**Supplemental table 1**. A detailed description of the search terms used for part 1 and 2 of the systematic search.

|  |  |
| --- | --- |
| *Part 1: Vascular function markers* | |
| Line | Search terms |
| #1 | (l-citrulline OR citrulline OR citrulline malate OR watermelon OR Citrullus lanatus) |
| #2 | (flow mediated vasodilation OR flow mediated vasodilatation OR flow mediated dilation OR flow mediated dilatation OR endothelial function OR endothelium function OR endothelial dysfunction OR endothelium dysfunction OR FMD OR vascular reactivity OR brachial artery OR pulse wave analysis OR pulse wave analyses OR pulse wave velocity OR PWA OR PWV OR transit time OR arterial stiffness OR vascular stiffness OR aortic stiffness OR plethysmography OR blood flow OR forearm blood flow OR contrast-enhanced ultrasound OR CEUS OR vascular function) |
| #3 | (#1 AND #2) |
| *Part 2: Cardiometabolic risk markers* | |
| Line | Search terms |
| #1 | (l-citrulline OR citrulline OR citrulline malate OR watermelon OR Citrullus lanatus) |
| #2 | (glucose OR blood glucose OR insulin OR glucose clamp technique OR glucose clamp OR euglycemic clamp\* OR insulin resistance OR glucose tolerance test OR OGTT OR oral glucose tolerance test OR c peptide OR proinsulin C peptide OR c-peptide OR proinsulin c-peptide OR connecting peptide OR matsuda OR HOMA-IR OR QUICKI) |
| #3 | (#1 AND #2) |

**Supplemental Table 2a**. Cochrane risk of bias assessment for studies investigating longer-term or postprandial effects of L-citrulline supplementation.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Longer-term studies* | Randomization process | Deviations from intended interventions | Missing outcome data | Measurement of the outcome | Selection of the reported result | Overall |  |  |
| Azizi 2021 |  |  |  |  |  |  |  | Low risk  Some concerns  High risk |
| Balderas-Munoz 2012 |  |  |  |  |  |  |  |  |
| Figueroa 2010 |  |  |  |  |  |  |  |  |
| Figueroa 2015 |  |  |  |  |  |  |  |  |
| Figueroa 2016 |  |  |  |  |  |  |  |  |
| Gonzales 2017 |  |  |  |
| Ochiai 2012 |  |  |  |
| Orea-Tejeda 2010 |  |  |  |  |  |  |  |  |
| Safi 2017 |  |  |  |  |  |  |  |  |
| Sanchez-Gonzalez 2013 |  |  |  |  |  |  |  |  |
| Schwedhelm 2007 |  |  |  |  |  |  |  |  |
| Wong 2015 |  |  |  |  |  |  |  |  |
| *Postprandial studies* |  |  |  |  |  |  |  |  |
| Churchward-Venne 2014 |  |  |  |  |  |  |  |  |
| Cutrufello 2015 |  |  |  |  |  |  |  |  |
| Kim 2015 |  |  |  |  |  |  |  |  |
| Ochiai 2012 |  |  |  |  |  |  |  |  |
| Rogers 2020 |  |  |  |
| Trexler 2019 |  |  |  |

**Supplemental Table 2b**. Cochrane risk of bias assessment for studies investigating longer-term or postprandial effects of watermelon consumption.

Low risk

Some concerns

High risk

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Longer-term studies* | Randomization process | Deviations from intended interventions | Missing outcome data | Measurement of the outcome | Selection of the reported result | Overall |  |  |
| Bailey 2016 |  |  |  |  |  |  |  |  |
| Figueroa 2011 |  |  |  |  |  |  |  |  |
| Figueroa 2012 |  |  |  |  |  |  |  |  |
| Figueroa 2013 |  |  |  |  |  |  |  |  |
| Figueroa 2014 |  |  |  |
| *Postprandial studies* |  |  |  |  |  |  |  |  |
| Blohm 2020 |  |  |  |  |  |  |  |  |
| Cutrufello 2015 |  |  |  |  |  |  |  |  |
| Fan 2020 |  |  |  |  |  |  |  |  |
| Martinez-Sanchez 2017 |  |  |  |  |  |  |  |  |
| Robert 2008 |  |  |  |  |  |  |  |  |