Supplementary tables

Table S1: Overview of search terms

| Exposure | Outcome | Type of publication |
|-------------------------------|-------------|-------------------------|
| AND | AND | |
| High(-)intensity sweetener(s) | Body weight | Narrative review |
| High(-)potency sweetener(s) | Obesity | Systematic review |
| Intense sweetener(s) | Overweight | Mini-review |
| Artificial sweetener(s) | Adiposity | Review |
| Low(-)calorie sweetener(s) | | Commentary |
| Low(-)caloric sweetener(s) | | Opinion |
| Low(-)energy sweetener(s) | | Perspective |
| Non-caloric sweetener(s) | | Meta-analysis |
| No(-)calorie sweetener(s) | | Meta-analyses |
| Non-nutritive sweetener(s) | | Consensus |
| | | statement(s) |
| Sugar(-)free sweetener(s) | | Consensus report |
| Sugar(-)free product(s) | | Position statement(s) |
| Reduced(-)sugar sweetener(s) | | Position report |
| Reduced(-)sugar product(s) | | Scientific statement(s) |
| Sweetening agent(s) | | Scientific report |
| Sugar replacer | | |

Table S2: Inclusion and exclusion criteria

| Inclusion criteria | Exclusion criteria |
|--|--|
| The effect or association of LES (primarily | Publications reviewing lower-energy sugars, |
| intense sweeteners) with BW regulation | polyols or other food ingredients |
| The publication has to include an | Publications which incidentally refer to LES |
| assessment of evidence on the relationship | and BW relationships, without reviewing the |
| between LES and BW as a significant | evidence |
| component | |
| The publication has to include LES in | Publication focused on one specific LES or |
| general and not specific types of LES | one specific category of LES |
| The publication has to be either a narrative | All primary studies; animal studies as well |
| or systematic review or position or | as human studies (observational or |
| consensus statement | intervention), letters to editors, brief |
| | commentaries, conference abstracts or |
| | summaries |
| | Publications focused on pregnancy and fetal |
| | outcomes |
| The publication has to be published in a | |
| refereed journal | |
| An English version of the full publication | |
| has to be assessible | |
| Full text has to be accessible | Publications with data not electronically |
| | accessible from the database |

BW: body weight, LES: low-energy sweetener

| Table S3: Article characteristics and subset | equent operationalization |
|--|---------------------------|
|--|---------------------------|

| Characteristic | Operationalization |
|---|--|
| Article ID | Self-assigned unique ID, consecutive |
| First author surname | Text (used for matching) |
| Title | Text (used for matching) |
| Publication year | Year (used for matching) |
| Study outcome – Reviews | Effect or association relative to control or |
| Author's conclusion | no/lower exposure: |
| BW | 0 = Decrease/more beneficial |
| | 1 = Neutral (no directional effect or |
| | association) |
| | 2 = Increase/less beneficial |
| | 3 = No conclusion directly relevant to the |
| | LES-body weight relationship |
| | 4 = Evidence is insufficient to draw a |
| | conclusion (author's view) |
| | 5 = We are unable to draw a conclusion |
| | from the paper |
| Study outcome – Reviews | 0 = Significant effect - decreasing |
| Statistical significance (only reviews | 1 = Not statistically significant effect |
| including meta-analysis) | 2 = Significant effect - increasing |
| BW | Effect or association relative to control or |
| Study outcome – Primary studies | |
| Main message | no/lower exposure: 0 = Decrease/more beneficial |
| BW | |
| | 1 = Neutral (no directional effect or association) |
| | 2 = Increase/less beneficial |
| | 3 = No conclusion directly relevant to the |
| | LES-BW relationship |
| | 4 = Evidence is insufficient to draw a |
| | conclusion (author's view) |
| | 5 = We are unable to draw a conclusion |
| | from the paper |
| | |
| Article type - Review | 0 = Narrative review |
| ~ 1 | 1 = Systematic review with meta-analysis |
| | 2 = Systematic review without meta- |
| | analysis |
| 3W: body weight, LES: low-energy sweeteners | |

BW: body weight, LES: low-energy sweeteners

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| Article type – Primary studies | 0 = Randomized controlled trial |
|---|--|
| | 1 = Observational study |
| | 2 = Animal and/or in vitro study |
| | 3 = 0 ther |
| | 4 = Systematic review (systematic search) |
| | with meta-analysis |
| | 5 = Systematic review (systematic search) |
| | without meta-analysis |
| | 6 = Narrative review |
| Develotion | 0 = Adults |
| Population | |
| Only human studies | 1 = Children |
| | 2 = Both or not specific |
| Sample size, only primary studies | Number |
| Number of authors | Number |
| Journal impact factor, current | Number |
| Journal impact factor, last five years | Number |
| Funding source, only reviews | 0 = Non-profit organization |
| | 1 = For profit organization |
| | 2 = Both profit and non-profit |
| | 3 = Not stated/Stated as no funding received |
| Affiliation of the corresponding author, only | 0 = University |
| reviews | 1 = Government |
| | 2 = Non-profit organization |
| | 3 = Industry |
| | 4 = Other |
| Affiliation of the first author, only reviews | 0 = University |
| | 1 = Government |
| | 2 = Non-profit organization |
| | 3 = Industry |
| | 4 = Other |
| Number of relevant cited studies, only | Number |
| reviews | |
| Number of review authors publications in | Number |
| the section concerning BW, only reviews | |
| Years since cited paper was published | Number |
| BW: body weight, LES: low-energy sweeteners | |

Table S3: Article characteristics and subsequent operationalization, continued

Adjusted odds ratios for the likelihood of being cited

Table S4: Adjusted odds ratios for the likelihood of being cited (from multivariate analyses of 183 cited articles in 51 evidence assessment units from 33 reviews)

| | 4.11 × 1.0D | 1 | 4.11 × 1.0D | 1 | 4.1% · 1.0D | |
|------------------------------|------------------|--------|------------------|--------|------------------|--------|
| | Adjusted OR | p | Adjusted OR | р | Adjusted OR | p |
| | (CI), NOAU | | (CI), JFC | | (CI), YESI | |
| Main message of cited articl | | | | | | |
| Neutral (no directional | 1 (ref) | | 1 (ref) | | 1 (ref) | |
| effect or association) | | | | | | |
| No conclusion directly | 1.72 (1.00-2.98) | 0.05 | 1.63 (0.94-2.82) | 0.08 | 1.64 (0.93-2.88) | 0.09 |
| relevant to the LES- BW | | | | | | |
| relationship | | | | | | |
| Decrease/more beneficial | 1.39 (0.81-2.40) | 0.23 | 1.26 (0.72-2.21) | 0.42 | 1.31 (0.76-2.27) | 0.33 |
| We are unable to draw a | 1.25 (0.49-2.82) | 0.61 | 1.14 (0.45-2.55) | 0.76 | 1.11 (0.43-2.50) | 0.81 |
| conclusion from the article | | | | | | |
| Evidence is insufficient to | 1.19 (0.60-2.27) | 0.61 | 1.11 (0.56-2.11) | 0.76 | 1.05 (0.53-2.03) | 0.88 |
| draw a conclusion | | | | | | |
| Increase/less beneficial | 1.17 (0.72-1.95) | 0.53 | 1.16 (0.71-1.94) | 0.56 | 1.11 (0.67-1.87) | 0.69 |
| Cited article type | • | • | | | | |
| Systematic review with | 1 (ref) | | 1 (ref) | | 1 (ref) | |
| meta-analysis | | | | | | |
| Systematic review without | 0.97 (0.40-2.22) | 0.95 | 0.83 (0.35-1.87) | 0.66 | 0.86 (0.36-1.92) | 0.72 |
| meta-analysis | | | | | | |
| Randomized controlled trial | 0.85 (0.50-1.52) | 0.58 | 0.79 (0.45-1.42) | 0.41 | 0.85 (0.48-1.56) | 0.59 |
| Observational study | 0.69 (0.40-1.23) | 0.19 | 0.62 (0.36-1.12) | 0.10 | 0.67 (0.39-1.19) | 0.15 |
| Animal | 0.67 (0.29-1.47) | 0.33 | 0.66 (0.28-1.45) | 0.31 | 0.64 (0.28-1.40) | 0.28 |
| Narrative review | 0.45 (0.18-1.03) | 0.07 | 0.40 (0.16-0.90) | 0.03 | 0.39 (0.16-0.87) | 0.03 |
| Other | 0.27 (0.00-3.39) | 0.50 | - | - | 0.22 (0.00-2.68) | 0.44 |
| Cited article population | | | | | | |
| Adults | 1 (ref) | | 1 (ref) | | 1 (ref) | |
| Children | 2.28 (1.61-3.24) | <0.001 | 2.20 (1.54-3.15) | <0.001 | 2.27 (1.59-3.26) | <0.001 |
| Both | 1.05 (0.63-1.70) | 0.83 | 1.04 (0.62-1.69) | 0.88 | 1.00 (0.59-1.65) | 0.99 |
| Sample size | 1.00 (0.83-1.21) | 0.96 | 0.96 (0.80-1.16) | 0.68 | 1.00 (0.82-1.21) | 0.97 |
| Number of authors | - | - | 1.04 (0.99-1.09) | 0.10 | 1.05 (1.00-1.10) | 0.06 |
| Journal impact factor | 1.14 (0.99-1.30) | 0.06 | - | - | 1.15 (1.00-1.31) | 0.04 |
| Journal impact factor, last | 1.12 (0.97-1.28) | 0.12 | - | - | 1.13 (0.98-1.30) | 0.08 |
| five years | | | | | | |
| Years since cited article | 1.00 (0.98-1.02) | 0.83 | 1.00 (0.98-1.02) | 0.93 | - | - |
| was published | | | | | | |
| _ | | 1 | 1 | 1 | 1 | |

BW; body weight, CI; 95% confidence interval, JFC; Current journal impact factor, LES; low-energy sweetener, NOAU; Number of authors, OR; Odds ratios, *p*; p-value, ref; reference variable, YESI; Years since cited study was published. Logistic mixed-effects regression adjusted for number of authors, journal impact factor and years since cited study was published, respectively.

Post hoc analysis

Table S5: Subgroup analysis for evidence assessment units (n=11) showing a beneficial effect or association of LES on BW (n=65 articles cited)

| | n (%) ¹ | OR (95% CI) | P-value |
|---|--------------------|------------------|---------|
| Main message of cited articles | | | |
| Neutral (no directional effect or | 16 (25) | 1 (ref) | |
| association) | | | |
| No conclusion directly relevant to the | 8 (12) | 1.23 (0.61-2.40) | 0.56 |
| LES- BW relationship | | | |
| Increase/less beneficial | 9 (14) | 1.06 (0.53-2.07) | 0.86 |
| Decrease/more beneficial | 18 (28) | 1.02 (0.58-1.80) | 0.93 |
| Evidence is insufficient to draw a | 11 (17) | 0.90 (0.46-1.73) | 0.76 |
| conclusion | | | |
| Unable to draw a conclusion from the | 2 (3) | 0.55 (0.09-2.04) | 0.44 |
| article | | | |
| Cited article type | · | | |
| Systematic review with meta-analysis | 8 (12) | 1 (ref) | |
| Systematic review without meta-analysis | 4 (6) | 1.62 (0.66-3.90) | 0.28 |
| Randomized controlled trial | 23 (35) | 0.91 (0.49-1.80) | 0.79 |
| Observational study | 19 (29) | 0.82 (0.42-1.64) | 0.56 |
| Narrative review | 8 (12) | 0.70 (0.29-1.60) | 0.40 |
| Other | 1 (2) | 0.49 (0.03-2.84) | 0.51 |
| Animal | 1 (2) | 0.49 (0.03-2.84) | 0.51 |
| Cited article population ² | · | | |
| Adults | 23 (35) | 1 (ref) | |
| Children | 22 (34) | 1.38 (0.85-2.26) | 0.19 |
| Both | 18 (28) | 1.07 (0.62-1.82) | 0.81 |
| Sample size ^{3,4} | 42 (65) | 0.92 (0.68-1.22) | 0.56 |
| Number of authors | 64 (98) | 1.01 (0.95-1.07) | 0.86 |
| Journal impact factor, current (2018) ⁵ | 63 (97) | 1.01 (0.84-1.20) | 0.9 |
| Journal impact factor, last five years ⁵ | 63 (97) | 1.01 (0.84-1.20) | 0.92 |
| Years since cited article was published | 65 (100) | 0.97 (0.94-1.00) | 0.09 |

BW; body weight, CI; 95% confidence interval, LES; low-energy sweetener, n; sample size, OR; Odds ratio, ref; reference variable. Logistic mixed-effects regression.

¹Cited articles can potentially be cited in all evidence assessment units. The aggregated number for subgroups is therefore higher than the total number of cited articles.

²Data on population was only extracted for articles considering human subjects.

³Data on sample size was only extracted for primary evidence (i.e. not for reviews).

⁴Sample size was base 10 log-transformed, so odds ratio is the change per 10-fold change in study population.

Table S6: Subgroup analysis for evidence assessment units (n=7) showing a neutral effect or association of LES on BW (n=48 articles cited)

| | n (%) ¹ | OR (95% CI) | P-value |
|---|--------------------|------------------|---------|
| Main message of cited articles | L | | ÷ |
| Neutral (no directional effect or | 19 (40) | 1 (ref) | |
| association) | | | |
| Unable to draw a conclusion from the | 3 (6) | 1.67 (1.07-2.54) | 0.03 |
| article | | | |
| Evidence is insufficient to draw a | 2 (4) | 1.45 (0.84-2.43) | 0.17 |
| conclusion | | | |
| Increase/less beneficial | 9 (19) | 1.25 (0.92-1.70) | 0.15 |
| Decrease/more beneficial | 11 (23) | 1.08 (0.80-1.45) | 0.60 |
| No conclusion directly relevant to the | 4 (8) | 0.89 (0.56-1.38) | 0.61 |
| LES- BW relationship | | | |
| Cited article type | | | |
| Systematic review with meta-analysis | 8 (17) | 1 (ref) | |
| Observational study | 22 (46) | 1.45 (1.06-2.02) | 0.03 |
| Randomized controlled trial | 18 (38) | 1.13 (0.81-1.60) | 0.48 |
| Animal | - | - | - |
| Other | - | - | - |
| Systematic review without meta-analysis | - | - | - |
| Narrative review | - | - | - |
| Cited article population ² | | | 1 |
| Adults | 26 (54) | 1 (ref) | |
| Children | 16 (33) | 1.12 (0.88-1.44) | 0.36 |
| Both | 6 (13) | 0.81 (0.55-1.18) | 0.29 |
| Sample size ^{3,4} | 4 (8) | 1.09 (0.96-1.23) | 0.18 |
| Number of authors | 48 (100) | 0.97 (0.93-1.00) | 0.06 |
| Journal impact factor, current (2018) ⁵ | 46 (96) | 1.03 (0.94-1.13) | 0.47 |
| Journal impact factor, last five years ⁵ | 48 (100) | 1.02 (0.93-1.12) | 0.64 |
| Years since cited article was published | 48 (100) | 1.00 (0.99-1.01) | 0.78 |

BW; body weight, CI; 95% confidence interval, LES; low-energy sweetener, n; sample size, OR; Odds ratio, ref; reference variable. Logistic mixed-effects regression. The analysis is additionally adjusted for overdispersion. ¹Cited articles can potentially be cited in all evidence assessment units. The aggregated number for subgroups is therefore higher than the total number of cited articles.

²Data on population was only extracted for articles considering human subjects.

³Data on sample size was only extracted for primary evidence (i.e. not for reviews).

⁴Sample size was base 10 log-transformed, so odds ratio is the change per 10-fold change in study population.

Table S7: Subgroup analysis for evidence assessment units (n=7) showing an adverse effect or association of LES on BW (n=63 articles cited)

| | $n (\%)^1$ | OR (95% CI) | P-value |
|---|------------|------------------|---------|
| Main message of cited articles | | | |
| Neutral (no directional effect or | 9 (14) | 1 (ref) | |
| association) | | | |
| No conclusion directly relevant to the | 6 (10) | 1.29 (0.62-2.65) | 0.49 |
| LES- BW relationship | | | |
| Increase/less beneficial | 35 (56) | 1.09 (0.65-1.90) | 0.75 |
| Decrease/more beneficial | 6 (10) | 0.95 (0.43-2.01) | 0.89 |
| Evidence is insufficient to draw a | 6 (10) | 0.79 (0.35-1.72) | 0.56 |
| conclusion | | | |
| Unable to draw a conclusion from the | 1 (2) | 0.79 (0.11-3.33) | 0.78 |
| article | | | |
| Cited article type | | | |
| Systematic review with meta-analysis | 4 (6) | 1 (ref) | |
| Animal | 12 (19) | 1.43 (0.72-3.15) | 0.34 |
| Observational study | 33 (52) | 1.34 (0.72-2.85) | 0.40 |
| Randomized controlled trial | 6 (10) | 1.17 (0.52-2.77) | 0.71 |
| Systematic review without meta- | 2 (3) | 1.00 (0.29-2.98) | 1.00 |
| analysis | | | |
| Narrative review | 6 (10) | 1.00 (0.43-2.41) | 1.00 |
| Other | - | - | - |
| Cited article population ² | | | |
| Adults | 19 (30) | 1 (ref) | |
| Both | 9 (14) | 0.87 (0.53-1.39) | 0.57 |
| Children | 22 (35) | 0.80 (0.55-1.15) | 0.24 |
| Sample size ^{3,4} | 39 (62) | 1.14 (0.91-1.44) | 0.25 |
| Number of authors | 63 (100) | 1.04 (1.00-1.09) | 0.07 |
| Journal impact factor, current | 63 (100) | 1.13 (0.97-1.30) | 0.12 |
| (2018) ⁵ | | | |
| Journal impact factor, last five years ⁵ | 63 (100) | 1.13 (0.97-1.32) | 0.12 |
| Years since cited article was | 63 (100) | 1.00 (0.96-1.04) | 0.92 |
| published | | | |

BW; body weight, CI; 95% confidence interval, LES; low-energy sweetener, n; sample size, OR; Odds ratio, ref; reference variable. Logistic mixed-effects regression. The analysis is additionally adjusted for overdispersion.

¹Cited articles can potentially be cited in all evidence assessment units. The aggregated number for subgroups is therefore higher than the total number of cited articles.

²Data on population was only extracted for articles considering human subjects.

³Data on sample size was only extracted for primary evidence (i.e. not for reviews).

⁴Sample size was base 10 log-transformed, so odds ratio is the change per 10-fold change in study population.

⁵Journal impact factor was base 2 log-transformed, so odds ratio is the change per 2-fold change in journal impact factor.

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| Table S8: Subgroup analysis for evidence assessment units (n=26) concluding insufficient | |
|--|--|
| evidence to draw a conclusion about the effect of LES on BW (n=126 articles cited) | |

| | n (%) ¹ | OR (95% CI) | P-value |
|---|--------------------|------------------|---------|
| Main message of cited articles | | | |
| Neutral (no directional effect or | 29 (23) | 1 (ref) | |
| association) | | | |
| Evidence is insufficient to draw a | 12 (10) | 1.45 (0.96-2.15) | 0.07 |
| conclusion | | | |
| No conclusion directly relevant to the | 15 (12) | 0.89 (0.58-1.35) | 0.60 |
| LES- BW relationship | | | |
| Increase/less beneficial | 36 (29) | 0.88 (0.63-1.22) | 0.45 |
| Decrease/more beneficial | 28 (22) | 0.80 (0.56-1.14) | 0.22 |
| Unable to draw a conclusion from the | 4 (3) | 0.65 (0.27-1.37) | 0.30 |
| article | | | |
| Cited article type | · | L | |
| Systematic review with meta-analysis | 12 (10) | 1 (ref) | |
| Systematic review without meta-analysis | 6 (5) | 1.97 (1.12-3.45) | 0.02 |
| Observational study | 53 (42) | 1.03 (0.69-1.59) | 0.89 |
| Randomized controlled trial | 42 (33) | 0.82 (0.54-1.29) | 0.38 |
| Animal | 3 (2) | 0.78 (0.29-1.83) | 0.60 |
| Narrative review | 8 (6) | 0.73 (0.37-1.37) | 0.34 |
| Other | - | - | - |
| Cited article population ² | · | L | |
| Adults | 66 (52) | 1 (ref) | |
| Children | 39 (31) | 1.84 (1.43-2.37) | <0.001 |
| Both | 16 (13) | 0.83 (0.53-1.25) | 0.38 |
| Sample size ^{3,4} | 96 (76) | 1.10 (0.98-1.25) | 0.11 |
| Number of authors | 125 (99) | 1.00 (0.97-1.04) | 0.92 |
| Journal impact factor, current (2018) ⁵ | 124 (98) | 1.10 (1.00-1.20) | 0.049 |
| Journal impact factor, last five years ⁵ | 123 (98) | 1.10 (0.99-1.21) | 0.06 |
| Years since cited article was published | 126 (100) | 1.00 (0.99-1.02) | 0.77 |

BW; body weight, CI; 95% confidence interval, LES; low-energy sweetener, n; sample size, OR; Odds ratio, ref; reference variable. Logistic mixed-effects regression.

¹Cited articles can potentially be cited in all evidence assessment units. The aggregated number for subgroups is therefore higher than the total number of cited articles.

²Data on population was only extracted for articles considering human subjects.

³Data on sample size was only extracted for primary evidence (i.e. not for reviews).

⁴Sample size was base 10 log-transformed, so odds ratio is the change per 10-fold change in study population.

Table S9: Subgroup analysis for articles cited (n=112) in narrative reviews (n=26 evidence assessment units)

| | n (%) ¹ | OR (95% CI) | P-value |
|--|--------------------|------------------|---------|
| Main message of cited articles | | | |
| Neutral (no directional effect or | 20 (18) | 1 (ref) | |
| association) | | | |
| Decrease/more beneficial | 21 (19) | 1.13 (0.75-1.70) | 0.57 |
| Increase/less beneficial | 38 (34) | 1.10 (0.76-1.59) | 0.63 |
| No conclusion directly relevant to the LES- BW relationship | 17 (15) | 0.76 (0.47-1.21) | 0.25 |
| Evidence is insufficient to draw a conclusion | 12 (11) | 0.73 (0.42-1.22) | 0.24 |
| Unable to draw a conclusion from the article | 3 (3) | 0.54 (0.16-1.39) | 0.26 |
| Cited article type | • | | 1 |
| Systematic review with meta-analysis | 13 (12) | 1 (ref) | |
| Randomized controlled trial | 20 (18) | 1.00 (0.64-1.58) | 0.99 |
| Animal | 13 (12) | 0.84 (0.50-1.41) | 0.52 |
| Observational study | 48 (43) | 0.81 (0.55-1.23) | 0.31 |
| Narrative review | 14 (13) | 0.64 (0.37-1.09) | 0.10 |
| Systematic review without meta-analysis | 3 (3) | 0.47 (1.14-1.22) | 0.16 |
| Other | - | - | - |
| Cited article population ² | · | | L |
| Adults | 41 (37) | 1 (ref) | |
| Children | 31 (28) | 1.24 (0.90-1.70) | 0.18 |
| Both | 25 (22) | 0.93 (0.64-1.32) | 0.68 |
| Sample size ^{3,4} | 69 (62) | 0.87 (0.74-1.00) | 0.06 |
| Number of authors | 112 (100) | 1.03 (0.99-1.06) | 0.16 |
| Journal impact factor, current (2018) ⁵ | 109 (97) | 1.06 (0.95-1.18) | 0.26 |
| Journal impact factor, last five years ⁵ | 111 (99) | 1.04 (0.93-1.16) | 0.47 |
| Years since cited article was published | 112 (100) | 1.01 (0.99-1.03) | 0.22 |

BW; body weight, CI; 95% confidence interval, LES; low-energy sweetener, n; sample size, OR; Odds ratio, ref; reference variable. Logistic mixed-effects regression.

¹Cited articles can potentially be cited in all evidence assessment units. The aggregated number for subgroups is therefore higher than the total number of cited articles.

²Data on population was only extracted for articles considering human subjects.

³Data on sample size was only extracted for primary evidence (i.e. not for reviews).

⁴Sample size was base 10 log-transformed, so odds ratio is the change per 10-fold change in study population.

Table S10: Subgroup analysis for articles cited (n=56) in systematic reviews with meta-analysis (n=11 evidence assessment units)

| n (%) ¹ | OR (95% CI) | P-value | | | |
|---------------------------------------|---|---|--|--|--|
| Main message of cited articles | | | | | |
| 21 (38) | 1 (ref) | | | | |
| | | | | | |
| 13 (23) | 1.50 (0.85-2.64) | 0.16 | | | |
| 3 (5) | 1.43 (0.50-3.56) | 0.46 | | | |
| | | | | | |
| 3 (5) | 1.15 (0.37-2.99) | 0.79 | | | |
| | | | | | |
| 15 (27) | 1.10 (0.61-1.95) | 0.75 | | | |
| 1 (2) | 0.65 (0.03-3.55) | 0.68 | | | |
| | | | | | |
| | | | | | |
| 29 (52) | 1 (ref) | | | | |
| 27 (48) | 0.94 (0.60-1.45) | 0.77 | | | |
| - | - | - | | | |
| - | - | - | | | |
| - | - | - | | | |
| - | - | - | | | |
| - | - | - | | | |
| Cited article population ² | | | | | |
| 34 (61) | 1 (ref) | | | | |
| 22 (39) | 0.86 (0.54-1.34) | 0.50 | | | |
| - | - | - | | | |
| 56 (100) | 0.97 (0.78-1.20) | 0.81 | | | |
| 56 (100) | 0.95 (0.88-1.04) | 0.27 | | | |
| 56 (100) | 1.11 (0.92-1.31) | 0.26 | | | |
| 56 (100) | 1.11 (0.91-1.33) | 0.28 | | | |
| 56 (100) | 1.01 (0.99-1.03) | 0.39 | | | |
| | 21 (38) 13 (23) 3 (5) 3 (5) 15 (27) 1 (2) 29 (52) 27 (48) - | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | | |

BW; body weight, CI; 95% confidence interval, LES; low-energy sweetener, n; sample size, OR; Odds ratio, ref; reference variable. Logistic mixed-effects regression.

¹Cited articles can potentially be cited in all evidence assessment units. The aggregated number for subgroups is therefore higher than the total number of cited articles.

²Data on population was only extracted for articles considering human subjects.

³Data on sample size was only extracted for primary evidence (i.e. not for reviews).

⁴Sample size was base 10 log-transformed, so odds ratio is the change per 10-fold change in study population.

⁵Journal impact factor was base 2 log-transformed, so odds ratio is the change per 2-fold change in journal impact factor.

| Table S11: Subgroup analysis for articles cited (n=116) in systematic reviews without meta- |
|---|
| analysis (n=14 evidence assessment units) |

| | $n (\%)^1$ | OR (95% CI) | P-value | | |
|---|------------|------------------|---------|--|--|
| Main message of cited articles | | | | | |
| Neutral (no directional effect or | 29 (25) | 1 (ref) | | | |
| association) | | | | | |
| Evidence is insufficient to draw a | 13 (11) | 1.19 (0.71-1.94) | 0.51 | | |
| conclusion | | | | | |
| No conclusion directly relevant to the | 11 (9) | 1.13 (0.65-1.92) | 0.65 | | |
| LES- BW relationship | | | | | |
| Decrease/more beneficial | 28 (24) | 1.06 (0.71-1.61) | 0.77 | | |
| Increase/less beneficial | 28 (24) | 1.02 (0.67-1.54) | 0.93 | | |
| Unable to draw a conclusion from the | 4 (3) | 0.52 (0.15-1.35) | 0.23 | | |
| article | | | | | |
| Cited article type | | | | | |
| Systematic review with meta-analysis | 11 (9) | 1 (ref) | | | |
| Systematic review without meta-analysis | 8 (7) | 0.92 (0.48-1.74) | 0.80 | | |
| Observational study | 49 (42) | 0.67 (0.43-1.08) | 0.09 | | |
| Randomized controlled trial | 39 (34) | 0.61 (0.38-1.00) | 0.04 | | |
| Narrative review | 4 (3) | 0.54 (0.19-1.30) | 0.20 | | |
| Animal | 1 (1) | 0.35 (0.02-1.85) | 0.32 | | |
| Other | 1(1) | 0.35 (0.02-1.85) | 0.32 | | |
| Cited article population ² | | | | | |
| Adults | 62 (53) | 1 (ref) | | | |
| Both | 14 (12) | 1.86 (1.20-2.82) | 0.004 | | |
| Children | 36 (31) | 1.66 (1.20-2.29) | 0.002 | | |
| Sample size ^{3,4} | 88 (76) | 1.03 (0.88-1.20) | 0.74 | | |
| Number of authors | 114 (98) | 1.02 (0.98-1.07) | 0.33 | | |
| Journal impact factor, current (2018) ⁵ | 113 (97) | 1.06 (0.95-1.19) | 0.29 | | |
| Journal impact factor, last five years ⁵ | 112 (97) | 1.06 (0.94-1.19) | 0.33 | | |
| Years since cited article was published | 116 (100) | 1.00 (0.98-1.01) | 0.69 | | |

BW; body weight, CI; 95% confidence interval, LES; low-energy sweetener, n; sample size, OR; Odds ratio, ref; reference variable. Logistic mixed-effects regression.

¹Cited articles can potentially be cited in all evidence assessment units. The aggregated number for subgroups is therefore higher than the total number of cited articles.

²Data on population was only extracted for articles considering human subjects.

³Data on sample size was only extracted for primary evidence (i.e. not for reviews).

⁴Sample size was base 10 log-transformed, so odds ratio is the change per 10-fold change in study population.

| | | · · · · · | |
|---|-------------------------|-------------------------|-----------|
| Main message of cited articles | | | |
| Neutral (no directional effect or | 15 (33) | 1 (ref) | |
| association) | | | |
| Evidence is insufficient to draw a | 2 (4) | 1.39 (0.79-2.34) | 0.23 |
| conclusion | | | |
| Increase/less beneficial | 11 (24) | 1.27 (0.94-1.71) | 0.12 |
| Decrease/more beneficial | 16 (36) | 1.25 (0.95-1.64) | 0.11 |
| No conclusion directly relevant to the | 1 (2) | 0.66 (0.23-1.55) | 0.39 |
| LES- BW relationship | | | |
| We are unable to draw a conclusion from | - | - | - |
| the paper | | | |
| Cited article type | | | |
| Systematic review with meta-analysis | 6 (13) | 1 (ref) | |
| Observational study | 22 (49) | 1.15 (0.81-1.65) | 0.45 |
| Randomized controlled trial | 17 (38) | 1.10 (0.77-1.60) | 0.62 |
| Animal | - | - | - |
| Other | - | - | - |
| Systematic review without meta-analysis | - | - | - |
| Narrative review | - | - | - |
| Cited article population ¹ | | 1 | 1 |
| Adults | 19 (42) | 1 (ref) | |
| Children | 20 (44) | 1.04 (0.82-1.31) | 0.77 |
| Both | 6 (13) | 0.91 (0.63-1.29) | 0.59 |
| Sample size ^{2,3} | 39 (87) | 1.06 (0.94-1.20) | 0.31 |
| Number of authors | 45 (100) | 0.98 (0.94-1.01) | 0.24 |
| Journal impact factor ⁴ | 45 (100) | 1.13 (1.04-1.22) | 0.003 |
| Journal impact factor, last five years ⁴ | 45 (100) | 1.13 (1.03-1.22) | 0.006 |
| Years since cited article was published | 45 (100) | 1.00 (0.99-1.01) | 0.88 |
| BW: body weight CI: 95% confidence interval LES: 1 | our anargu aurastanar i | a complectize OP: Odder | otio rafe |

Table S12: Subgroup analysis of articles cited 5 or more times (n=45) across all evidence assessment units (n = 51)

n (%)

OR (95% CI)

P-value

BW; body weight, CI; 95% confidence interval, LES; low-energy sweetener, n; sample size, OR; Odds ratio, ref; reference variable. Logistic mixed-effects regression.

¹Data on population was only extracted for articles considering human subjects.

²Data on sample size was only extracted for primary evidence (i.e. not for reviews).

³Sample size was base 10 log-transformed, so odds ratio is the change per 10-fold change in study population.