen S. Patient retention in antiretroviral therapy programs up to three years on treatment in sub-Saharan Africa, 2007-2009: systematic review. *Trop Med Int Heal*. 2010;15(SUPPL. 1):1–15.
20. The ADAPTE Collaboration. The ADAPTE Process: Resource Toolkit for Guideline Adaptation. Version 2.0. G-I-N; 2009. Available from: <http://www.g-i-n.net>. (cited 2018 Feb 19)
21. Jensen MD, Ryan DH, Apovian CM, et al. 2013 AHA/ACC/TOS guideline for the management of overweight and obesity in adults: A report of the American College of cardiology/American Heart Association task force on practice guidelines and the obesity society. *Circulation*. 2014;129(25 SUPPL. 1):S102-38.
22. British Columbia Ministry of Health. Cardiovascular Disease - Primary Prevention: Resource Guide for Physicians. Victoria: BCGuidelines.ca; 2014.
23. Fan AL, Fenske JN, Harrison R Van, Jackson EA, Marcelino MA. Screening and Management of Lipids. Ann Arbor: University of Michigan Health System; 2014.
24. British Columbia Ministry of Health. Hypertension – Diagnosis and Management. Victoria: BCGuidelines.ca; 2016.
25. World Health Organization. Prevention and Control of Noncommunicable Diseases: Guidelines for primary health care in low-resource settings. Geneva: WHO; 2012.
26. National Institute for Health and Care Excellence. Preventing excess weight gain. London: NICE; 2015.
27. Piepoli MF, Hoes AW, Agewall S, et al. 2016 European Guidelines on cardiovascular disease prevention in clinical practice. Sophia Antipolis: ESC; 2016.
28. Heffner JE. Does Evidence-Based Medicine Help the Development of Clinical Practice Guidelines? *Chest*. 1998;113(3):172S–178S.
29. Haute Autorité de Santé. Elaboration de recommandations de bonne pratique. Saint-Denis La Plaine: HAS; 2016.
30. Roux H. Sélection parmi 5 recommandations de bonnes pratiques de prévention des maladies cardiovasculaires via les procédures Agree II et ADAPTE. Identification des références bibliographiques des recommandations internationales: VA/DoD clinical practice guideline for the management of dyslipidemia for cardiovascular risk reduction et VA/DoD clinical practice guideline for screening and management of overweight and obesity, à intégrer dans la matrice de recherche de l'étude SPICES. En utilisant les procédures Agree II et Adapte, quelles sont les références bibliographiques des recommandations internationales sélectionnées à intégrer dans la matrice de recherche de l'étude SPICES?. thèse de médecine. Faculté de médecine. Brest. 2018.
31. The AGREE Collaboration. Development and validation of an international appraisal instrument for assessing the quality of clinical practice guidelines: the AGREE project. *Qual Saf Heal Care*. 2003;12(1):18–23.
32. Harrison MB, Graham ID, van den Hoek J, et al. Guideline adaptation and implementation planning: a prospective observational study. *Implement Sci*. 2013;8:49.

33. Hoffmann-Eßer W, Siering U, Neugebauer EAM, Brockhaus AC, McGauran N, Eikermann M. Guideline appraisal with AGREE II: online survey of the potential influence of AGREE II items on overall assessment of guideline quality and recommendation for use. *BMC Health Serv Res*. 2018;18(1):143.
34. Schloemer T, Schröder-Bäck P. Criteria for evaluating transferability of health interventions: a systematic review and thematic synthesis. *Implement Sci*. 2018;13(1):88.
35. Haute Autorité de Santé. Méthode et processus d'adaptation des recommandations pour la pratique clinique existantes. Saint-Denis La Plaine: HAS; 2007.
36. Gagliardi AR, Brouwers MC. Do guidelines offer implementation advice to target users? A systematic review of guideline applicability. *BMJ Open*. 2015;5(2):e007047.
37. Makarski J, Brouwers MC. The AGREE Enterprise: a decade of advancing clinical practice guidelines. *Implement Sci*. 2014;9:103.
38. Polus S, Lerberg P, Vogel J, et al. Appraisal of WHO guidelines in maternal health using the AGREE II assessment tool. *PLoS One*. 2012;7(8):e38891.
39. Sabharwal S, Patel V, Nijjer SS, et al. Guidelines in cardiac clinical practice: evaluation of their methodological quality using the AGREE II instrument. *J R Soc Med*. 2013;106(8):315–22.
40. Moher D, Liberati A, Tetzlaff J, Altman D, The PRISMA Group. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med*. 2009;6(7):e1000097.
41. Fischer F, Lange K, Klose K, Greiner W, Kraemer A. Barriers and Strategies in Guideline Implementation-A Scoping Review. *Healthcare*. 2016;4(3):36.

Appendix:

APPENDIX 1: AGREE score for guideline # 1:

| AGREE items | Appraiser 1 | Appraiser 3 | Calculates SCORE |
|--|---|--------------------|-------------------------|
| <i>Domain 1. Scope and Purpose</i> | | | 58% |
| 1. Overall Objective(s) | Score: 4 develop clinical practice guidelines for management of overweight and obesity in adults | Score: 4 | |
| 2. The health question(s) | Score: 2 | Score: 7 | |
| 3. The population | Score: 4 overweight and obese adult patients | Score: 6 | |
| <i>Domain 2. Stakeholder Involvement</i> | | | 44% |
| 4. all relevant professional groups | Score: 4 | Score: 4 | |
| 5. The views and preferences of the target population | Score: 1 ?? | Score: 2 | |
| 6. The target users | Score: 6 Intended Users Advanced Practice Nurses Allied Health Personnel Dietitians Health Care Providers Nurses Pharmacists Physician Assistants Physicians Psychologists/Non-physician Behavioral Health Clinicians | Score: 5 | |
| <i>Domain 3. Rigour of Development</i> | | | 68% |
| 7. Systematic methods were used to search for evidence. | Score: 7 | Score: 6 | |
| 8. The criteria for selecting the evidence | Score: 6 | Score: 6 | |
| 9. The strengths and limitations of the body of evidence | Score: 6 Rating Schema for the Strength of the Evidence Applying Classification of Recommendations and Level of Evidence | Score: 6 | |
| 10. The methods for formulating the recommendations | Score: 6 Process for the Development of Evidence Statements, Recommendations, and Panel Voting | Score: 6 | |
| 11. The health benefits, side effects, and risks | Score: 6 | Score: 3 | |
| 12. Explicit link between the recommendations and the supporting evidence. | Score: 6 | Score: 5 | |

| | | | |
|---|---|-----------------|------------|
| 13. Externally reviewed by experts prior to publication | Score: 4 | Score: 5 | |
| 14. procedure for updating | Score: 1 ?? | Score: 2 | |
| Domain 4. Clarity of Presentation | | | 81% |
| 15. The recommendations are specific and unambiguous | Score: 6 | Score: 5 | |
| 16. Options for management of the condition or health issue | Score: 6 Interventions and Practices Considered: 1. Identifying patients who need to lose weight by body mass index (BMI), waist circumference, and cardiometabolic risk factors 2. Identifying risk of cardiovascular disease (CVD) and other comorbidities 3. Advising patients about risk of CVD, type 2 diabetes, and all-cause mortality 4. Matching treatment benefits with risk profiles 5. Counseling overweight and obese patients with CVD risk factors on the benefits of lifestyle changes to lose weight 6. Diets for weight loss (calorie restriction, restriction of certain food types) 7. Lifestyle intervention and counseling (comprehensive lifestyle interventions that include lower-calorie diets and increasing physical activity) Face-to-face programs Electronically delivered programs Commercial-based programs Very-low-calorie diets (in limited circumstances) Maintenance programs 8. Selecting and referring patients for bariatric surgical treatment | Score: 6 | |
| 17. Key recommendations | Score: 6 'major recommendations' | Score: 6 | |
| Domain 5. Applicability | | | 29% |
| 18. facilitators and barriers | Score: 1 Description of Implementation Strategy An implementation strategy was not provided | Score: 2 | |

| | | | |
|--|--|-----------------|------------|
| 19. advice and/or tools | Score: 4 Implementation Tools Clinical Algorithm Patient Resources Pocket Guide/Reference Cards Resources Slide Presentation Staff Training/Competency Material | Score: 2 | |
| 20. Potential resource implications of applying | Score: 2 Cost Analysis A formal cost analysis was not performed and published cost analyses were not reviewed | Score: 1 | |
| 21. The guideline presents monitoring and/or auditing criteria | Score: 6 Major Outcomes Considered Reduction in body weight as measured by: Weight (kg, lb, %) Body fat measures (body mass index [BMI] and BMI change) Waist circumference Weight loss maintenance Cardiovascular disease (CVD) events Myocardial infarction Heart failure Hospitalization for heart failure or stroke CVD risk factors Systolic blood pressure or diastolic blood pressure Total cholesterol, high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C), non-HDL-C, triglycerides Fasting insulin, fasting glucose, glycosylated hemoglobin, diagnosis of diabetes C-reactive protein (CRP) Morbidity Coronary heart disease/CVD Type 2 diabetes Mortality (CVD-related, all-cause, overall) | Score: 4 | |
| Domain 6. Editorial Independence | | | 54% |
| 22. Views of the funding body have not influenced the content | Score: 5 | Score: 2 | |
| 23. Competing interests | Score: 4 | Score: 6 | |

APPENDIX 2: AGREE score for guideline # 2:

| AGREE items | Appraiser 5 | Appraiser 4 | Calculates SCORE |
|------------------------------------|-----------------|--|------------------|
| Domain 1. Scope and Purpose | | | 61% |
| 1. Overall Objective(s) | Score: 5 | Score: 3 | |
| 2. The health question(s) | Score: 4 | Score: 4 not clearly described, but globally defined by chapter titles (which tool, who to assess..) | |

| | | | |
|--|--|---|------------|
| 3. The population | Score: 5 | Score: 7 | |
| Domain 2. Stakeholder Involvement | | | 22% |
| 4. all relevant professional groups | Score: 4 Not specify, authors? | Score: 1 Name of people in the committee are not available | |
| 5. The views and preferences of the target population | Score: 1 | Score: 2 tools to help discuss with patients | |
| 6. The target users | Score: 3 | Score: 3 guess it is physician (GPs) but it is not said | |
| Domain 3. Rigour of Development | | | 24% |
| 7. Systematic methods were used to search for evidence. | Score: 2 | Score: 1 nothing on research and inclusion exclusion methodology | |
| 8. The criteria for selecting the evidence | Score: 1 | Score: 1 nothing on research and inclusion exclusion methodology | |
| 9. The strengths and limitations of the body of evidence | Score: 3 | Score: 1 not even a discussion on the most used risk calculator tools | |
| 10. The methods for formulating the recommendations | Score: 3 | Score: 2 pdf doc for all guidelines development. poor info https://www2.gov.bc.ca/assets/gov/health/practitioner-pro/bc-guidelines/gpac-handbook/gpachandbook2017.pdf | |
| 11. The health benefits, side effects, and risks | Score: 5 | Score: 2 | |
| 12. Explicit link between the recommendations and the supporting evidence. | Score: 3 | Score: 4 not always. framingham risk tool is recommended though it is not consensual on evidence and on international guidelines | |
| 13. Externally reviewed by experts prior to publication | Score: 3 imprecise | Score: 3 external review by peer (no more info) | |
| 14. procedure for updating | Score: 4 | Score: 1 | |
| Domain 4. Clarity of Presentation | | | 64% |
| 15. The recommendations are specific and unambiguous | Score: 5 | Score: 5 | |
| 16. Options for management of the condition or health issue | Score: 4 not enough developed | Score: 4 | |
| 17. Key recommendations | Score: 5 | Score: 6 yes, but no reference for most of them | |
| Domain 5. Applicability | | | 29% |
| 18. facilitators and barriers | Score: 1 | Score: 2 | |

| | | | |
|--|-----------------|---|------------|
| 19. advice and/or tools | Score: 4 | Score: 4 tools | |
| 20. Potential resource implications of applying | Score: 4 | Score: 1 | |
| 21. The guideline presents monitoring and/or auditing criteria | Score: 4 | Score: 2 | |
| Domain 6. Editorial Independence | | | 21% |
| 22. Views of the funding body have not influenced the content | Score: 2 | Score: 4 not clear: Funding for GPAC and its projects is made available through the 2014 Physician Master Agreement. | |
| 23. Competing interests | Score: 2 | Score: 1 Not available | |

APPENDIX 3: AGREE score for guideline # 3:

| AGREE items | Appraiser 5 | Appraiser 4 | Calculates SCORE |
|--|--------------------|--|-------------------------|
| Domain 1. Scope and Purpose | | | 69% |
| 1. Overall Objective(s) | Score: 6 | Score: 6 | |
| 2. The health question(s) | Score: 5 | Score: 3 | |
| 3. The population | Score: 6 | Score: 5 what is \"severe\" dyslipidemia? | |
| Domain 2. Stakeholder Involvement | | | 39% |
| 4. all relevant professional groups | Score: 5 | Score: 5 no patients no paramed | |
| 5. The views and preferences of the target population | Score: 1 | Score: 1 | |
| 6. The target users | Score: 5 | Score: 3 | |
| Domain 3. Rigour of Development | | | 33% |
| 7. Systematic methods were used to search for evidence. | Score: 5 | Score: 3 up to 2011 they use the literature search done by others (the college of endocrinologist) | |
| 8. The criteria for selecting the evidence | Score: 4 | Score: 1 nothing | |
| 9. The strengths and limitations of the body of evidence | Score: 2 | Score: 2 | |
| 10. The methods for formulating the recommendations | Score: 2 | Score: 5 | |
| 11. The health benefits, side effects, and risks | Score: 5 | Score: 2 | |

| | | | |
|--|-----------------|--|------------|
| 12. Explicit link between the recommendations and the supporting evidence. | Score: 2 | Score: 4 | |
| 13. Externally reviewed by experts prior to publication | Score: 3 | Score: 4 but no experts name, just experts from university | |
| 14. procedure for updating | Score: 3 | Score: 1 | |
| Domain 4. Clarity of Presentation | | | 61% |
| 15. The recommendations are specific and unambiguous | Score: 5 | Score: 5 | |
| 16. Options for management of the condition or health issue | Score: 5 | Score: 4 very little on non pharmacological therapy | |
| 17. Key recommendations | Score: 4 | Score: 5 | |
| Domain 5. Applicability | | | 33% |
| 18. facilitators and barriers | Score: 2 | Score: 2 | |
| 19. advice and/or tools | Score: 3 | Score: 1 | |
| 20. Potential resource implications of applying | Score: 4 | Score: 3 only statin prices | |
| 21. The guideline presents monitoring and/or auditing criteria | Score: 5 | Score: 5 treat to target vs risk based treatment | |
| Domain 6. Editorial Independence | | | 54% |
| 22. Views of the funding body have not influenced the content | Score: 4 | Score: 2 don't know who fund it | |
| 23. Competing interests | Score: 6 | Score: 5 | |

APPENDIX 4: AGREE score for guideline # 4:

| AGREE items | Appraiser 1 | Appraiser 3 | Calculates SCORE |
|------------------------------------|---|--------------------|-------------------------|
| Domain 1. Scope and Purpose | | | 50% |
| 1. Overall Objective(s) | Score: 4 This guideline provides recommendations on how to diagnose and manage hypertension (HTN) in adults aged ≥ 19 years. | Score: 4 | |
| 2. The health question(s) | Score: 2 | Score: 4 | |

| | | | |
|--|---|-----------------|------------|
| 3. The population | Score: 4 This guideline provides recommendations on how to diagnose and manage hypertension (HTN) in adults aged ≥ 19 years. Outside the scope of this guideline is the management of secondary causes of HTN,* accelerated HTN, acute HTN in emergency settings, and in pregnant adults. The amount of randomized controlled trials informing care of the elderly with raised blood pressure is limited. | Score: 6 | |
| Domain 2. Stakeholder Involvement | | | 14% |
| 4. all relevant professional groups | Score: 1 ?? no where mentioned | Score: 4 | |
| 5. The views and preferences of the target population | Score: 1 no | Score: 2 | |
| 6. The target users | Score: 1 no | Score: 2 | |
| Domain 3. Rigour of Development | | | 15% |
| 7. Systematic methods were used to search for evidence. | Score: 1 not mentioned, also couldn't find it on the website or in appendix | Score: 2 | |
| 8. The criteria for selecting the evidence | Score: 1 | Score: 1 | |
| 9. The strengths and limitations of the body of evidence | Score: 2 only in top recommendations?? | Score: 2 | |
| 10. The methods for formulating the recommendations | Score: 1 no | Score: 2 | |
| 11. The health benefits, side effects, and risks | Score: 1 | Score: 2 | |
| 12. Explicit link between the recommendations and the supporting evidence. | Score: 4 yes: see references | Score: 3 | |
| 13. Externally reviewed by experts prior to publication | Score: 1 process not mentioned | Score: 3 | |
| 14. procedure for updating | Score: 1 none found | Score: 3 | |

| | | | |
|--|--|-----------------|------------|
| Domain 4. Clarity of Presentation | | | 56% |
| 15. The recommendations are specific and unambiguous | Score: 4 | Score: 4 | |
| 16. Options for management of the condition or health issue | Score: 5 | Score: 4 | |
| 17. Key recommendations | Score: 4 | Score: 5 | |
| Domain 5. Applicability | | | 38% |
| 18. facilitators and barriers | Score: 1 | Score: 2 | |
| 19. advice and/or tools | Score: 4 practical guide for physicians + for patients | Score: 3 | |
| 20. Potential resource implications of applying | Score: 5 annual cost, cost for the patient,.. | Score: 4 | |
| 21. The guideline presents monitoring and/or auditing criteria | Score: 3 | Score: 4 | |
| Domain 6. Editorial Independence | | | 13% |
| 22. Views of the funding body have not influenced the content | Score: 1 ?? | Score: 3 | |
| 23. Competing interests | Score: 1 ?? | Score: 2 | |

APPENDIX 5: AGREE score for guideline # 5:

| AGREE items | Appraiser 1 | Appraiser 3 | Calculates SCORE |
|------------------------------------|--|--------------------|-------------------------|
| Domain 1. Scope and Purpose | | | 69% |
| 1. Overall Objective(s) | Score: 6 provide technical guidance to countries in integrating costeffective interventions against major NCDs into their health systems The primary goal of the guideline is to improve the quality of care and the outcome in people with type 2 diabetes in low-resource settings. | Score: 6 | |
| 2. The health question(s) | Score: 4 Guideline provides a basis for development of simple algorithms for management of diabetes with essential medicines and technology available in fist-contact health services in low-resource settings. It recommends a set of basic interventions to integrate management of diabetes into primary health care. | Score: 6 | |

| | | | |
|--|---|--|------------|
| 3. The population | Score: 4 The recommendations are limited to patients with type 2 diabetes, as the more complex management of type 1 diabetes requires more specialized care. | Score: 5 | |
| Domain 2. Stakeholder Involvement | | | 58% |
| 4. all relevant professional groups | Score: 5 | Score: 5 absence of the WONCA (World Organization of National Colleges, Academic and Academic Associations of General Practitioners / Family Physicians) | |
| 5. The views and preferences of the target population | Score: 4 There are no data on individual diabetic patient values and preferences in low resource settings, and they could vary between populations. | Score: 3 No point of view of the target population, no formal consultation of patients and the public in the development of CPR, but consideration of low resource countries | |
| 6. The target users | Score: 5 The target users are health care professionals responsible for developing diabetes treatment protocols which will be used by health care staff in primary care units in low-resource settings. | Score: 5 | |
| Domain 3. Rigour of Development | | | 69% |
| 7. Systematic methods were used to search for evidence. | Score: 6 | Score: 4 Research protocol explained but not sufficiently detailed, not reproducible with the data provided in the guideline | |
| 8. The criteria for selecting the evidence | Score: 5 | Score: 5 | |
| 9. The strengths and limitations of the body of evidence | Score: 6 | Score: 6 | |
| 10. The methods for formulating the recommendations | Score: 6 | Score: 6 | |

| | | | |
|--|--|--|------------|
| 11. The health benefits, side effects, and risks | Score: 5 The alternative for most of the recommendations in low-resource settings in primary care is usually no intervention. The consequences of untreated type 2 diabetes have been inferred from trials data on patients that did not achieve improvement in established risk factors for complications, and there is no doubt that diabetes substantially increases the risk of premature mortality, limb amputation, blindness and kidney failure | Score: 5 | |
| 12. Explicit link between the recommendations and the supporting evidence. | Score: 6 | Score: 5 | |
| 13. Externally reviewed by experts prior to publication | Score: 4 | Score: 5 methods used for external review not described, no reviewers designated as methodologist | |
| 14. procedure for updating | Score: 4 The guideline will be updated in 2016, unless made seriously obsolete earlier by breakthrough research. | Score: 4 | |
| Domain 4. Clarity of Presentation | | | 78% |
| 15. The recommendations are specific and unambiguous | Score: 6 | Score: 5 | |
| 16. Options for management of the condition or health issue | Score: 6 | Score: 5 | |
| 17. Key recommendations | Score: 6 | Score: 6 Table 5 | |
| Domain 5. Applicability | | | 56% |
| 18. facilitators and barriers | Score: 3 | Score: 3 Not detailed in the guideline, more informations but not specifically to diabetes but to NCDs in: Package of Essential Noncommunicable (PEN) Disease Interventions for Primary Health Care in Low-Resource Settings | |
| 19. advice and/or tools | Score: 3 | Score: 4 | |

| | | | |
|--|--|-----------------|------------|
| 20. Potential resource implications of applying | Score: 6 | Score: 5 | |
| 21. The guideline presents monitoring and/or auditing criteria | Score: 5 | Score: 6 | |
| Domain 6. Editorial Independence | | | 75% |
| 22. Views of the funding body have not influenced the content | Score: 5 This work was funded by WHO funds | Score: 6 | |
| 23. Competing interests | Score: 5 This work was funded by WHO funds. Every member of the guideline development group and the peer reviewers (See CD for list of peer reviewers), completed a standard WHO declaration of interest forms (see CD). | Score: 6 | |

APPENDIX 6: Excluded recommendations for 2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adult:

| Excluded recommendations | Reason for exclusion |
|---|--|
| Measure height and weight and calculate BMI at annual visits or more frequently. | Diagnostic procedures |
| Use the current cutpoints for overweight (BMI 25.0–29.9 kg/m ²) and obesity (BMI ≥30 kg/m ²) to identify adults who may be at elevated risk of CVD and the current cutpoints for obesity (BMI ≥30 kg/m ²) to identify adults who may be at elevated risk of mortality from all causes. | Diagnostic procedures |
| Use a very-low-calorie diet (defined as <800 kcal/d) only in limited circumstances and only when provided by trained practitioners in a medical care setting where medical monitoring and high-intensity lifestyle intervention can be provided. Medical supervision is required because of the rapid rate of weight loss and potential for health complications. | Very-low calories diet |
| Advise adults with a BMI ≥40 kg/m ² or BMI ≥35 kg/m ² with obesity-related comorbid conditions who are motivated to lose weight and who have not responded to behavioral treatment with or without pharmacotherapy with sufficient weight loss to achieve targeted health outcome goals that bariatric surgery may be an appropriate option to improve health and offer referral to an experienced bariatric surgeon for consultation and evaluation. | Bariatric Surgical Treatment for Obesity |
| For individuals with a BMI <35 kg/m ² , there is insufficient evidence to recommend for or against undergoing bariatric surgical procedures. | Bariatric Surgical Treatment for Obesity |
| Advise patients that choice of a specific bariatric surgical procedure may be affected by patient factors, including age, severity of obesity/BMI, obesity-related comorbid conditions, other operative risk factors, risk of short- and long-term complications, behavioral and psychosocial factors, and patient tolerance for risk, as well as provider factors (surgeon and facility). | Bariatric Surgical Treatment for Obesity |

APPENDIX 7: Excluded recommendations for 2015 NICE guideline: Preventing excess weight gain:

| Excluded Recommendations | Reasons for exclusion |
|--|------------------------------|
| Recommendation 7: Clearly communicate the benefits of maintaining a healthy weight | Qualitative evidence review |
| Recommendation 8: Clearly communicate the benefits of gradual improvements to physical activity and dietary habit | Qualitative evidence review |
| Recommendation 9: Tailor messages for specific group | Qualitative evidence review |
| Recommendation 10: Ensure activities are integrated with the local strategic approach to obesity | Qualitative evidence review |

APPENDIX 8 : 73 excluded references for 2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adult:

| Excluded references for 2013 AHA/ACC/TOS | Reason for exclusion |
|--|------------------------------|
| Williamson DF, Flanders D, Thompson TJ, Pamuk E, Thun M, Byers T. Intentional weight loss and mortality among overweight individuals with diabetes. <i>Diabetes Care</i> 2000; 23: 1499–1504 | No intervention |
| Chaturvedi N, Fuller JH. Mortality risk by body weight and weight change in people with NIDDM. The WHO Multinational Study of Vascular Disease in Diabetes. <i>Diabetes Care</i> 1995; 18: 766–774. | No intervention |
| Ford ES, Williamson DF, Liu S. Weight change and diabetes incidence: findings from a national cohort of US adults. <i>Am J Epidemiol</i> 1997; 146: 214–222. | No intervention |
| Moore LL, Visioni AJ, Wilson PW, D’Agostino RB, Finkle WD, Ellison RC. Can sustained weight loss in overweight individuals reduce the risk of diabetes mellitus? <i>Epidemiology</i> 2000; 11: 269–273. | No intervention |
| Wannamethee SG, Shaper AG. Weight change and duration of overweight and obesity in the incidence of type 2 diabetes. <i>Diabetes Care</i> 1999; 22: 1266–1272. | No intervention |
| Long SD, O’Brien K, MacDonald KG Jr et al. Weight loss in severely obese subjects prevents the progression of impaired glucose tolerance to type II diabetes. A longitudinal interventional study. <i>Diabetes Care</i> 1994; 17: 372–375. | Surgical intervention |
| Sjostrom CD, Peltonen M, Wedel H, Sjostrom L. Differentiated long-term effects of intentional weight loss on diabetes and hypertension. <i>Hypertension</i> 2000; 36: 20–25. | Surgical intervention |
| Pories WJ, MacDonald KG Jr, Flickinger EG et al. Is type II diabetes mellitus (NIDDM) a surgical disease? <i>Ann Surg</i> 1992; 215: 633–643 | Surgical intervention |
| O’Leary JP. Overview: Jejunoileal bypass in the treatment of morbid obesity. <i>Am J Clin Nutr</i> 1980; 33: 389–394. | Surgical intervention |
| Hauptman J, Lucas C, Boldrin MN, Collins H, Segal KR. Orlistat in the long-term treatment of obesity in primary care settings. <i>Arch Fam Med</i> . 2000;9:160–167. | Pharmacological intervention |
| Rosner S, Sjostrom L, Noack R, Meinders AE, Nosedá G. Weight loss, weight maintenance, and improved cardiovascular risk factors after 2 years treatment with orlistat for obesity. European Orlistat Obesity Study Group. <i>Obes Res</i> . 2000;8:49–61. | Pharmacological intervention |
| Teupe B, Bergis K. Prospective randomized two-years clinical study comparing additional metformin treatment with reducing diet in type 2 diabetes. <i>Diabetes Metab</i> . 1991;17:213–217. | Pharmacological intervention |
| Karason K, Wikstrand J, Sjostrom L, Wendelhag I. Weight loss and progression of early atherosclerosis in the carotid artery: a four-year controlled study of obese subjects. <i>Int J Obes Relat Metab Disord</i> . 1999;23:948–956. | Surgical intervention |
| Carson JL, Ruddy ME, Duff AE, Holmes NJ, Cody RP, Brolin RE. The effect of gastric bypass surgery on hypertension in morbidly obese patients. <i>Arch Intern Med</i> . 1994;154:193–200. | Surgical intervention |
| Kunesova M, Hainer V, Parizkova J, Stich V, Fried M. Long-term treatment of obesity in the obesity unit. <i>Sb Lek</i> . 1998;99:279–286. | Surgical intervention |
| Foley EF, Benotti PN, Borlase BC, Hollingshead J, Blackburn GL. Impact of gastric restrictive surgery on hypertension in the morbidly obese. <i>Am J Surg</i> . 1992;163:294–297. | Surgical intervention |
| Broom I, Wilding J, Stott P, Myers N, on behalf of the UK Multimorbidity Study Group. Randomised trial of the effect of orlistat on body weight and cardiovascular disease risk profile in obese patients: UK Multimorbidity Study. <i>Int J Clin Pract</i> 2002;56:494–9. Broom I. Randomised trial of the effect of orlistat on body weight and CVD risk profile in overweight and obese patients with co-morbidities. <i>Int J Obes</i> 2001; 25(Suppl 1):S106. Wilding J. Early response to orlistat treatment predicts long-term success in overweight and obese patients with co-morbidities. <i>Int J Obes</i> 2001;25(Suppl 1):S108. | Pharmacological intervention |
| Broom I, Hughes E, Dodson P, Reckless J, on behalf of the Orlistat UK Study Group. The role of orlistat in the treatment of obese patients with mild to moderate hypercholesterolaemia: consequences for coronary risk. <i>Br J Cardiol</i> 2001;9:460–8. | Pharmacological intervention |
| Davidson MH, Hauptman J, DiGirolamo M, Foreyt JP, Halsted CH, Heber D, et al. Weight control and risk factor reduction in obese subjects treated for 2 years with orlistat: a randomized controlled trial [published erratum in JAMA 1999;281:1174]. <i>JAMA</i> 1999; 281:235–42. | Pharmacological intervention |
| Finer N, James WPT, Kopelman PG, Lean MEJ, Williams G. One-year treatment of obesity: a randomized, double-blind, placebo-controlled, multicentre study of orlistat, a gastrointestinal lipase inhibitor. <i>Int J Obes</i> 2000;24:306–13. | Pharmacological intervention |
| Farrell J. Long-term management of obesity in primary care: the role of orlistat (Xenical). <i>Obes Res</i> 1997; 5(Suppl 1):10S. | Pharmacological intervention |
| Hauptman J, Lucas C, Boldrin M, Segal KR. Long-term weight loss with orlistat: impact of selection algorithm on outcomes. <i>Obes Res</i> 1999;7(Suppl 1):50S. | Pharmacological intervention |

| | |
|--|------------------------------|
| Hill JO, Hauptman J, Anderson JW, Fujioka K, O'Neil PM, Smith DK, et al. Orlistat, a lipase inhibitor, for weight maintenance after conventional dieting: a 1-y study. <i>Am J Clin Nutr</i> 1999;69:1108–16. Anderson JW, on behalf of the Orlistat Weight Maintenance Study Group. Prevention of weight regain after conventional dieting: a 1-year study with orlistat (Xenical), a new gastrointestinal lipase inhibitor. <i>Obes Res</i> 1997;5(Suppl 1):S2. | Pharmacological intervention |
| Hollander PA, Elbein SC, Hirsch IB, Kelley D, McGill J, Taylor T, et al. Role of orlistat in the treatment of obese patients with type 2 diabetes. A 1-year randomized double-blind study. <i>Diabetes Care</i> 1998; 21:1288–94. | Pharmacological intervention |
| Lindgarde F, on behalf of the Orlistat Swedish Multimorbidity Study Group. The effect of orlistat on body weight and coronary heart disease risk profile in obese patients: the Swedish Multimorbidity Study. <i>J Intern Med</i> 2000;248:245–54. Lindgarde F. Orlistat improves coronary heart disease in high-risk obese population: the Swedish Multimorbidity Study. <i>Obes Res</i> 1999;7:70. | Pharmacological intervention |
| Toomvliet AC, Pijl H, Frolich M, Westendorp RGJ, Meinders AE. Insulin and leptin concentrations in obese humans during long-term weight loss. <i>Neth J Med</i> 1997; 51:96–102. | Pharmacological intervention |
| Sjostrom L, Rissanen A, Andersen T, Boldrin M, Golay A, Koppeschaar HP, et al. Randomised placebo-controlled trial of orlistat for weight loss and prevention of weight regain in obese patients. European Multicentre Orlistat Study Group. <i>Lancet</i> 1998;352:167–72. Franson K, Rossner S. Fat intake and food choices during weight reduction with diet, behavioural modification and a lipase inhibitor. <i>J Intern Med</i> 2000;247:607–14. Karhunen L, Franssila-Kallunki A, Rissanen P, Valve R, Kolehmainen M, Rissanen A, et al. Effect of orlistat treatment on body composition and resting energy expenditure during a two-year weight-reduction programme in obese Finns. <i>Int J Obes</i> 2000;24:1567–72. Rissanen P, Vahtera E, Krusius T, Uusitupa M, Rissanen A. Weight change and blood coagulability and fibrinolysis in healthy obese women. <i>Int J Obes</i> 2001; 25:212–18. Vidgren HM, Agren JJ, Valve RS, Karhunen LJ, Rissanen AM, Uusitupa ML. The effect of orlistat on the fatty acid composition of serum lipid fractions in obese subjects. <i>Clin Pharmacol Ther</i> 1999;66:315–22. | Pharmacological intervention |
| Apfelbaum M, Vague P, Ziegler O, Hanotin C, Thomas F, Leutenegger E. Long-term maintenance of weight loss after a very-low-calorie diet: a randomized blinded trial of the efficacy and tolerability of sibutramine. <i>Am J Med</i> 1999;106:179–84. | Pharmacological intervention |
| McMahon FG, Fujioka K, Singh BN, Mendel CM, Rowe E, Rolston K, et al. Efficacy and safety of sibutramine in obese white and African patients with hypertension. A 1-year, double-blind, placebo-controlled, multicenter trial. <i>Arch Intern Med</i> 2000; 160:2185–91. Fujioka K, McMahon FG, Mendel CM, Rowe E, Mooradian AD. Efficacy and safety of sibutramine in promoting and maintaining weight loss in obese African-Americans and caucasians with hypertension controlled by calcium channel blockers. <i>Obes Res</i> 1999; 7(Suppl 1):69S. | Pharmacological intervention |
| Smith IG, on behalf of the members of the Sibutramine Clinical Study 1047 Team, Goulder MA. Randomized placebo-controlled trial of long-term treatment with sibutramine in mild to moderate obesity. <i>J Fam Pract</i> 2001;50:505–12. Jones SP, Smith IG, Kelly F, Gray JA. Long term weight loss with sibutramine. <i>Int J Obes</i> 1995;19:41. Smith IG. Long-term weight loss with sibutramine, a once-daily serotonin and norepinephrine reuptake inhibitor. <i>Obes Res</i> 1997;5(Suppl 1):80S. | Pharmacological intervention |
| James WPT, Astrup A, Finer N, Hilsted J, Kopelman P, Rossner S, et al. Effect of sibutramine on weight maintenance after weight loss: a randomised trial. <i>Lancet</i> 2000;356:2119–25. Astrup A, Finer N, Hansen DL, Toubro S, Goulder M, Kopelman P, et al. Initial weight loss response to sibutramine predicts 2 yrs outcome in STORM. <i>Int J Obes</i> 2001;25(Suppl 2):S104. Hansen D, Astrup A, Toubro S, Finer N, Kopelman P, Hilsted J, et al., for the STORM Study Group. Predictors of weight loss and maintenance during 2 years of treatment by sibutramine in obesity. Results from the European multi-centre STORM trial. <i>Int J Obes</i> 2001; 25:496–501. James P, Astrup A, Finer N, Hilsted J, Kopelman P, Rossner S, et al. Sibutramine Trial in Obesity Reduction and Maintenance (STORM). <i>Obes Res</i> 1999;7:50. Mertens I, Wauters M, Peiffer F, Van de Sompel M, Van der Planken B, Corthouts B, et al. A 2 year combined weight loss program with a hypocaloric diet, sibutramine and physical activity increases antithrombin III levels in obese subjects. <i>Obes Res</i> 1999;7:125. Toubro S, Hansen DL, Hilsted JC, Porsborg PA, Astrup AV, for the STORM Study Group. Effekt af sibutramin til vægtafsvalgehjælpelse. En randomiseret klinisk kontrolleret undersøgelse. <i>Ugeskr Laeger</i> 2001;163:2935–40. | Pharmacological intervention |
| Bitsch M, Skrumager BK. Femoxetine in the treatment of obese patients in general practice. <i>Int J Obes</i> 1987; 11:183–90. | Pharmacological intervention |
| Breum L, Bjerre U, Bak JF, Jacobsen S, Astrup A. Long-term effects of fluoxetine on glycemic control in obese patients with non-insulin-dependent diabetes mellitus or glucose intolerance: influence on muscle glycogen synthase and insulin receptor kinase activity. <i>Metabolism</i> 1995;44:1570–6. | Pharmacological intervention |
| Goldstein DJ, Rampey AH, Enas GG, Potvin JH, Fludzinski LA, Levine LR. Fluoxetine: a randomized clinical trial in the treatment of obesity. <i>Int J Obes</i> 1994; 18:129–35. Darga LL, Lucas CP, Carrol-Michels L. The effect of fluoxetine, a serotonin-uptake inhibitor, on weight loss in obese subjects. <i>Am J Clin Nutr</i> 1988;47:764. Darga LL, Carroll-Michals L, Botsford SJ, Lucas CP. Fluoxetine's effect on weight loss in obese subjects. <i>Am J Clin Nutr</i> 1991;54:321–5. Marcus MD, Wing RR, Ewing L, Kern E, McDermott M, Gooding W. A double-blind, placebo-controlled trial of fluoxetine plus behavior modification in the treatment of obese binge-eaters and non-binge-eaters. <i>Am J Psychiatry</i> 1990;147:876–81. | Pharmacological intervention |
| O'Kane M, Wiles PG, Wales JK. Fluoxetine in the treatment of obese type 2 diabetic patients. <i>Diabet Med</i> 1994;11:105–10. | Pharmacological intervention |
| Wadden TA, Bartlett SJ, Foster GD, Greenstein RA, Wingate BJ, Stunkard AJ, et al. Sertraline and relapse prevention training following treatment by very-low-calorie diet: a controlled clinical trial. <i>Obes Res</i> 1995; 3:549–57. Foster GD, Wadden TA, Peterson FJ, Leitizia KA, Bartlett SJ, Conill AM. A controlled comparison of three very-low-calorie diets: effects on weight, body composition, and symptoms. <i>Am J Clin Nutr</i> 1992;55:811–17. | Pharmacological intervention |
| Fontbonne A, Andre P, Eschwege E. BIGPRO (Biguanides and the Prevention of the Risk of Obesity): study design. A randomized trial of metformin versus placebo in the correction of the metabolic abnormalities associated with insulin resistance. <i>Diabete Metabolisme</i> 1991;17:249–54. Bard JM, Charles MA, Juhan-Vague I, Vague P, Andre P, Safar M, et al. Accumulation of triglyceride-rich lipoprotein in subjects with abdominal obesity: the biguanides and the prevention of the risk of obesity (BIGPRO) I study. <i>Arterioscler Thromb Vasc Biol</i> 2001; 21:407–14. Charles MA, Morange P, Eschwege E, Andre P, Vague P, Juhan-Vague I. Effect of weight change and metformin on fibrinolysis and the von Willebrand factor in obese nondiabetic subjects: the BIGPROI Study. Biguanides and the Prevention of the Risk of Obesity. <i>Diabetes Care</i> 1998;21:1967–72. Fontbonne A, Charles MA, Juhan-Vague I, Bard JM, Andre P, Isnard F, et al. The effect of metformin on the metabolic abnormalities associated with upper-body fat distribution. BIGPRO Study Group. <i>Diabetes Care</i> 1996; 19:920–6. | Pharmacological intervention |

| | |
|--|------------------------------|
| <p>UK Prospective Diabetes Study (UKPDS) Group. Effect of intensive blood-glucose control with metformin on complications in overweight patients with type 2 diabetes (UKPDS 34) [published erratum in Lancet 1998;352:1557]. Lancet 1998;352:854–65.</p> <p>Clarke P, Gray A, Adler A, Stevens R, Raikou M, Cull C, et al. Cost-effectiveness analysis of intensive blood-glucose control with metformin in overweight patients with type II diabetes (UKPDS no. 51). Diabetologia 2001; 44:298–304.</p> <p>Turner RC, Mann JI, Keeton G. UK prospective study of therapies of maturity-onset diabetes. I. Effect of diet, sulphonylurea, insulin or biguanide therapy on fasting plasma glucose and body weight over one year. Diabetologia 1983;24:404–11.</p> <p>Turner RC, Holman RR, Matthews DR, Oakes SF, Bassett PA, Stratton IM, et al. UK Prospective Diabetes Study (UKPDS). VIII. Study design, progress and performance. Diabetologia 1991;34:877–90.</p> <p>Turner R, Murchison L, Wright AD, Oakley N, Kohner E, Hayes R, et al. United Kingdom prospective diabetes study 24: A 6-year, randomized, controlled trial comparing sulphonylurea, insulin, and metformin therapy in patients with newly diagnosed type 2 diabetes that could not be controlled with diet therapy. Ann Intern Med 1998;128:165–75.</p> <p>Turner RC, Cull CA, Frighi V, Holman RR. Glycemic control with diet, sulphonylurea, metformin, or insulin in patients with type 2 diabetes mellitus: progressive requirement for multiple therapies (UKPDS 49). UK Prospective Diabetes Study (UKPDS) Group. JAMA 1999;281:2005–12.</p> <p>UK Prospective Diabetes Study Group. UK prospective diabetes study 16. Overview of 6 years' therapy of type II diabetes: a progressive disease. [published erratum in Diabetes 1996;45:1655]. Diabetes 1995;44:1249–58.</p> <p>United Kingdom Prospective Diabetes Study (UKPDS). 13: Relative efficacy of randomly allocated diet, sulphonylurea, insulin, or metformin in patients with newly diagnosed non-insulin dependent diabetes followed for three years. BMJ 1995;310:83–8.</p> <p>Wright AD, Cull CA, Holman RR, Turner RC. UKPDS 28: a randomized trial of efficacy of early addition of metformin in sulphonylurea-treated type 2 diabetes. Diabetes Care 1998;21:87–92.</p> | Pharmacological intervention |
| <p>Chiasson JL, Josse RG, Hunt JA, Palmason C, Rodger NW, Ross SA, et al. The efficacy of acarbose in the treatment of patients with non-insulin-dependent diabetes mellitus. Ann Intern Med 1994;121:928–35.</p> <p>Rodger NW, Chiasson J-L, Josse RG, Hunt JA, Palmason C, Ross SA, et al. Clinical experience with acarbose: results of a Canadian multicentre study. Clin J Invest Med 1995;18:318–24.</p> <p>Wolever TM, Chiasson JL, Josse RG, Hunt JA, Palmason C, Rodger NW, et al. Small weight loss on long-term acarbose therapy with no change in dietary pattern or nutrient intake of individuals with non-insulin-dependent diabetes. Int J Obes Relat Metab Disord 1997;21:756–63.</p> <p>Wolever TMS, Chiasson J-L, Josse RG, Hunt JA, Palmason C, Rodger NW, et al. No relationship between carbohydrate intake and effect of acarbose on HbA1c or gastrointestinal symptoms in type 2 diabetic subjects consuming 30–60% of energy from carbohydrate. Diabetes Care 1998;21:1612–18.</p> <p>Wolever TMS, Radmard R, Chiasson J-L, Hunt JA, Josse RG, Palmason C, et al. One-year acarbose treatment raises fasting serum acetate in diabetic patients. Diabet Med 1995;12:164–72.</p> | Pharmacological intervention |
| Ho GY, Blaufox MD, Wassertheil-Smoller S, Oberman A, Langford H. Plasma renin predicts success of antihypertensive drug withdrawal. Am J Hypertens 1994; 7:679–84. | no CVD primary prevention |
| Thaler L, Wassertheil-Smoller S, Blaufox MD, Oberman A, Langford HG. Effect of withdrawal of antihypertensive drug on depressive mood. Am J Hypertens 1993;6:1055–62. | no CVD primary prevention |
| Hankey CR, Leslie WS, Currall JE, Matthews D, Lean ME. Weight change after myocardial infarction: statistical perspectives for future study. J Hum Nutr Dietet 2002;15:439–44. | no CVD primary prevention |
| Hankey CR, Leslie WS, Lean MEJ. An energy deficit approach to weight management during nutritional counselling post myocardial infarction. Proc Nutr Soc 2001;60:33A. | no CVD primary prevention |
| Leslie WS, Hankey CR, Currall JE, Matthews D, Lean ME. The impact of a transferable programme of intensified nutritional counselling in cardiac rehabilitation following myocardial infarction. Proc Nutr Soc 2000;59: 69A. | no CVD primary prevention |
| Canner PL, Borhani NO, Oberman A, Cutler J, Prineas RJ, Langford H, et al. The Hypertension Prevention Trial: assessment of the quality of blood pressure measurements. Am J Epidemiol 1991; 134:379–92. | No intervention |
| Diabetes Prevention Program Research Group. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. N Engl J Med 2002; 346: 393–403. | Pharmacological intervention |
| Sjöström L, Rissanen A, Andersen T, Boldrin M, Golay A, Koppeschaar HP, Krempf M. Randomised placebo-controlled trial of orlistat for weight loss and prevention of weight regain in obese patients. Lancet 1998; 352: 167–173. | Pharmacological intervention |
| Davidson MH, Hauptman J, DiGirolamo M, Foreyt JP, Halsted CH, Heber D, Heimburger DC, Lucas CP, Robbins DC, Chung J, Heymsfield SB. Weight controlled and risk factor reduction in obese subjects treated for 2 years with orlistat. A randomized controlled trial. JAMA 1999; 281: 235–242. | Pharmacological intervention |
| Kelley DE, Bray GA, Pi-Sunyer FX, Klein S, Hill J, Miles J, Hollander P. Clinical efficacy of orlistat therapy in overweight and obese patients with insulin-treated type 2 diabetes. Diabetes Care 2002; 25: 1033–1041. | Pharmacological intervention |
| Miles JM, Leiter L, Hollander P, Wadden T, Anderson JW, Doyle M, Foreyt J, Aronne L, Klein S. Effect of orlistat in overweight and obese patients with type 2 diabetes treated with metformin. Diabetes Care 2002; 25: 1123–1128. | Pharmacological intervention |
| Bakris G, Calhoun D, Hellman C, Dolker, Kingma I, on behalf of the orlistat and resistant hypertension investigators. Orlistat improves blood pressure control in obese subjects with treated but inadequately controlled hypertension. J Hypertens 2002; 20: 2257–2267. | Pharmacological intervention |
| Hanefeld M, Sache G. The effects of orlistat on body weight and glycaemic control in overweight patients with type 2 diabetes: a randomized placebo-controlled trial. Diabetes Obes Metabol 2002; 4: 415–423. | Pharmacological intervention |
| McMahon FG, Weinstein SP, Rowe E, Ernst KR, Johnson F, Fujioka K, the Sibutramine in Hypertension Clinical Study Group. Sibutramine is safe and effective for weight loss in obese patients whose hypertension is well controlled with angiotensin-converting enzyme inhibitors. J Hum Hypertens 2002; 16: 5–11. | Pharmacological intervention |
| McNulty SJ, Ur E, Williams G, for the Multicenter Sibutramine Study Group. A randomized trial of sibutramine in the management of obese type 2 diabetic patients treated with metformin. Diabetes Care 2003; 26: 125–131. | Pharmacological intervention |
| Lechner GW, Elliot DW. Comparison of weight loss after gastric exclusion and partitioning. Arch Surg 1983; 118: 685–692. | Surgical Intervention |
| Capella JF, Capella RF. The weight reduction operation of choice: vertical banded gastroplasty or gastric bypass? Am J Surg 1996; 171: 74–79. | Surgical Intervention |
| Sapala JA, Wood MH, Sapala MA, Flake Jr TM. Marginal ulcer after gastric bypass: a prospective 3-year study of 173 patients. Obes Surg 1998; 8: 505–516. | Surgical Intervention |
| Sjöström CD, Lissner L, Wedel H, Sjöström L. Reduction in incidence of diabetes, hypertension and lipid disturbances after intentional weight loss induced by bariatric surgery: the SOS Intervention Study. Obes Res 1999; 7: 477–484. | Surgical Intervention |

| | |
|---|------------------------------|
| Torgerson JS, Sjöström L. The Swedish Obese Subjects (SOS) Study: Rationale and results. <i>Int J Obes Relat Metab Disord</i> 2001; 25 (Suppl 1): S2–S4. | Surgical Intervention |
| Sjöström CD, Peltonen M, Wedel H, Sjöström L. Differential long-term effects of intentional weight loss on diabetes and hypertension. <i>Hypertension</i> 2000; 36: 20–25. | Surgical Intervention |
| Lavig T, Haffner JFW, Kaarsen R, Nygaard K, Stadaas JO. Gastric banding for morbid obesity: five years follow-up. <i>Int J Obes Relat Metab Disord</i> 1993; 17: 453–457. | Surgical Intervention |
| Sugerman HJ, Londregan GL, Kellum JM, Wolf L, Liszka T, Engle KM, Birkenhauer R, Starkey JV. Weight loss with vertical banded gastroplasty and Roux-Y gastric bypass for morbid obesity with selective versus random assignment. <i>Am J Surg</i> 1989; 157: 93–102. | Surgical Intervention |
| Hall JC, Watts JM, O'Brien PE, Dunstan RE, Walsh JF, Slavotinek AH, Elmslie RG. Gastric surgery for morbid obesity. The Adelaide Study. <i>Ann Surg</i> 1990; 4: 419–427. | Surgical Intervention |
| Brolin RE, Bradley LJ, Wilson AC, Cody RP. Lipid risk profile and weight stability after gastric restrictive operations for morbid obesity. <i>J Gastrointest Surg</i> 2000; 4: 464–469. | Surgical Intervention |
| Pontiroli AE, Pizzocri P, Librenti MC, Vedani P, Marchi M, Cucchi E, Orena C, Paganelli M, Giacomelli M, Ferla G, Folli F. Laparoscopic adjustable banding for the treatment of morbid (grade 3) obesity and its metabolic complications: a three-year study. <i>J Clin Endocrinol Metab</i> 2002; 87: 3361–3555. | Surgical Intervention |
| Ruvolo GG, Greco ES, Speziale GD, NMMarino B. Effects of amlodipine and hypocaloric diet on the left ventricular mass in hypertensive obese patients [in Italian]. <i>Minerva Cardioangiol</i> 1994; 42 (6): 289–292. | Pharmacological intervention |
| Norris S, L, Zhang X, Avenell A, Gregg E, Schmid C, H, Lau J. Pharmacotherapy for weight loss in adults with type 2 diabetes mellitus. <i>Cochrane database of systematic reviews</i> (Online) Jan 2005, (1) : CD004096- | Pharmacological intervention |
| Padwal R, Li S, K, Lau D, C, W. Long-term pharmacotherapy for obesity and overweight. <i>Cochrane database of systematic reviews</i> (Online) Jan 2004, (3) : CD004094- | Pharmacological intervention |
| Padwal R, Li S, K, Lau D, C, W. Long-term pharmacotherapy for overweight and obesity: a systematic review and meta-analysis of randomized controlled trials. <i>International journal of obesity and related metabolic disorders : journal of the International Association for the Study of Obesity</i> Dec 2003, 27 (12) : 1437-46 | Pharmacological intervention |
| Rucker, Diana; Padwal, Raj; Li, Stephanie, K; Curioni, Cintia; Lau, David, C, W. Long term pharmacotherapy for obesity and overweight: updated meta-analysis. <i>BMJ (Clinical research ed.)</i> Dec 2007, 335 (7631) : 1194-9 | Pharmacological intervention |
| Emerging Risk Factors Collaboration; Wormser, David; Kaptoge, Stephen; Di Angelantonio, Emanuele; Wood, Angela, M; Pennells, Lisa; Thompson, Alex; Sarwar, Nadeem; Kizer, Jorge, R; Lawlor, Debbie, A; Nordestgaard, Børge, G; Ridker, Paul; Salomaa, Veikko; Stevens, June; Woodward, Mark; Sattar, Naveed; Collins, Rory; Thompson, Simon, G; Whitlock, Gary; Danesh, John. Separate and combined associations of body-mass index and abdominal adiposity with cardiovascular disease: collaborative analysis of 58 prospective studies. <i>Lancet</i> Mar 2011, 377 (9771) : 1085-95 | No intervention |
| Lenz, Matthias; Richter, Tanja; Mühlhauser, Ingrid. The morbidity and mortality associated with overweight and obesity in adulthood: a systematic review. <i>Deutsches Ärzteblatt international</i> Oct 2009, 106 (40) : 641-8 | No intervention |
| Prospective Studies Collaboration; Whitlock, Gary; Lewington, Sarah; Sherliker, Paul; Clarke, Robert; Emberson, Jonathan; Halsey, Jim; Qizilbash, Nawab; Collins, Rory; Peto, Richard. Body-mass index and cause-specific mortality in 900 000 adults: collaborative analyses of 57 prospective studies. <i>Lancet</i> Mar 2009, 373 (9669) : 1083-96 | No intervention |

APPENDIX 9 : 34 excluded references for 2015 NICE guideline: Preventing excess weight gain:

| Excluded references for 2015 NICE | Reason for exclusion |
|--|------------------------------|
| USDA 2010u (++) U.S. Department of Agriculture. Is intake of sugar-sweetened beverages associated with adiposity in children? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010u. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250242&highlight=sugar&home=1 . | Pediatric population |
| Smithers et al. 2011 (+) Smithers LG, Golley RK, Brazionis L et al. Characterizing whole diets of young children from developed countries and the association between diet and health: a systematic review. <i>Nutrition Reviews</i> . 2011;69(8):449-67. | Pediatric population |
| Kuhl et al. 2012 (-) Kuhl ES, Clifford LM, Stark LJ. Obesity in preschoolers: behavioral correlates and directions for treatment. <i>Obesity</i> . 2012 20110714 [Epub ahead of print];20(1):3-29. | Pediatric population |
| Larson and Story 2013 (+) Larson N, Story M. A review of snacking patterns among children and adolescents: what are the implications of snacking for weight status? <i>Childhood Obesity</i> . 2013 20130307 [Epub ahead of print];9(2):104-15 | Pediatric population |
| Department of Health 2008 (+) | Not Found/qualitative review |
| Boylan et al. 2012 (+) | Not Found/qualitative review |
| NHS Somerset 2011 (+) | Not Found/qualitative review |
| Marno 2011 (+) | Not Found/qualitative review |
| Crocker et al. 2009 (++) | Not Found/qualitative review |
| te Velde et al. 2009 (+) | Not Found |
| Nelson et al. 2011 (+) Nelson TF, Stovitz SD, Thomas M et al. Do youth sports prevent pediatric obesity? A systematic review and commentary. <i>Current Sports Medicine Reports</i> . 2011;10(6):360-70. | No intervention |
| Schoeppe et al. 2013 (++) Schoeppe S, Duncan MJ, Badland H et al. Associations of children's independent mobility and active travel with physical activity, sedentary behaviour and weight status: a systematic review. <i>Journal of Science & Medicine in Sport</i> . 2013;16(4):312-9. | Pediatric population |
| Laframboise and Degrauw 2011 (+) Laframboise MA, Degrauw C. The effects of aerobic physical activity on adiposity in school-aged children and youth: a systematic review of randomized controlled trials. <i>Journal of the Canadian Chiropractic Association</i> . 2011;55(4):256-68. | Pediatric population |
| te Velde et al. 2012 (+) te Velde SJ, van Nassau F, Uijtdewilligen L et al. Energy balance-related behaviours associated with overweight and obesity in preschool children: a systematic review of prospective studies. <i>Obesity Reviews</i> . 2012;13 Suppl 1:56-74. | Pediatric population |
| Leblanc et al. 2012 (++) Leblanc AG, Spence JC, Carson V et al. Systematic review of sedentary behaviour and health indicators in the early years (aged 0-4 years). <i>Applied Physiology, Nutrition, & Metabolism = Physiologie Appliquee, Nutrition et Metabolisme</i> . 2012;37(4):753-72. | Pediatric population |
| Tremblay et al. 2011 (++) Tremblay MS, Leblanc AG, Kho ME et al. Systematic review of sedentary behaviour and health indicators in school-aged children and youth. <i>International Journal of Behavioral Nutrition & Physical Activity</i> . 2011 20110921 [Epub ahead of print];8:98. | Pediatric population |
| Wahi et al. 2011 (++) Wahi G, Parkin PC, Beyene J et al. Effectiveness of interventions aimed at reducing screen time in children: a systematic review and meta-analysis of randomized controlled trials. <i>Archives of Pediatrics & Adolescent Medicine</i> . 2011 20110704 [Epub ahead of print];165(11):979-86. | Pediatric population |
| USDA 2010u (++) U.S. Department of Agriculture. Is intake of sugar-sweetened beverages associated with adiposity in children? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010u. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250242&highlight=sugar&home=1 . | Pediatric population |
| USDA 2010s (++) U.S. Department of Agriculture. Is intake of 100% fruit juice associated with adiposity in children? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010s. Available from: | Pediatric population |
| USDA 2010r (+) U.S. Department of Agriculture. Is intake of calcium and/or dairy (milk and milk products) related to adiposity in children? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010r | Pediatric population |
| USDA 2010t (++) U.S. Department of Agriculture. Is intake of fruits and vegetables associated with adiposity in children? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010t. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250239&highlight=fruits&home=1 . | Pediatric population |
| USDA 2010n (+) | Not Found |
| Kastorini et al. 2011 (+) | Not Found |
| USDA 2010y (++) U.S. Department of Agriculture. Is intake of dietary fat associated with adiposity in children? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010y. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250240&highlight=dietary%20fat&home=1 . | Pediatric population |
| Schwingshackl and Hoffmann 2013 (++) | Not Found |
| USDA 2010w (++) U.S. Department of Agriculture. Is intake of dietary fiber related to adiposity in children? (DGAC 2010). Washington (DC): U.S. Department of Agriculture; 2010w. Available from: http://www.nel.gov/conclusion.cfm?conclusion_statement_id=250245 . | Pediatric population |
| Brown et al. 2010 (-) Brown RJ, de Banate MA, Rother KL. Artificial sweeteners: a systematic review of metabolic effects in youth. <i>International Journal of Pediatric Obesity</i> . 2010;5(4):305-12. | Pediatric population |
| Rosenheck et al. 2008 (+) | Not Found |
| Hammons and Fiese 2011 (+) Hammons AJ, Fiese BH. Is frequency of shared family meals related to the nutritional health of children and adolescents? <i>Pediatrics</i> . 2011 20110502 [Epub ahead of print];127(6):e1565-e1574. | Pediatric population |
| USDA 2010f (+) | Not Found |
| Larson and Story 2013 (+) Larson N, Story M. A review of snacking patterns among children and adolescents: what are the implications of snacking for weight status? <i>Childhood Obesity</i> . 2013 20130307 [Epub ahead of print];9(2):104-15 | Pediatric population |
| Ekelund et al. 2012 (+) Ekelund U, Luan J, Sherar LB et al. Moderate to vigorous physical activity and sedentary time and cardiometabolic risk factors in children and adolescents. <i>JAMA</i> . 2012;307(7):704-12. | Pediatric population |
| Janssen and Leblanc 2010 (+) Janssen I, Leblanc AG. Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. <i>International Journal of Behavioral Nutrition & Physical Activity</i> . 2010 [Epub ahead of print];7:40. | Pediatric population |
| Chen et al. 2008 (+) Chen X, Beydoun MA, Wang Y. Is sleep duration associated with childhood obesity? A systematic review and meta-analysis. <i>Obesity</i> . 2008;16(2):265-74. | Pediatric population |



FACULTÉ
DE MÉDECINE &
SCIENCES DE LA SANTÉ

IMPRIME 3 – AUTORISATION D'IMPRIMER

THESE DE DOCTORAT EN MEDECINE

INTERNE

Madame / Monsieur VIMFLES Nicolas
Inscrit-e en DES de Médecine Générale

Titre définitif de la thèse soutenue :

Projet SPICES :

- **Sélection parmi 5 recommandations de bonne pratique pour la prévention des maladies cardiovasculaires via les procédures AGREE II et ADAPTE.**
- **Identification des références bibliographiques des recommandations internationales, « 2013 AHA/ACC/TOS : Guideline for the Management of Overweight and Obesity in Adults » et « 2015 NICE guideline : Preventing excess weight gain », à intégrer dans la matrice de recherche de l'étude SPICES.**

ACCORD DU PRESIDENT DU JURY DE THESE SUR L'IMPRESSION DE LA THESE

OUI : ☐

☐

La présente autorisation d'imprimer sa thèse est délivrée à l'interne susmentionné.

A Podgorica (Montenegro) le 10 octobre 2018.

Le directeur de l'UFR de médecine et des
sciences de la santé de Brest


C. BERTHOU

Le président du jury de thèse


Dr. Jean-François de Rudder
Président du jury de thèse
10/10/2018

VIMFLES (Nicolas) – Projet SPICES :

- **Sélection parmi 5 recommandations de bonne pratique pour la prévention des maladies cardiovasculaires via les procédures AGREE II et ADAPTE.**
- **Identification des références bibliographiques des recommandations internationales, « 2013 AHA/ACC/TOS : Guideline for the Management of Overweight and Obesity in Adults » et « 2015 NICE guideline : Preventing excess weight gain », à intégrer dans la matrice de recherche de l'étude SPICES.**

Th. : Méd. : Brest 2018

ABSTRACT:

Introduction:

Cardiovascular diseases (CVD) are the first cause of mortality in the world. Despite health-care prevention policies, the global burden of CVD increases. The SPICES project was created to implement innovative interventions about CVD prevention in Europe and Sub-Saharan Africa. The first step was a systematic review of the international recommendations on the topic using the ADAPTE procedure.

Method:

ADAPTE Step 11 assessed quality of 5 guidelines with the AGREE II Instrument. Inclusion was based on an overall assessment score ≥ 5 . ADAPTE Step 13 was extraction of recommendations from “2013 AHA/ACC/TOS: Guideline for the Management of Overweight and Obesity in Adults” and “2015 NICE guideline: Preventing excess weight gain”.

Recommendations were included if they were A or B level of evidence, 1++, 1+, 2++, 2+, Strong or Class 1.

Recommendations were excluded if they focused on secondary or tertiary CVD prevention, diagnostic procedures, pharmacological or surgical treatments. References of selected recommendations were gathered in a matrix. If no grading of recommendations, references were included if they were randomized controlled trials or cohort interventional surveys.

Results:

2 guidelines were included and 3 excluded. Regarding ADAPTE step 13, 17 recommendations and 316 references were selected and extracted to the research matrix.

Conclusion:

A great disparity in the quality of guidelines and references was found. Main limitation was lack of time. The research group had to stop at a draft matrix. The next step will be finalization of the matrix to extract interventions and implementation from references.

MOTS CLES :

FAMILY MEDICINE; CARDIOVASCULAR DISEASES; PRIMARY PREVENTION; CLINICAL PRACTICE GUIDELINE

JURY :

Président : Pr LE RESTE

Membres : Dr DERRIENNIC

Dr BARAIS

Dr LE GOFF

DATE DE SOUTENANCE : 25 Octobre 2018

ADRESSE DE L'AUTEUR : NC