**TABLE 2.** summarize findings by publishing order.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Conclusion** | **Confounding factors adjustment** | **Outcome P-value** | **Outcome**  **Mean ± SD** | | | | | | | | | | | **Duration of follow up** | **Inflammatory factors analyzed** | **Population case/control (number, gender, and age)** | **Study group** | **Study design** | **Study (author, year, country)** |
| No significant relation between GI and CRP in groups | Adjusted for sex, center, ethnicity, and baseline waist circumference, (log)HDL cholesterol, and age | 0.86 | LF/LGI  (N=121) | LF/HGI  (N=116) | | HM/LGI  (N=116) | | | HM/HGI  (N=111) | | HS/HGI  (N=85) | | | 24 weeks | CRP (mg/L) | 548  (230 men/ 318 women, mean age for men 52 ± 10 and women 51 ± 9) | Healthy people | dietary intervention | Jebb, 2010, UK |
| **CRP (mg/L)** | | | | | | | | | | |
| 0.57 (0.16, 1.90) | 0.5 (0.10, 1.95) | | 0.4 (0.14, 1.10) | | | 0.54 (0.20, 1.90) | | 0.7 (0.16, 2.30) | | baseline |
| 0.6 (0.20, 1.70) | 0.7 (0.20, 2.40) | | 0.7 (0.20, 2.00) | | | 0.65 (0.20, 2.30) | | 0.95 (0.30, 1.85) | | Follow-up |
| +8.0 (-13.5, 33.9) | +22.4 (-7.6, 60.3) | | +36.3 (3.0, 78.2) | | | +3.8 (-21.4, 35.6) | | +21.3 (-5.8, 55.2) | | Percentage change |
| No significant relation between GI and CRP in groups | Adjusted for baseline (weight and body fat) or baseline and metformin (other variables) by using the general linear model ANOVA | 0.24 | CHD (n=46) | | | | Low GI (n=50) | | |  | | | | 12 months or until they achieved a 7% weight loss | CRP (mg/L) | 96 (0 men/96 women, mean age: 30.1) | overweight and obese premenopausal women with PCOS | dietary intervention | Marsh, 2010, Australia |
| **CRP (mg/L) change** | | | | | | | | | | |
| 4.6 ± 0.5 | | | | 5.3 ± 0.8 | | | Baseline | | | |
| -0.6 ± 0.7 | | | | -1.2 ± 0.3 | | | Changes from baseline | | | |
| non-digestible carbohydrate (generally low GI carbohydrate) increases inflammatory biomarkers lesser than digestible carbohydrate (high GI carbohydrate) | N/M |  | 0–4 h Postprandial concentration | | 0–2 h Postprandial concentration | | | Fasting concentration | | | | | | 60 minutes before consumption to 240 minutes after consumption | IL-6 (pg/mL)  TNF-a (pg/mL) | 10 (10men/0 women, age 21 ± 2.0) | Healthy people | randomized Crossover study | Priebe, 2010, Netherland |
| **<0.05** | **IL-6 (pg/mL)** | | | | | | | | | | |
| 5.1 ± 0.7 | | 5.2 ± 0.8 | | | 7.0 ± 0.8 | | | | Low GI (n=10) | |
| 19.7 ± 5.1 | | 15.0 ± 4.5 | | | 13.1 ± 4.2 | | | | High GI (n=10) | |
| **<0.05** | **TNF-a (pg/mL)** | | | | | | | | | | |
| 5.3 6 1.6 | | 5.5 6 1.8 | | | 5.7 ± 1.9 | | | | Low GI (n=10) | |
| 7.8 6 2.1 | | 6.7 6 1.7 | | | 6.6 ± 1.8 | | | | High GI (n=10) | |

**Continue TABLE 2.** summarize findings by publishing order.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Conclusion** | **Confounding factors adjustment** | **Outcome P-value** | **Outcome**  **Mean ± SD** | | | | | | | | | | | **Duration of follow up** | **Inflammatory factors analyzed** | **Population case/control (number, gender, and age)** | **Study group** | **Study design** | **Study (author, year, country)** |
| no analyses were performed according to GI | Adjusted for gender, age, and race |  | 59.6 (n=258) | 58.8 (n=284) | 55.8 (n=570) | 55.2 (n=284) | | | 54.4 (n=319) | 50.2 (n=31) | | | reported GI of groups | from baseline and year 2 of the study | IL-6 (pg/mL)  CRP (mg/ml)  TNF-a (pg/mL) | 1751 (percentage of men is different from 36.7% to 83.9% in groups,  aged 70–79) | Aged healthy people | cohort study | Anderson, 2011, USA |
| N/M | **IL-6 (pg/mL) Geometric mean** | | | | | | | | | | |
| 1.8 | 1.8 | 1.9 | 1.9 | | | 1.6 | 2.2 | | |  |
| N/M | **CRP (mg/ml) Geometric mean** | | | | | | | | | | |
| 1.7 | 1.8 | 1.8 | 1.8 | | | 1.6 | 1.5 | | |  |
| N/M | **TNF-a (pg/mL) Geometric mean** | | | | | | | | | | |
| 3.0 | 3.2 | 3.2 | 3.2 | | | 2.9 | 2.9 | | |  |
| No significant relation between GI and CRP in groups | None but Rank transformed for analysis | Overall= 0.13  **Trend= 0.05** | Very Low  Carbohydrate  (n=21) | | Low Glycemic Index  (n=21) | | | Low Fat  (n=21) | | | | Pre–Weight-Loss  Baseline | | Not clear but was During Weight-Loss Maintenance | CRP (mg/L) | 21  (13 men/8 women, aged 30.3) | overweight and obese young adults | controlled 3-way crossover study | Ebbeling1, 2012, USA |
| **CRP (mg/L) changes** | | | | | | | | | | |
| -0.87 (0.57 to 2.69) | | -0.76 (0.50 to 2.20) | | | -0.78 (0.38 to 1.92) | | | | 1.75 (0.44 to 4.61) | |
| no significant relation founded in both TNF and CRP but IL-6 was significantly decreased in the low GI group | N/M | 0.24 | High GI (n=10) | | | | Low GI (n=10) | | | |  | | | Less than a week (24 to 48 h) | TNF (pg/mL)  IL-6 (pg/ml)  CRP (mg/l) | 20 (0 men/20 women, aged 30.3) | overweight and obese women | dietary intervention | McNulty, 2012, USA |
| **TNF (pg/mL)** | | | | | | | | | | |
| 1.79 ± 0.43 | | | | 1.13 ± 0.18 | | | | Pre-exercise | | |
| 1.67 ± 0.26 | | | | 1.06 ± 0.11 | | | | Post-exercise | | |
| 1.20 ± 0.13 | | | | 0.98 ± 0.13 | | | | 24 h | | |
| 1.32 ± 0.18 | | | | 1.12 ± 0.16 | | | | 48 h | | |
| 0.42 | **IL-6 (pg/ml)** | | | | | | | | | | |
| 3.05 ± 0.61 | | | | 2.28 ± 0.52\* | | | | Pre-exercise | | |
| 3.96 ± 0.59 | | | | 3.0 ± 0.52\* | | | | Post-exercise | | |
| 2.84 ± 0.50 | | | | 2.59 ± 0.49\* | | | | 24 h | | |
| 2.64 ± 0.51 | | | | 2.23 ± 0.39\* | | | | 48 h | | |
| 0.59 | **CRP (mg/l)** | | | | | | | | | | |
| 2.46 ± 0.86 | | | | 2.06 ± 0.48 | | | | Pre-exercise | | |
| 2.87 ± 1.06 | | | | 2.00 ± 0.51 | | | | Post-exercise | | |
| 2.81 ± 1.13 | | | | 2.23 ± 0.36 | | | | 24 h | | |
| 2.40 ± 0.77 | | | | 2.13 ± 0.38 | | | | 48 h | | |

**Continue TABLE 2.** summarize findings by publishing order.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Conclusion** | **Confounding factors adjustment** | **Outcome P-value** | **Outcome**  **Mean ± SD** | | | | | | **Duration of follow up** | **Inflammatory factors analyzed** | **Population case/control (number, gender, and age)** | **Study group** | **Study design** | **Study (author, year, country)** |
| changes in GI after 1 year did not have any significant relation between GI and both IL-6 and TNF | Adjusted for sex, age, changes in waist circumference, changes in body mass index, intervention group, physical activity in leisure time, smoking, insulin use, presence of type 2 diabetes mellitus, w-3 fatty-acid intake, and fibre. |  | Q4 (n=128) | Q3 (n=128) | | Q2 (n=129) | | Q1 (n=126) | 1 year | IL-6  (pg/mL)  TNF (pg/mL) | 568,  Q1: 126  Q2: 129  Q3: 128  Q4: 128  (Men: 227/Women: 284, men aged 55-80 years and women 60-80 years) | no cardiovascular disease and met one or more of the two following criteria: three or more cardiovascular risk factors, or type 2 diabetes mellitus | cohort dietary intervention | M. Bullo2, 2013, Spain |
| 0.969 | **IL-6 (pg/mL) change relative to the change in quartile (Q) 1** | | | | | |
| 0.33 (-3.11 to 3.78) | -1.80 (-5.13 to 1.53) | | -0.61  (-3.92 to 2.70) | | 0 |
| 0.798 | **TNF (pg/mL) change relative to the change in quartile (Q) 1** | | | | | |
| 1.63 (\_3.99 to 7.25) | -2.49 (-7.93 to 2.94) | | -0.04 (-5.45 to 5.36) | | 0 |
| GI has a significant relation with HS-CRP but no significant change founded in IL-6 | N/M |  | Controls (n=31) | | | Low GI/GL (n=28) | | | 12 weeks | HS-CRP (μg/mL)  IL-6 (pg/mL) | 61  (Men: 27/ women: 31, age: 61.3 and 63 for Low GI/GL and Controls groups respectively) | type 2 diabetes | dietary intervention | Ariana, 2014, Greece |
| **0.007** | **HS-CRP (μg/mL) change** | | | | | |
| 0.7 ± 0.5 | | | −1.4 ± 0.7 \* | | |
| 0.718 | **IL-6 (pg/mL) change** | | | | | |
| 0.7 ± 0.5 | | | −0.1 ± 0.3 | | |
| no significant relation founded between GI with either IL-6 or TNF-a | N/M | NS | Control Group | | Intervention Group | |  | | early pregnancy and to 28 weeks | TNF-a (pg/mL)  IL-6 (pg/mL) | 621 (0 men/ 621 women, age not mentioned) | Pregnant women | dietary intervention | Wash, 2014, Ireland |
| **TNF-a (pg/mL)** | | | | | |
| 4.60 (2.91-7.57) | | 4.82 (3.02-7.50) | | First trimester | |
| 4.65 (3.09-7.71) | | 5.36 (3.19-7.83) | | 28 weeks | |
| 5.08 (0.88-8.49) | | 5.62 (0.58-9.2) | | Cord | |
| NS | **IL-6 (pg/mL)** | | | | | |
| 9.48 (4.38-26.26) | | 9.70 (4.17-21.1) | | First trimester | |
| 9.37 (4.21-22.34) | | 9.98 (5.38-20.8) | | 28 weeks | |
| 9.17 (3.06-23.91) | | 10.95 (3.55-29.0) | | Cord | |

**Continue TABLE 2.** summarize findings by publishing order.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Conclusion** | **Confounding factors adjustment** | **Outcome P-value** | **Outcome**  **Mean ± SD** | | | | | | **Duration of follow up** | **Inflammatory factors analyzed** | **Population case/control (number, gender, and age)** | **Study group** | **Study design** | **Study (author, year, country)** |
| No significant relation between groups for both IL-6 and CRP | N/M | 0.457 | Low Fat diet (n = 40) | High GI (n = 40) | | Low GI (n = 41) | | | 6 months | IL-6 (pg/mL)  CRP (mg/mL) | 122 (men: 25/women: 97, aged 42.5 to 44.1 in groups) | overweight and obese adults | Controlled clinical trial | Juanola-Falgarona, 2014, Spain |
| **CRP (mg/mL)** | | | | | |
| 3.70±5.59 | 3.58 ± 6.25 | | 2.99 ± 4.34 | | Baseline |
| -20.04 ± 1.72 | -20.07 ± 2.74 | | -20.19 ± 1.78 | | 6-m change |
| 0.162 | **IL-6 (pg/mL)** | | | | | |
| 1.66 ± 1.11 | 1.36 ± 0.90 | | 1.67 ± 1.18 | | Baseline |
| -20.01 ± 0.72 | 0.12 ± 0.91 | | -20.27 ± 0.86 | | 6-m change |
| There is a significant relation between GI with IL-6 and TNF-a | N/M |  | High GI (n=5) | | Low GI (n=5) | | time | | 60 minutes before consumption to 180 minutes after consumption | IL-6 (pg/mL)  TNF-a (pg/mL) | 10  (10men/ 0 women, aged 27 ± 5) | type 1 diabetes | dietary intervention | Campbell3, 2014, UK |
| **<0.05** | **IL-6 (pg/mL)** | | | | | |
| 6 | | 5.8 | | -60 | |
| 5.2 | | 4.8 | | meal | |
| 5.3 | | 4.2 | | 60 | |
| 8.7 a | | 4.5a | | 120 | |
| 8.2 b | | 4.2b | | 180 | |
| **<0.05** | **TNF-a (pg/mL)** | | | | | |
| 5.6 | | 5.8 | | -60 | |
| 4.5 | | 4.5 | | meal | |
| 6.7c | | 3.6c | | 60 | |
| 6.6d | | 4.2d | | 120 | |
| 6.1e | | 3.8e | | 180 | |

**Continue TABLE 2.** summarize findings by publishing order.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Conclusion** | **Confounding factors adjustment** | **Outcome P-value** | **Outcome**  **Mean ± SD** | | | | **Duration of follow up** | **Inflammatory factors analyzed** | **Population case/control (number, gender, and age)** | **Study group** | **Study design** | **Study (author, year, country)** |
| Diet low in GI can significantly reduce HS-CRP in comparison with Conventional Diet | Adjusted for age, BMI, smoking, alcohol consumption, history of hypertension, history of hypercholesterolemia, and duration of diabetes. | **<0.05** | Conventional Diet/ High GI | Low-Intermediate GI | |  | 24 weeks | HS-CRP (mg/dL) | 53 (24 men/ 29 women, mean age 42 ± 2.0 years) | overweight people with type 2 diabetes | dietary intervention | Bahado4-Singh, 2015, Jamaica |
| **HS-CRP (mg/dL)** | | | |
| 1.12 ± 0.30 | 1.36 ± 0.21 | | Baseline |
| -0.33 ± 1.09 | -0.65 ± 0.19 | | Different between week 12 and baseline |
| -0.17 ± 0.31 | -0.52 ± 0.17 | | Different between week 24 and baseline |
| -15.18 | -38.24 | | % Difference between week 24 and baseline |
| No significant relation before and after intervention | N/M | NS | **TNF-a (pg/mL)** | | | | 3 months | TNF-a (pg/mL) | 22 (0men/22 women, age 26.76 ± 5.08) | Women with PCOS | Dietary Intervention | Szczuko, 2018, Poland |
| after | | before | |
| 57.626 (43.48–98.83) | | 59.69 (35.79–104.4) | |
| 1. To convert CRP to nmol/L, multiply by 9.524 2. Population quartile to their glycemic index at baseline. 3. Outcome’s mean is extracted from the article chart by JavaTpoint software (Approximate ( 4. The sampling of studies is 1:1 grouping but the specific size of each group was not mentioned in the text.   \* Was significant within-group after the intervention  outcomes with the same alphabet (abcd)are significant with each other  N/M: Not Mentioned, GI: Glycemic Index, GL: Glycemic Load, IL-6: Interleukin-6, IL-1: Interleukin-1, TNF-a: Tumor Necrosis Factor Alfa, TNF: Tumor Necrosis Factor, CRP: C-Reactive Protein, HS-CRP: High Sensitive C-Reactive Protein, CHD: conventional healthy diet, PCOS: polycystic ovary syndrome, NS: not significant | | | | | | | | | | | | |