

Appendix A – Methodology documents CAPOC

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1. Search strings in PubMed

The search strings were defined based on mesh-terms and search words used in relevant studies and publications, that we knew about in advance, and with inputs from the project group consisting of public health prevention experts from the Nordic Cancer Societies.

Scheme 1: Tax and fiscal policies

| | | |
|--|-----|---|
| Mesh terms #1 | AND | Mesh terms #3 |
| "Body Weight"[Mesh] | | "Fiscal Policy"[Mesh] OR "Taxes"[Mesh] OR "Nutrition Policy/economics"[Mesh] |
| OR | | OR |
| Search terms #2 | | Search terms #4 |
| Obes*[Title/Abstract] OR overweight[Title/Abstract] OR "Pediatric obes*"[Title/Abstract] OR "body weight"[Title/Abstract] OR "Pre overweight"[Title/Abstract] OR "pre obes*"[Title/Abstract] | | "Fiscal polic*"[Title/Abstract] OR Tax[Title/Abstract] OR "Sugar tax"[Title/Abstract] OR "Sugar levy"[Title/Abstract] OR "Sugar-Sweetened beverage tax"[Title/Abstract] OR "Soda tax"[Title/Abstract] OR "fat tax"[Title/Abstract] OR "food subsid*"[Title/Abstract] OR "import tariff*"[Title/Abstract] OR "Health tax"[Title/Abstract] OR "unhealthy food tax"[Title/Abstract] OR "tax deduction"[Title/Abstract] OR "targeted subsid*"[Title/Abstract] OR "tax incentive*"[Title/Abstract] OR "soft drink tax"[Title/Abstract] |

Scheme 2: Marketing

| | | |
|--|--|---|
| Aspect 1) Overweight | AND | Aspect 4) Type of policy |
| Mesh terms #1 | | Mesh terms #5 |
| "Body Weight"[Mesh] | | "Marketing"[Mesh] OR "Mass Media"[Mesh] OR "Social Media"[Mesh] |
| OR | | OR |
| Search terms #2 | | Search terms #6 |
| Obes*[Title/Abstract] OR overweight[Title/Abstract] OR "Pediatric obes*"[Title/Abstract] OR "body weight"[Title/Abstract] OR "Pre overweight"[Title/Abstract] OR "pre obes*"[Title/Abstract] | "Marketing"[Title/Abstract] OR "Social Marketing"[Title/Abstract] OR "Advertis*"[Title/Abstract] OR "Mass Media"[Title/Abstract] OR "Marketing standard*"[Title/Abstract] OR "Advertising standard*"[Title/Abstract] OR "Food marketing"[Title/Abstract] OR "Food advertis*"[Title/Abstract] OR "Marketing | |

| | | |
|--|--|---|
| | | restriction*"[Title/Abstract] OR "marketing regulat*"[Title/Abstract] OR "Television marketing"[Title/Abstract] OR "broadcast marketing"[Title/Abstract] OR "digital marketing"[Title/Abstract] OR "Food promotion"[Title/Abstract] OR "Social media marketing"[Title/Abstract] |
|--|--|---|

Scheme 3: Labelling

| | | |
|--|-----|--|
| Aspect 1) Overweight | AND | Aspect 4) Type of policy |
| Mesh terms #1 | | Mesh terms #7 |
| "Body Weight"[Mesh] | | "Food Labeling"[Mesh] OR "Nutritive Value"[Mesh] |
| OR | | OR |
| Search terms #2 | | Search terms #8 |
| Obes*[Title/Abstract] OR overweight[Title/Abstract] OR "Pediatric obes*"[Title/Abstract] OR "body weight"[Title/Abstract] OR "Pre overweight"[Title/Abstract] OR "pre obes*"[Title/Abstract] | | "Food label*"[Title/Abstract] OR "Food labelling legislat*"[Title/Abstract] OR "Nutritive value*"[Title/Abstract] OR "Nutrient declaration*"[Title/Abstract] OR "nutrition label*"[Title/Abstract] OR "menu label*"[Title/Abstract] OR "nutrient claim*"[Title/Abstract] OR "Front of pack"[Title/Abstract] OR "front of pack label*"[Title/Abstract] OR "Nutrient information"[Title/Abstract] OR "ingredient list*"[Title/Abstract] OR "interpretive front of pack"[Title/Abstract] OR label*[Title/Abstract] OR "Point-of-purchase label*"[Title/Abstract] OR "Calorie label*"[Title/Abstract] OR "Energy label*"[Title/Abstract] |

Scheme 4: Early Childhood prevention

| | | |
|----------------------|-----|---|
| Aspect 1) Overweight | AND | Aspect 4) Type of policy |
| Mesh terms #1 | | Mesh terms #9 |
| "Body Weight"[Mesh] | | "Breast Feeding"[Mesh] OR "Maternal Health"[Mesh] OR "Maternal Nutritional Physiological Phenomena"[Mesh] OR "Infant Food"[Mesh] OR "Child Nutritional Physiological Phenomena"[Mesh] OR "Epigenesis, Genetic" [Mesh] OR "Obesity/genetics"[Mesh] |
| OR | | OR |
| Search terms #2 | | Search terms #10 |

| | | |
|--|-----|--|
| Obes*[Title/Abstract] OR overweight[Title/Abstract] OR "Pediatric obes*"[Title/Abstract] OR "body weight"[Title/Abstract] OR "Pre overweight"[Title/Abstract] OR "pre obes*"[Title/Abstract] | AND | "Breast Feed*"[Title/Abstract] OR "Maternal Health"[Title/Abstract] OR "Maternal Nutritional Physiological Phenomena"[Title/Abstract] OR "Infant Food"[Title/Abstract] OR "Infant Nutritional Physiological Phenomena"[Title/Abstract] OR "Child Nutritional Physiological Phenomena"[Title/Abstract] OR " infant malnutrition"[Title/Abstract] OR "child malnutrition"[Title/Abstract] OR "successful breastfeed*"[Title/Abstract] OR "promotion breastfeed*"[Title/Abstract] OR "Maternal nutrition"[Title/Abstract] OR "Epigenesis genetic*"[Title/Abstract] OR "Nutritional epigenetic*"[Title/Abstract] OR "Obesity genetic*"[Title/Abstract] |
|--|-----|--|

Scheme 5: Food reformulation

| | | |
|--|-----|--|
| Aspect 1) Overweight | AND | Aspect 4) Type of policy |
| Mesh terms #1 | | Mesh terms #11 |
| "Body Weight"[Mesh] | | "Nutritive Value"[Mesh] OR "Food Industry/legislation and jurisprudence"[Mesh] OR "Food Supply/legislation and jurisprudence"[Mesh] OR "Food/standards"[Mesh] OR "Food, Formulated"[Mesh] OR "Portion Size" [Mesh] OR "Serving Size" [Mesh] |
| OR | | OR |
| Search terms #2 | | Search terms #12 |
| Obes*[Title/Abstract] OR overweight[Title/Abstract] OR "Pediatric obes*"[Title/Abstract] OR "body weight"[Title/Abstract] OR "Pre overweight"[Title/Abstract] OR "pre obes*"[Title/Abstract] | | "Nutritive Value*"[Title/Abstract] OR "Food standard*"[Title/Abstract] OR "Food Formulat*"[Title/Abstract] OR "Food reformulat*"[Title/Abstract] OR "Food content*"[Title/Abstract] OR "Nutritional qualit*"[Title/Abstract] OR "mandatory limit*"[Title/Abstract] OR "food sustainab*"[Title/Abstract] OR "portion size*"[Title/Abstract] OR "Serving size*"[Title/Abstract] OR "Package size*"[Title/Abstract] |

Scheme 6: Availability and affordability

| | | |
|--|-----|---|
| Aspect 1) Overweight | AND | Aspect 4) Type of policy |
| Mesh terms #1 | | Mesh terms #13 |
| "Body Weight"[Mesh] | | "Costs and Cost Analysis"[Mesh] OR "Food Supply"[Mesh] OR "Commerce"[Mesh] OR "Health/economics"[Mesh] OR "Health Status/economics"[Mesh] |
| OR | | OR |
| Search terms #2 | | Search terms #14 |
| Obes*[Title/Abstract] OR overweight[Title/Abstract] OR "Pediatric obes*" [Title/Abstract] OR "body weight"[Title/Abstract] OR "Pre overweight"[Title/Abstract] OR "pre obes*" [Title/Abstract] | | "Costs and Cost Analysis"[Title/Abstract] OR "Food supply" [Title/Abstract] OR "Access to Healthy Food*" [Title/Abstract] OR "Food Insecurit*" [Title/Abstract] OR "Food securit*" [Title/Abstract] OR "Commerce" [Title/Abstract] OR "Price*" [Title/Abstract] OR "Health econom*" [Title/Abstract] OR availab* [Title/Abstract] OR affordab* [Title/Abstract] OR "Assistance program*" [Title/Abstract] OR "Food voucher*" [Title/Abstract] OR "Nutrition assistance*" [Title/Abstract] OR "4 Ps" [Title/Abstract] OR "Four Ps" [Title/Abstract] OR "Promotion*" [Title/Abstract] OR "Space management" [Title/Abstract] OR "Nudg*" [Title/Abstract] OR "Choice architecture*" [Title/Abstract] OR "Willingness to pay" [Title/Abstract] OR "Price sensitivity*" [Title/Abstract] |

Scheme 7: Public standards

| | | |
|----------------------|-----|---|
| Aspect 1) Overweight | AND | Aspect 4) Type of policy |
| Mesh terms #1 | | Mesh terms #15 |
| "Body Weight"[Mesh] | | "Diet/standards"[Mesh] OR "Guideline Adherence"[Mesh] OR "Nutrients/standards"[Mesh] OR "Food/standards"[Mesh] OR "Beverages/standards"[Mesh] OR "Food and Beverages/standards"[Mesh] OR "Health/standards"[Mesh] OR "Public Health/standards"[Mesh] OR "Infant Health/standards"[Mesh] OR "Child Health/standards"[Mesh] OR "Adolescent Health/standards"[Mesh] OR "Health |

| | | |
|--|--|---|
| | | Status/standards"[Mesh] OR "Exercise/legislation and jurisprudence"[Mesh] OR "Exercise/standards"[Mesh] OR "Movement/standards"[Mesh] OR "Physical Education and Training/standards"[Mesh] OR "Curriculum/standards"[Mesh] OR "School Health Services/legislation and jurisprudence"[Mesh] OR "School Health Services/standards"[Mesh] |
| OR | | OR |
| Search terms #2 | | Search terms #16 |
| Obes*[Title/Abstract] OR overweight[Title/Abstract] OR "Pediatric obes*"[Title/Abstract] OR "body weight"[Title/Abstract] OR "Pre overweight"[Title/Abstract] OR "pre obes*"[Title/Abstract] | | "Diet standard*"[Title/Abstract] OR "Guideline adherence"[Title/Abstract] OR "Nutrient standard*"[Title/Abstract] OR "Food standard*"[Title/Abstract] OR "Beverage standard*"[Title/Abstract] OR "Health standard*"[Title/Abstract] OR "Public health standard*"[Title/Abstract] OR "Child health standard*"[Title/Abstract] OR "Exercise standard*"[Title/Abstract] OR "Curriculum standard*"[Title/Abstract] OR "School standard*"[Title/Abstract] OR "Nutrient standard*"[Title/Abstract] OR "Food based standard*"[Title/Abstract] OR "Nutritional guideline*"[Title/Abstract] OR "Diet guideline*"[Title/Abstract] OR "National guideline*"[Title/Abstract] OR "Government standard*"[Title/Abstract] OR "Nutrition governance"[Title/Abstract] OR "National recommendat*"[Title/Abstract] OR "Mandatory physical activit*"[Title/Abstract] OR "Physical activity curriculum"[Title/Abstract] OR "Public standard*"[Title/Abstract] OR "National polic*"[Title/Abstract] OR "National health polic*"[Title/Abstract] |

Scheme 8: Health literacy

| | | |
|----------------------|-----|--|
| Aspect 1) Overweight | AND | Aspect 4) Type of policy |
| Mesh terms #1 | | Mesh terms #17 |
| "Body Weight"[Mesh] | | "Health Promotion"[Mesh] OR "Health Education"[Mesh] |
| OR | | OR |
| Search terms #2 | | Search terms #18 |

| | | |
|--|--|--|
| Obes*[Title/Abstract] OR overweight[Title/Abstract] OR "Pediatric obes*"[Title/Abstract] OR "body weight"[Title/Abstract] OR "Pre overweight"[Title/Abstract] OR "pre obes*"[Title/Abstract] | | "Health Promotion*"[Title/Abstract] OR "Health Literacy"[Title/Abstract] OR "Consumer Health Information"[Title/Abstract] OR "Health Education*"[Title/Abstract] OR "Health awareness"[Title/Abstract] OR "Nutrition awareness"[Title/Abstract] OR "Physical activity awareness"[Title/Abstract] OR "Exercise awareness"[Title/Abstract] OR "Health knowledge"[Title/Abstract] OR "Nutrition knowledge"[Title/Abstract] OR "Physical activity knowledge"[Title/Abstract] OR "Exercise knowledge"[Title/Abstract] OR "Nutrition literacy"[Title/Abstract] OR "PA literacy"[Title/Abstract] OR "Food literacy"[Title/Abstract] |
|--|--|--|

Scheme 9: School health

| | | |
|--|-----|---|
| Aspect 1) Overweight | AND | Aspect 4) Type of policy |
| Mesh terms #1 | | Mesh terms #19 |
| "Body Weight"[Mesh] | | "School Health Services"[Mesh] OR "Diet/economics"[Mesh] OR "Nutrition Policy"[Mesh] OR "Schools"[Mesh] OR "Food Services"[Mesh] OR "Meals"[Mesh] |
| OR | | OR |
| Search terms #2 | | Search terms #20 |
| Obes*[Title/Abstract] OR overweight[Title/Abstract] OR "Pediatric obes*"[Title/Abstract] OR "body weight"[Title/Abstract] OR "Pre overweight"[Title/Abstract] OR "pre obes*"[Title/Abstract] | | "School Health Service*"[Title/Abstract] OR "Diet econom*"[Title/Abstract] OR "Nutrition Polic*"[Title/Abstract] OR "School*"[Title/Abstract] OR "Food Service*"[Title/Abstract] OR "School Meal*"[Title/Abstract] OR "School Snack*"[Title/Abstract] OR "School Lunch*"[Title/Abstract] OR "School Breakfast*"[Title/Abstract] OR "School food*"[Title/Abstract] OR "School food standard*"[Title/Abstract] OR "School meal*"[Title/Abstract] OR "School lunch*"[Title/Abstract] OR "Free school lunch*"[Title/Abstract] OR "Free school meal*" OR "Universal school meal*"[Title/Abstract] OR "School food program*"[Title/Abstract] OR "School food service*"[Title/Abstract] OR "Public school meals*"[Title/Abstract] OR "Mandatory physical |

| | | |
|--|--|--|
| | | <p>activit*"[Title/Abstract] OR "School PA" [Title/Abstract] OR "School physical activit*"[Title/Abstract]</p> |
|--|--|--|

2. Inclusion and exclusion criteria - PubMed and grey literature search

| | PubMed search | Grey search |
|------------------------|--|---|
| Year | All available years are included | All available years are included but for websites with several publications on the same topic, only newest publications are included unless older publications also cover other aspects not mentioned in the newest publication. |
| Approach | Systematic search strings are searched at in PubMed. Additional studies that are published and we bump into are also reviewed if they seem relevant. | The websites are chosen from CADHT's ¹ overview of websites in 'Grey Matters' ² , where relevant websites for this project are included, and additional websites are added with the help of the project group. Specific keywords are selected and searched for at all chosen websites and all the websites are browsed for relevant publications. |
| Type of studies | Systematic reviews, meta-analyses, and government reports. | Grey literature published by the authors/organizations from the websites. |
| Language | All we can understand (Danish, English, Swedish, Norwegian, Portuguese) | All we can understand (Danish, English, Swedish, Norwegian, Portuguese) |

¹ The Canadian Agency for Drugs and Technologies in Health.

² <https://www.cadth.ca/grey-matters-practical-tool-searching-health-related-grey-literature>. Only relevant sites for this search are included and sites where the html link works.

| | | |
|---------------------------|--|--|
| Inclusion criteria | <ul style="list-style-type: none"> • Policies carried out at political, regional, national, or global level. • Deals with the evidence of the effect of prevention policies. • National experiences with prevention policies. • Implemented and evaluation of effects. <ul style="list-style-type: none"> ○ Effects measured at group, population, or industry-level. • Effects on two main outcomes: anthropometry and health behavior. • Other relevant topic outcomes e.g. exposure, prices, industry effects. • All policies implemented regardless of duration time. • Must be about health prevention. | <ul style="list-style-type: none"> • Policies carried out at political, regional, national, or global level. • Deals with the evidence of the effect of prevention policies. • National experiences with prevention policies. • Implemented and evaluation of effects. <ul style="list-style-type: none"> ○ Effects measured at group, population, or industry-level. • Effects on two main outcomes: anthropometry and health behavior. • Other relevant topic outcomes e.g. exposure, prices, industry effects. • All policies implemented regardless of duration time. • Must be about health prevention. |
| Exclusion criteria | <ul style="list-style-type: none"> • Opinion/policy papers are not included in the final search. • Other umbrella-reviews. • Interventions at individual, specific group, and local level. • Everything about eating disorders and stigma. • Treatment (unless treatment is viewed as prevention of further obesity) • Outcome on cases of illness/death. | <ul style="list-style-type: none"> • Opinion/policy papers are not included in the final search. • Other umbrella-reviews. • Interventions at individual, specific group, and local level. • Everything about eating disorders and stigma. • Treatment (unless treatment is viewed as prevention of further obesity) • Outcome on cases of illness/death. |

Anthropometry as outcome measurement:

Weight; overweight; obesity; pre-obesity; pre-overweight; fat; thick; weight loss; weight gain; BMI; body fat; fat mass; paediatric obesity; body weight; infant/childhood/adolescence/adult obesity; infant/childhood/adolescence/adult overweight; weight maintenance; weight stability.

Health behaviour as outcome measurement:

Consumption/intake; Purchase; food habits (frequency of healthy and unhealthy eating); drinking habits (frequency of healthy and unhealthy drinking); spending on unhealthy/healthy food/drinks; demand of unhealthy/healthy food/drinks; demand of physical activity offers; frequency of physical activity; frequency of physical activity offers; frequency of sedentary behaviour; health literacy; reformulation of food/drinks products; number of advertisements; guideline adherence; number of free/healthy school meals.

3. Reasons for excluding three policy topics in the review report

Systematic literature searches were also made in PubMed on the effectiveness of policies concerning public standards, food reformulation and health literacy. However, these three topics were not included in the final review report because:

1. We already have national and Nordic public standards for a healthy diet and physical activity.
2. Studies found on food reformulation and health literacy largely covered intervention studies and studies investigating associations between these aspects and health behaviours.
3. It was agreed on in the project group that insights from the six remaining topics would be the most beneficial for potential policies to implement in the Nordic context.

4. Grey literature resources - List of websites browsed systematically

International resources

- **World Health Organization.** *Publications or Health topics.* <https://www.who.int/europe/publications/i> ; https://www.who.int/health-topics/obesity#tab=tab_1 [Search by keyword, health topic, type, phrases may be searched by using " " and under Topic see publications below] ☒
- **World Cancer Research Fund International.** *Publications.* <https://www.wcrf.org/policy/our-publications/> [Language: English]. ☒
- **Science and Technology of Childhood Obesity Policy (STOP).** *Publications.* <https://www.stopchildobesity.eu/stop-publications/> [Language: English] ☒
- **Publications Office of the European Union.** *Publications.* <https://op.europa.eu/en/home> [Advanced search by collection, author, subject, Language: English]. ☒
- **The European Food Information Council (EUFIC)** <https://www.eufic.org/en/> ☒
- **The European Consumer Organization** <https://www.beuc.eu/position-papers> ☒
- **Centers for Disease Control and Prevention (CDC).** *Publications.* <https://www.cdc.gov/publications/index.html> [Choose by topic or search in right corner]. ☒
- **Nordisk Samarbejde.** *Publications.* <https://www.norden.org/da/publikationer> [Search by keyword, type, topic or organization, Language: Danish, Swedish, Norwegian, English]. ☒
- **World Obesity.** *Resources, Policy Dossiers and Publications.* <https://www.worldobesity.org/resources/policy-dossiers> <https://www.worldobesity.org/resources/resource-library> [Search by keyword and filter by category, Language: English]. ☒
- **OECD.** *OECD iLibrary.* <https://www.oecd-ilibrary.org/> [Search by keyword, title or author, Language: English]. ☒
- **European Heart Network.** *Publications and Papers.* <https://www.ehnheart.org/publications-and-papers/publications.html?start=10> [Search by keyword in right corner or browse publications, Language: English]. ☒
- **The European Association for the Study of Obesity.** *Research, Education, Policy and Media.* <https://easo.org/> [Language: English]. ☒
- **Unicef.** *Publications.* <https://www.unicef.org/reports> [Filter by topic, Language: English]. ☒
- **Cochrane.** *Cochrane Reviews.* <https://www.cochranelibrary.com/> [Can be browsed by topic or searched by title/abstract/keyword in right corner, Language: English]. ☒
- **International Food Information Council,** <https://ific.org/> ☒
- **Health Behaviour in School-aged Children** <https://hbsc.org/> ☒
- **Policy Evaluation Network** <https://www.jpi-pen.eu/> ☒

National resources

Australia

- **Australian Government, Department of Health and Aged Care.** *Publications.* https://www.health.gov.au/resources/publications?f%5B0%5D=field_related_health_topics%3A1476 [Search by type and topic in left side bar, Language: English]. ☒
- **EPOCH – Translate. Translating Early Prevention of Obesity in Childhood.** *Foundation Research.* <https://earlychildhoodobesity.com/> ☒
- **Obesity Policy Coalition** <https://www.opc.org.au/> ☒
- **Obesity Evidence Hub** <https://www.obesityevidencehub.org.au/> ☒
- **Centre for Behavioural Research in Cancer** <https://www.cancervic.org.au/research/behavioural> ☒

Austria

- **Austrian Institute of Health Technology Assessment.** *Publications.* <https://aihta.at/page/praevention-screening/en> [Language: German, English] ☒

Belgium

- **Belgian Health Care Knowledge Centre.** *Publications.* <https://kce.fgov.be/en/all-reports-0> [Search by keyword, domain and year] ☒

Canada

- **Alberta Health and Wellness.** *Health data, research and standards.* <https://www.alberta.ca/health-wellness.aspx> . [Scroll down to view list of completed reports or use the keyword search box in top right corner, Language: English]. ☒
- **Canadian Agency for Drug and Technologies in Health (CADTH).** *About.* <https://www.cadth.ca/about-cadth> [Can limit by 'Product line,' 'Result type,' 'Publication date,' etc. in the bar at the left side of the page. Includes projects in progress as well as completed projects, Language: English, French]. ☒
- **Canadian Institutes of Health Research.** *Human development, Child and Youth Health.* <https://cihr-irsc.gc.ca/e/8697.html> [Publications in the left side bar, Language: English]. ☒
- **Health Quality Council of Alberta (HQCA).** *Reports Library.* <https://hqca.ca/reports-library/> [Search by keyword in right side search field]. ☒
- **The Hospital for Sick Children (SickKids).** *Reports and Theses.* <https://lab.research.sickkids.ca/task/reports-theses/> [Language: English] ☒
- **Institute of Health Economics (IHE).** *Publications.* <https://www.ihe.ca/index.php?/publications> [Search by keyword, year, topic etc. in left hand menu, Language: English]. ☒

- **Manitoba Centre for Health Policy (MCHP).** *Deliverables, by topic.* <http://mchp-appserv.cpe.umanitoba.ca/deliverablesList.html> [Search by topic, basic or advanced search to the right, Language: English]. ☒
- **Newfoundland and Labrador Centre for Applied Health Research. Contextualized Health Research Synthesis Program (CHRSP).** *Completed CHRSP Projects.* <https://www.mun.ca/nlcahr/chrsp/completed-chrsp-projects/> [Language: English]. ☒
- **Government of Canada.** <https://www.canada.ca/en/services/health.html> <https://www.canada.ca/en/public-health/services/reports-publications/disease-prevention-control-guidelines.html> ☒
- **Canadian Partnership against cancer.** Tools. <https://www.partnershipagainstanccancer.ca/tools/prevention-policies-directory/cancer-prevention-policy-packs/> [Language: English]. ☒

Denmark

- **Sundhedsstyrelsen.** <https://www.sst.dk/da/udgivelser> [Language: Danish, English summaries]. ☒
- **Kræftens Bekæmpelse.** <https://www.cancer.dk/fagfolk/rapporter/> [Language: Danish]. ☒
- **Diabetesforeningen.** *Projekter og undersøgelser.* <https://diabetes.dk/forskning/for-fagfolk/projekter-og-undersogelser> [Language: Danish]. ☒
- **Hjerteforeningen.** *Rapporter, anbefalinger og guidelines.* <https://hjerteforeningen.dk/fagnet/rapporter-fra-hjerteforeningen/> [Language: Danish]. ☒
- **Nationalt Center for Overvægt.** *Om forskning.* <https://www.ncfo.dk/om-forskning/> [Language: Danish]. ☒
- **Vidensråd for Forebyggelse.** *Rapporter.* <http://www.vidensraad.dk/rapporter> [Language: Danish]. ☒
- **DTU Fødevareinstituttet.** *Publikationer.* <https://www.food.dtu.dk/publikationer> [Language: Danish]. ☒
- **The Initiative for Science, Society and Policy, Roskilde Universitet** <http://www.issp.center/> (hjemmeside dur ikke). I stedet søgt blandt RUC's publikationer på. <https://forskning.ruc.dk/> ☒
- **SDU** <https://portal.findresearcher.sdu.dk/da/publications/> **SDU , Institut for idræt og biomekanik** https://www.sdu.dk/da/om_sdu/institutter_centre/iob_idraet_og_biomekanik ☒
- **Statens Institut for Folkesundhed** <https://www.sdu.dk/da/sif/rapporter> ☒
- **Institut for idrætsanalyse** www.idan.dk ☒
- **Landbrug og Fødevarer** <https://lf.dk/viden-om/sundhed-og-fodevarer> ☒
- **COOP analyse** <https://coopanalyse.dk/> ☒
- **Københavns Kommune** https://kk.sites.itera.dk/apps/kk_pub2/ ☒
- **Novo Nordisk Fonden** <https://novonordiskfonden.dk/nyheder-medier/mediebibliotek/> ☒

Finland

- **Ministry of Social Affairs and Health.** *Publications.* <https://stm.fi/en/publications> [Search by keyword, Language: Finnish, Swedish and English]. ☒

- **Finnish Institute for Health and Welfare.** *Publications or Search.* <https://thl.fi/en/web/thlfi-en/publications> [Publications or Search in the right corner, Language: Finnish, Swedish and English]. ☒
- **Cancer Society of Finland.** *Publications.* <https://www.cancersociety.fi/publications/> [Language: Finnish, Swedish and English]. ☒

France

- **French National Authority for Health.** *Publications.* https://www.has-sante.fr/jcms/p_3135026/en/search-for-a-guideline-an-assesment [Search by topic, Language: French and English]. ☒

Germany

- **Federal Ministry of Health / Bundesministerium für Gesundheit** <https://www.bundesgesundheitsministerium.de/en/topics.html> [Search for keyword, Language: German and English]. ☒

Ireland

- **Health Information and Quality Authority.** *Reports & Publications.* <https://www.hiqa.ie/reports-and-publications/all-publications> [Search by keyword, Language: English]. ☒
- **The Irish Health Repository (Lenus).** <https://www.lenus.ie/> [Use advanced search or search by keyword, subjects, communities etc., Language: English] ☒
- **Department of Health Ireland.** *Publications.* <https://www.gov.ie/en/publications/> [Search by keyword, category, Language: English] ☒

The Netherlands

- **National Health Care Institute Netherlands.** *Publications.* <https://english.zorginstituutnederland.nl/publications> [Search by keyword and type; Language: Dutch and English] ☒

Norway

- **Folkehelseinstituttet, Norwegian Institute of Public Health.** *Publications.* <https://www.fhi.no/en/publ/> [Search by keyword and type, Language: Norwegian and English]. ☒
- **Kreftforeningen.** <https://kreftforeningen.no/?s=rapport> [Search in the right corner by keyword, Language: Norwegian and English]. ☒
- **Helsedirektoratet.** *Rapporter.* <https://www.helsedirektoratet.no/rapporter> [Language: Norwegian and English]. ☒

Sweden

- **Swedish Agency for Health Technology Assessment and Assessment of Social Services.** *Publications.* <https://www.sbu.se/en/publications2/> [Search by keyword, subjects, subjectcategories, type, Language: Swedish and English]. ☒
- **Folkhälsomyndigheten.** Public Health Agency of Sweden. *Publications.* <https://www.folkhalsomyndigheten.se/the-public-health-agency-of-sweden/publications/> [Language: Swedish and English]. ☒
- **Cancerfonden.** *Rapporter.* <https://www.cancerfonden.se/rapporter> [Language: Swedish]. ☒
- **Swelife.** *Rapporter.* <https://swelife.se/rapporter/> [Language: Swedish and English]. ☐
- **Statskontoret.** *Publiceret.* <https://www.statskontoret.se/publicerat/> [Language: Swedish and English]. ☒
- **Livsmedelsverket.** Publikationer. <https://www.livsmedelsverket.se/om-oss/publikationer/sok-publikationer> [Language: Swedish and English]. ☒
- **Socialstyrelsen.** Publikationer. <https://www.socialstyrelsen.se/publikationer/> [Language: Swedish and English]. ☒
- **HFS-nätverket.** Dokumentation. <http://www.hfsnatverket.se/hfs-natverkets-rapporter> [Language: Swedish and English]. ☒

UK

- **Healthcare Improvement Scotland.** *Published resources.* <https://www.healthcareimprovementscotland.org/> [Browse by healthcare area, type, keyword, Language: English]. ☒
- **National Institute for Health and Care Excellence (NICE)** <https://www.nice.org.uk/guidance/published> [Search by keyword in search field or choose Guidance and search by topic, Language: English]. ☒
- **National Institute for Health Research (NIHR).** *Publications.* <https://www.io.nihr.ac.uk/outputs-publications/> [Language: English]. ☒
- **Department of Health & Social Care.** <https://www.gov.uk/government/organisations/department-of-health-and-social-care> [Policy papers and consultation, Guidance and regulation or search field in right corner, Language: English]. ☒
- **Cancer Research UK.** *Publications.* https://publications.cancerresearchuk.org/?_gl=1*utecib*_ga*NDM4MTgxMTE2LjE2NTE1ODI0NDI.*_ga_58736Z2GNN*MTY2MTQyOTg4Ni4zLjEuMTY2MTQyOTkwNy4zOS4wLjA.&_ga=2.190981290.1827546914.1661429886-438181116.1651582442 [Search in search field or under publications, prevention, choose topic, Language: English]. ☐
- **National Health Service UK.** *Publications.* <https://www.england.nhs.uk/publication/> [Search by keyword, topic, type, Language: English]. ☒
- **Obesity UK.** *Our work* <https://www.obesityuk.org.uk/our-work> [Language: English]. ☒
- **Obesity Action Coalition.** *Education and Support and Advocacy.* <https://www.obesityaction.org/> [Search can also be made in the right corner, Language: English]. ☒
- **The Obesity Society.** *Positions and Policies.* <https://www.obesity.org/positions-and-policies/> [Language: English]. ☒
- **Action on Sugar** <https://www.actiononsugar.org/research-/> ☒

US

- **American Institute of Cancer Research** <https://www.aicr.org/resources/media-library/> ☒
- **Agency for Healthcare Research and Quality.** *Publications and Products.* <https://www.ahrq.gov/research/publications/pubcomguide/index.html> [Language: English]. ☒
- **U.S. Department of Health & Human Services.** <https://www.hhs.gov/> [Search in field search, Language: English]. ☒
- **National Academy of Sciences** <http://www.nasonline.org/publications/pnas/> ☒

5. Strategy for going through the websites with grey literature systematically

- If websites have their publications/reports gathered in one place, they have been browsed.
- On all websites, the following search terms has been searched at:
 - Obesity/overweight
 - Childhood obesity
 - Obesity prevention
 - Obesity policy
- If possible, searches have been restrained to reports/publications/surveys and only searching for the specific words and word combinations. If this wasn't an option, I have searched for obesity report/obesity publication manually etc.
- Here the results have been browsed thoroughly. If the hits have been more than 20, I have skimmed the first 10 because the websites show hits after relevance.
- Only publications that are available for free / without a user login has been included.
- If relevant publications from other authors/websites were found in the browsing of the 83 websites, they were also saved.

6. AMSTAR2 Checklist – Tool used for quality rating of all reviews and meta-analyses included

AMSTAR refer to *A Measurement Tool to Assess systematic Reviews* which was used to assess the methodological quality (incl. risk of bias) of the included systematic reviews and meta-analyses in a transparent and homogeneous manner. Methodological quality is rated based on 16 questions that cover e.g. whether a systematic review/meta-analysis include the PICO (Population, intervention, comparator group, outcome) components, include a protocol, is clear on inclusion and exclusion criteria, inform on and has a comprehensive search strategy, perform study selection and data extraction in duplicate, if a satisfactory technique is used to assess risk of bias (ROB), if meta-analysis are done, if ROB, heterogeneity and publication bias are accounted for in interpretation and sources of funding/conflicts of interests. The full AMSTAR2 checklist can be found online. The quality-rating that is provided by using AMSTAR2 is not an overall score, but instead a general rating of the review which can range from a critically low, low, moderate to a high quality.

The tool can be used to assess the methodological quality on systematic reviews that both include randomized (RCT) and/or non-randomized studies. However, it is important to be aware that AMSTAR2 rate the quality of a systematic review higher if it follows 'the Golden standard' for scientific studies examining effectiveness (Hariton & Locascio 2018³). A review reaches this golden standard if it contains randomized controlled trails, a risk of bias assessment and a meta-analysis. However, from the scope of this Umbrella review, it is not possible for all the included systematic reviews/meta-analyses to include this. Hence, we especially are interested in observational and real-life studies examining the effects from real life implemented policies. This is very hard to cover by using randomized controlled trials since the whole population is exposed to the policy and there thereby is no control group. Furthermore, because the evidence in the included reviews often are heterogenous regarding the study designs, the analyses made, samples included, and outcomes reported on, the possibility for meta-analyses is limited. This does not mean that the *results* from the included reviews/meta-analyses are of low quality and not useful even though they potentially rate low when using the AMSTAR2 quality assessment tool. Instead, these types of observational studies represent the most valid results and effects based on real life settings which is highly important when looking into evidence on real life prevention policies.

³ Hariton, Eduardo & Locascio, Joseph J 2018. "Randomised controlled trials—the gold standard for effectiveness research". *BJOG* 125(13).

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| | | |
|---|---|---|
| <p>1. Did the research questions and inclusion criteria for the review include the components of PICO?</p> | | |
| <p>For Yes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Population <input type="checkbox"/> Intervention <input type="checkbox"/> Comparator group <input type="checkbox"/> Outcome | <p>Optional (recommended)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Timeframe for follow-up | <ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <p>2. Did the report of the review contain an explicit statement that the review methods were established prior to the conduct of the review and did the report justify any significant deviations from the protocol?</p> | | |
| <p>For Partial Yes: The authors state that they had a written protocol or guide that included ALL the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> review question(s) <input type="checkbox"/> a search strategy <input type="checkbox"/> inclusion/exclusion criteria <input type="checkbox"/> a risk of bias assessment | <p>For Yes: As for partial yes, plus the protocol should be registered and should also have specified:</p> <ul style="list-style-type: none"> <input type="checkbox"/> a meta-analysis/synthesis plan, if appropriate, <i>and</i> <input type="checkbox"/> a plan for investigating causes of heterogeneity <input type="checkbox"/> justification for any deviations from the protocol | <ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> Partial Yes <input type="checkbox"/> No |
| <p>3. Did the review authors explain their selection of the study designs for inclusion in the review?</p> | | |
| <p>For Yes, the review should satisfy ONE of the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explanation for including only RCTs <input type="checkbox"/> OR Explanation for including only NRSI <input type="checkbox"/> OR Explanation for including both RCTs and NRSI | | |
| <p>4. Did the review authors use a comprehensive literature search strategy?</p> | | |
| <p>For Partial Yes (all the following):</p> <ul style="list-style-type: none"> <input type="checkbox"/> searched at least 2 databases (relevant to research question) <input type="checkbox"/> provided key word and/or search strategy <input type="checkbox"/> justified publication restrictions (e.g. language) | <p>For Yes, should also have (all the following):</p> <ul style="list-style-type: none"> <input type="checkbox"/> searched the reference lists / bibliographies of included studies <input type="checkbox"/> searched trial/study registries <input type="checkbox"/> included/consulted content experts in the field <input type="checkbox"/> where relevant, searched for grey literature <input type="checkbox"/> conducted search within 24 months of completion of the review | <ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> Partial Yes <input type="checkbox"/> No |
| <p>5. Did the review authors perform study selection in duplicate?</p> | | |
| <p>For Yes, either ONE of the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> at least two reviewers independently agreed on selection of eligible studies and achieved consensus on which studies to include <input type="checkbox"/> OR two reviewers selected a sample of eligible studies <u>and</u> achieved good agreement (at least 80 percent), with the remainder selected by one reviewer. | | |

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| | | |
|--|---|--|
| <p>6. Did the review authors perform data extraction in duplicate?</p> | | |
| <p>For Yes, either ONE of the following:</p> | | |
| <input type="checkbox"/> at least two reviewers achieved consensus on which data to extract from included studies | | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> OR two reviewers extracted data from a sample of eligible studies <u>and</u> achieved good agreement (at least 80 percent), with the remainder extracted by one reviewer. | | |
| <p>7. Did the review authors provide a list of excluded studies and justify the exclusions?</p> | | |
| <p>For Partial Yes:</p> <input type="checkbox"/> provided a list of all potentially relevant studies that were read in full-text form but excluded from the review | <p>For Yes, must also have:</p> <input type="checkbox"/> Justified the exclusion from the review of each potentially relevant study | <input type="checkbox"/> Yes <input type="checkbox"/> Partial Yes <input type="checkbox"/> No |
| <p>8. Did the review authors describe the included studies in adequate detail?</p> | | |
| <p>For Partial Yes (ALL the following):</p> <input type="checkbox"/> described populations <input type="checkbox"/> described interventions <input type="checkbox"/> described comparators <input type="checkbox"/> described outcomes <input type="checkbox"/> described research designs | <p>For Yes, should also have ALL the following:</p> <input type="checkbox"/> described population in detail <input type="checkbox"/> described intervention in detail (including doses where relevant) <input type="checkbox"/> described comparator in detail (including doses where relevant) <input type="checkbox"/> described study's setting <input type="checkbox"/> timeframe for follow-up | <input type="checkbox"/> Yes <input type="checkbox"/> Partial Yes <input type="checkbox"/> No |
| <p>9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?</p> | | |
| <p>RCTs</p> | | |
| <p>For Partial Yes, must have assessed RoB from</p> <input type="checkbox"/> unconcealed allocation, <i>and</i> <input type="checkbox"/> lack of blinding of patients and assessors when assessing outcomes (unnecessary for objective outcomes such as all-cause mortality) | <p>For Yes, must also have assessed RoB from:</p> <input type="checkbox"/> allocation sequence that was not truly random, <i>and</i> <input type="checkbox"/> selection of the reported result from among multiple measurements or analyses of a specified outcome | <input type="checkbox"/> Yes <input type="checkbox"/> Partial Yes <input type="checkbox"/> No <input type="checkbox"/> Includes only NRSI |
| <p>NRSI</p> | | |
| <p>For Partial Yes, must have assessed RoB:</p> <input type="checkbox"/> from confounding, <i>and</i> <input type="checkbox"/> from selection bias | <p>For Yes, must also have assessed RoB:</p> <input type="checkbox"/> methods used to ascertain exposures and outcomes, <i>and</i> <input type="checkbox"/> selection of the reported result from among multiple measurements or analyses of a specified outcome | <input type="checkbox"/> Yes <input type="checkbox"/> Partial Yes <input type="checkbox"/> No <input type="checkbox"/> Includes only RCTs |
| <p>10. Did the review authors report on the sources of funding for the studies included in the review?</p> | | |
| <p>For Yes</p> <input type="checkbox"/> Must have reported on the sources of funding for individual studies included in the review. Note: Reporting that the reviewers looked for this information but it was not reported by study authors also qualifies | | |
| | | <input type="checkbox"/> Yes <input type="checkbox"/> No |

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| | |
|--|--|
| <p>11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?</p> | |
| <p>RCTs</p> | |
| <p>For Yes:</p> | |
| <p><input type="checkbox"/> The authors justified combining the data in a meta-analysis</p> | <p><input type="checkbox"/> Yes</p> |
| <p><input type="checkbox"/> AND they used an appropriate weighted technique to combine study results and adjusted for heterogeneity if present.</p> | <p><input type="checkbox"/> No</p> |
| <p><input type="checkbox"/> AND investigated the causes of any heterogeneity</p> | <p><input type="checkbox"/> No meta-analysis conducted</p> |
| <p>For NRSI</p> | |
| <p>For Yes:</p> | |
| <p><input type="checkbox"/> The authors justified combining the data in a meta-analysis</p> | <p><input type="checkbox"/> Yes</p> |
| <p><input type="checkbox"/> AND they used an appropriate weighted technique to combine study results, adjusting for heterogeneity if present</p> | <p><input type="checkbox"/> No</p> |
| <p><input type="checkbox"/> AND they statistically combined effect estimates from NRSI that were adjusted for confounding, rather than combining raw data, or justified combining raw data when adjusted effect estimates were not available</p> | <p><input type="checkbox"/> No meta-analysis conducted</p> |
| <p><input type="checkbox"/> AND they reported separate summary estimates for RCTs and NRSI separately when both were included in the review</p> | |
| <p>12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?</p> | |
| <p>For Yes:</p> | |
| <p><input type="checkbox"/> included only low risk of bias RCTs</p> | <p><input type="checkbox"/> Yes</p> |
| <p><input type="checkbox"/> OR, if the pooled estimate was based on RCTs and/or NRSI at variable RoB, the authors performed analyses to investigate possible impact of RoB on summary estimates of effect.</p> | <p><input type="checkbox"/> No</p> |
| | <p><input type="checkbox"/> No meta-analysis conducted</p> |
| <p>13. Did the review authors account for RoB in individual studies when interpreting/ discussing the results of the review?</p> | |
| <p>For Yes:</p> | |
| <p><input type="checkbox"/> included only low risk of bias RCTs</p> | <p><input type="checkbox"/> Yes</p> |
| <p><input type="checkbox"/> OR, if RCTs with moderate or high RoB, or NRSI were included the review provided a discussion of the likely impact of RoB on the results</p> | <p><input type="checkbox"/> No</p> |
| <p>14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?</p> | |
| <p>For Yes:</p> | |
| <p><input type="checkbox"/> There was no significant heterogeneity in the results</p> | <p><input type="checkbox"/> Yes</p> |
| <p><input type="checkbox"/> OR if heterogeneity was present the authors performed an investigation of sources of any heterogeneity in the results and discussed the impact of this on the results of the review</p> | <p><input type="checkbox"/> No</p> |
| <p>15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias) and discuss its likely impact on the results of the review?</p> | |
| <p>For Yes:</p> | |
| <p><input type="checkbox"/> performed graphical or statistical tests for publication bias and discussed the likelihood and magnitude of impact of publication bias</p> | <p><input type="checkbox"/> Yes</p> |
| | <p><input type="checkbox"/> No</p> |
| | <p><input type="checkbox"/> No meta-analysis conducted</p> |

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16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?

For Yes:

- | | |
|---|------------------------------|
| <input type="checkbox"/> The authors reported no competing interests OR | <input type="checkbox"/> Yes |
| <input type="checkbox"/> The authors described their funding sources and how they managed potential conflicts of interest | <input type="checkbox"/> No |

To cite this tool: Shea BJ, Reeves BC, Wells G, Thuku M, Hamel C, Moran J, Moher D, Tugwell P, Welch V, Kristjansson E, Henry DA. AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ*. 2017 Sep 21;358:j4008.

7. Summary of results from the effect of availability, accessibility, and affordability policies

The results from the original studies in the AAA section was pooled and categorized in an excel sheet.

| Polices aimed at improving diet (N=108) | No. of studies | Consumption | Purchases | Nutritional quality (e.g. energy density) | PA Behaviour (steps, MVPA, PA level etc.) | Antropometry (weight, BMI etc.) | Availability (healthy foods/beverages or physical space for PA) | Cost-effectiveness/cost-benefit |
|--|----------------|---|---|--|--|--|---|--|
| Cash transfer/food benefit programs (e.g. SNAP, WIC) | n=49 | ↑ = 2 ↓ = 1 ↔ = 2 ■ = 4 – = 8 | ↑ = 1 ↓ = 1 ↔ = 2 ■ = 1 – = 9 | ↑ = 1 ↓ = 1 ↔ = 2 ■ = 1 – = 49 | ↑ = 1 ↓ = 1 ↔ = 2 ■ = 1 – = 49 | ↑ = 10 ↓ = 2 ↔ = 15 ■ = 15 – = 7 | ↑ = 1 ↓ = 1 ↔ = 2 ■ = 1 – = 48 | cost beneficial = 1 – = 48 |
| Price incentives for healthy foods and beverages | n=18 | ↑ = 4 ↓ = 1 ↔ = 2 ■ = 4 – = 8 | ↑ = 6 ↓ = 1 ↔ = 2 ■ = 1 – = 9 | ↑ = 1 ↓ = 1 ↔ = 2 ■ = 1 – = 17 | ↑ = 1 ↓ = 1 ↔ = 2 ■ = 1 – = 18 | ↑ = 1 ↓ = 1 ↔ = 2 ■ = 2 – = 15 | ↑ = 1 ↓ = 1 ↔ = 2 ■ = 1 – = 17 | Not cost effective = 1 Could save DALYs = 2 – = 16 |

| | | | | | | | | |
|---|--|--|---|---------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|--|
| Healthy food procurement/schemes | n=26 (15 studies NR health outcomes*) | ↑ = 6 ↓ = ↔ = ▪ = -- = 20 | ↑ = 3 ↓ = ↔ = 1 ▪ = 1 -- = 21 | ↑ = 1 ↓ = ↔ = ▪ = -- = 25 | ↑ = ↓ = ↔ = ▪ = -- = 26 | ↑ = ↓ = ↔ = ▪ = -- = 26 | ↑ = 1 ↓ = ↔ = ▪ = -- = 25 | -- = 26 |
| Restricting or improving availability of unhealthy/healthy foods and beverages | n=12 (4 studies NR health outcomes*) | ↑ = 1 ↓ = ↔ = ▪ = 2 -- = 9 | ↑ = 2 ↓ = ↔ = ▪ = 1 -- = 9 | ↑ = 2 ↓ = ↔ = ▪ = -- = 10 | ↑ = ↓ = ↔ = ▪ = -- = 12 | ↑ = ↓ = ↔ = ▪ = 1 -- = 11 | ↑ = 2 ↓ = ↔ = ▪ = -- = 10 | Leads to gained QALY = 1 -- = 11 |
| In-store promotion | n=3 | ↑ = ↓ = ↔ = ▪ = 2 -- = 1 | ↑ = ↓ = ↔ = ▪ = 1 -- = 2 | ↑ = ↓ = ↔ = ▪ = -- = 3 | ↑ = ↓ = ↔ = ▪ = -- = 3 | ↑ = ↓ = ↔ = ▪ = -- = 3 | ↑ = ↓ = ↔ = ▪ = 1 -- = 2 | -- = 3 |
| Policies aimed at improving physical activity (N=28) | | | | | | | | |
| Physical activity on referral | n=2 | ↑ = ↓ = ↔ = ▪ = -- = 2 | ↑ = ↓ = ↔ = ▪ = -- = 2 | ↑ = ↓ = ↔ = ▪ = -- = 2 | ↑ = ↓ = ↔ = 1 ▪ = -- = 1 | ↑ = ↓ = ↔ = ▪ = -- = 2 | ↑ = ↓ = ↔ = ▪ = -- = 2 | Not cost effective = 1 Leads to gained QALY = 1 -- = 0 |

| | | | | | | | | |
|---|--|---|---|-------------------------------------|--|---|-------------------------------------|------------------------------------|
| Improvement of walking and bicycling infrastructure | n=18 | ↑ = ↓ = ↔ = ▪ = -- = | ↑ = ↓ = ↔ = ▪ = -- = 18 | ↑ = ↓ = ↔ = ▪ = -- = 18 | ↑ = 9 ↓ = ↔ = 1 ▪ = 2 -- = 6 | ↑ = 1 ↓ = ↔ = ▪ = -- = 17 | ↑ = ↓ = ↔ = ▪ = -- = 18 | Economic beneficial = 6 -- = 12 |
| Improvement of built environment and access to increased PA equipment, settings and opportunities | n=8 | ↑ = ↓ = ↔ = ▪ = -- = 8 | ↑ = ↓ = ↔ = ▪ = -- = 8 | ↑ = ↓ = ↔ = ▪ = -- = 8 | ↑ = 3 ↓ = ↔ = 1 ▪ = 3 -- = 1 | ↑ = ↓ = ↔ = ▪ = -- = 8 | ↑ = ↓ = ↔ = ▪ = -- = 8 | Economic beneficial = 2 -- = 6 |
| Multicomponent policies incl. either several diet and/or PA components (N=20) | | | | | | | | |
| All grouped (n=21) | n=20 (3 studies NR health outc) | ↑ = 2 ↓ = ↔ = 1 ▪ = -- = 18 | ↑ = 3 ↓ = ↔ = ▪ = 1 -- = 16 | ↑ = ↓ = ↔ = ▪ = -- = 20 | ↑ = ↓ = ↔ = 1 ▪ = -- = 19 | ↑ = 1 ↓ = 1 ↔ = 2 ▪ = 1 -- = 16 | ↑ = ↓ = ↔ = ▪ = -- = 20 | Economic beneficial = 5 -- = 15 |

| | | | | | | | | |
|--|------------|--|--|--|--|--|--|--|
| | omes *) | | | | | | | |
|--|------------|--|--|--|--|--|--|--|

Signs used in table:

| |
|---|
| ↑ = positive significant results (e.g. increased consumption of FV, decreased overweight, increased PA behaviour, positive environmental changes etc.) |
| ↓ = Negative significant results (e.g. decreased FV consumption, increased BMI, decreased PA behaviour, negative environmental changes etc.) |
| ↔ = Mixed results (e.g. positive results and negative results, negative/positive results, and non-significant results) |
| ▪ = Non-significant results (no change in consumption, overweight, PA behaviour or environmental surroundings etc.) |
| – = Studies not reporting on outcome |
| n=10, ^{MA2} : indicates the total numbers of studies within a category equal 10 and 2 of those studies are results from the pooled results in a meta-analysis. |

8. Summary of results from the effect of school health policies

The results from the original studies in the school health section was pooled and categorized in an excel sheet.

| | No. of studies | Consumption | Purchase/sales | Nutritional quality (e.g. energy density) | PA Behaviour (steps, MVPA, PA level etc.) | Antropometry (weight, BMI etc.) | Cost-effectiveness | Environmental change (e.g. Increased environmental opportunities, enhanced |
|-----------------------|----------------|-------------|----------------|---|---|---------------------------------|--------------------|--|
| Diet policies (N=157) | | | | | | | | |

| | | | | | | | | playgrounds, changed curriculum etc.) |
|---|---------------|--|--|--|--------------------------------------|--|---------------------------------|---|
| Fruit and vegetables policy/program (free/subsidized/increased availability) | n=26 | ↑ = 17 ↓ = ↔ = 4 ▪ = 1 – = 4 | ↑ = ↓ = ↔ = 1 ▪ = – = 25 | ↑ = ↓ = ↔ = ▪ = – = 26 | ↑ = ↓ = ↔ = ▪ = – = 26 | ↑ = 1 ↓ = ↔ = 1 ▪ = – = 24 | cost effective = 1 – = 25 | ↑ = ↓ = ↔ = ▪ = – = 26 |
| School meals (breakfast and lunch) | n=15 | ↑ = 4 ↓ = ↔ = ▪ = – = 11 | ↑ = ↓ = ↔ = ▪ = – = 15 | ↑ = ↓ = ↔ = ▪ = – = 15 | ↑ = ↓ = ↔ = ▪ = – = 15 | ↑ = 2 ↓ = 1 ↔ = 2 ▪ = 7 – = 3 | – = 15 | ↑ = ↓ = ↔ = ▪ = – = 15 |
| Provision of healthy foods and beverages (FB) /limiting access to unhealthy FB/competitive food laws | n=4 4, MA2 | ↑ = 8 ↓ = ↔ = 10 MA, n=2 ▪ = 5 – = 21 | ↑ = 5 ↓ = ↔ = 5 ▪ = – = 34 | ↑ = 1 ↓ = ↔ = ▪ = – = 43 | ↑ = ↓ = ↔ = ▪ = 1 – = 44 | ↑ = 6 ↓ = 1 ↔ = 4 ▪ = 3 – = 30 | – = 44 | ↑ = 11 ↓ = ↔ = 2 ▪ = – = 31 |
| Nutrition standards/guidelines | n=15, MA1 | ↑ = 3 ↓ = ↔ = 1 MA, n=1 ▪ = 6 – = 5 | ↑ = 1 ↓ = ↔ = ▪ = – = 14 | ↑ = 1 ↓ = ↔ = ▪ = 2 – = 12 | ↑ = ↓ = ↔ = ▪ = – = 15 | ↑ = ↓ = ↔ = 1 ▪ = – = 14 | cost effective = 1 – = 14 | ↑ = ↓ = ↔ = 1 ▪ = – = 14 |
| Multicomponent nutrition policy (including several nutrition components) | n=13 | ↑ = 6 ↓ = ↔ = 2 ▪ = 1 – = 4 | ↑ = 1 ↓ = ↔ = ▪ = – = 12 | ↑ = ↓ = ↔ = ▪ = – = 13 | ↑ = ↓ = ↔ = ▪ = – = 13 | ↑ = ↓ = ↔ = 1 ▪ = 2 – = 10 | – = 13 | ↑ = 1 ↓ = ↔ = ▪ = – = 12 |
| Unspecified/broader nutrition policy | n=4 4 | ↑ = 20 ↓ = 2 ↔ = 3 ▪ = 4 – = 15 | ↑ = ↓ = ↔ = ▪ = – = 44 | ↑ = ↓ = ↔ = ▪ = – = 44 | ↑ = ↓ = ↔ = ▪ = – = 44 | ↑ = ↓ = ↔ = 2 ▪ = 1 – = 41 | – = 44 | ↑ = 4 ↓ = ↔ = ▪ = 12 – = 28 |
| PA/PE policies (N=62) | | | | | | | | |

| | | | | | | | | | |
|--|-------|---|---------------------------------------|-------------------------------------|---|---|------------------------------------|--|--|
| Standards/guidelines /policies for PE classes/PA in curriculum/school day (n=27) | n=27 | ↑ = ↓ = ↔ = ▪ = 1 – = 26 | ↑ = ↓ = ↔ = ▪ = – = 26 | ↑ = ↓ = ↔ = ▪ = – = 26 | ↑ = 2 ↓ = ↔ = 1 ▪ = 4 – = 20 | ↑ = 3 ↓ = ↔ = 6 ▪ = 11 – = 7 | cost effective = 1 – = 26 | ↑ = 1 ↓ = ↔ = ▪ = – = 26 | |
| Provision of increased PA opportunitites/enviromental changes within and near schools | n=4 | ↑ = ↓ = ↔ = ▪ = – = 4 | ↑ = ↓ = ↔ = ▪ = – = 4 | ↑ = ↓ = ↔ = ▪ = – = 4 | ↑ = ↓ = ↔ = ▪ = 1 – = 3 | ↑ = ↓ = 1 ↔ = ▪ = – = 3 | – = 4 | ↑ = 2 ↓ = ↔ = ▪ = – = 2 | |
| Active transport (n=2) | n=2 | ↑ = ↓ = ↔ = ▪ = – = 2 | ↑ = ↓ = ↔ = ▪ = – = 2 | ↑ = ↓ = ↔ = ▪ = – = 2 | ↑ = 1 ↓ = ↔ = ▪ = – = 1 | ↑ = ↓ = ↔ = 1 ▪ = – = 1 | Not cost effective = 1 – = 1 | ↑ = ↓ = ↔ = ▪ = – = 2 | |
| Multicomponent PA/PE policy (including several PA/PE components) (n=17) | n=17 | ↑ = ↓ = ↔ = ▪ = – = 17 | ↑ = ↓ = ↔ = ▪ = – = 17 | ↑ = ↓ = ↔ = ▪ = – = 17 | ↑ = 2 ↓ = ↔ = 2 ▪ = 3 – = 10 | ↑ = 3 ↓ = 1 ↔ = 1 ▪ = 6 – = 6 | – = 17 | ↑ = 7 ↓ = ↔ = 2 ▪ = – = 8 | |
| Unspecified/broader PA/PE policies | n=12 | ↑ = ↓ = ↔ = ▪ = – = 12 | ↑ = ↓ = ↔ = ▪ = – = 12 | ↑ = ↓ = ↔ = ▪ = – = 12 | ↑ = 3 ↓ = 1 ↔ = 1 ▪ = 3 – = 4 | ↑ = 2 ↓ = ↔ = 1 ▪ = 7 – = 2 | Cost effective = 1 – = 11 | ↑ = ↓ = ↔ = ▪ = – = 12 | |
| Multicomponent policies (N=106) | | | | | | | | | |
| All grouped (n=106) | n=106 | ↑ = 4 ↓ = ↔ = 8 ▪ = 10 – = 84 | ↑ = 1 ↓ = ↔ = ▪ = – = 105 | ↑ = ↓ = ↔ = ▪ = – = 106 | ↑ = 9 ↓ = ↔ = 3 ▪ = 12 – = 82 | ↑ = 25 ↓ = 1 ↔ = 17 ▪ = 43 – = 20 | Cost effective = 6 – = 100 | ↑ = 6 ↓ = ↔ = ▪ = 1 – = 99 | |

Signs used in table:

↑ = positive significant results (e.g. increased consumption of FV, decreased overweight, increased PA behaviour, positive environmental changes etc.)

↓ = Negative significant results (e.g. decreased FV consumption, increased BMI, decreased PA behaviour, negative environmental changes etc.)

↔ = Mixed results (e.g. positive results and negative results, negative/positive results and non-significant results)

▪ = Non-significant results (no change in consumption, overweight, PA behaviour or environmental surroundings etc.)

– = Studies not reporting on outcome

n=10, ^{MA2}: indicates the total numbers of studies within a category equal 10 and 2 of those studies are results from the pooled results in a meta-analysis.