**Suppl 1:** Baseline characteristics of included studies.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ID | Groups | NO | Gender n(%) | Age,y mean(SD) | BMI, kg/m² mean(SD) | Dose | SeHCAT % mean(SD) | Haemoglobin, mmol/L mean(SD) | Albumin, g/L mean(SD) | eGFR, mL/min per 1·73 m² mean(SD) | Potassium, mmol/L mean(SD) | Sodium, mmol/L mean(SD) | Creatinine, mmol/L mean(SD) | ALT, U/L mean(SD) | Alkaline phosphatase, U/L mean(SD) | Bilirubin, µmol/l mean(SD) |
| Male | Female |
| Appleby et al. 2017 [16] | Cholestyramine (1 g/day) | 7 | 4 (57.1) | 3 (42.9) | 46.4 (20.4) | 28.7 (5.1) | 1 g/day | \_ | \_ |  |  |  |  |  |  |  |  |
| Cholestyramine (250 mg/day) | 6 | 4 (66.7) | 2 (33.3) | 50 (21.28) | 28.4 (5.17) | 250 mg/day | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Placebo | 6 | 3 (50) | 3 (50) | 38.7 (17.57) | 26.6 (4.44) | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Beigel et al. 2014 [17] | Colesevelam  | 15 | 9 (60) | 6(40) | 47.5(10.69) | 77.3(14.96)\* | 625 mg/day | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Placebo | 11 | 1 (9) | 10(91) | 44.6 (11.26) | 73.95 (16.76)\* | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Camilleri et al. 2020 | Tropifexor (60 μg/day)-placebo | 10 | 6 (60) | 4 (40) | 49.25 (12.17) | 35.55 (8.86) | 60 µg/ day | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Placebo-tropifexor (60 μg/day) | 10 | 2 (20) | 8 (80) | 58.25 (13.4) | 34.2 (8.4) | 60 µg/ day | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Devarakonda et al. 2019 | Colesevelam  | 17 | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Cholestyramine | 10 | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Loperamide | 12 | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Colesevelam and Loperamide | 5 | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Kårhus et al. 2022 [20] | Liraglutide | 25 | 7 (27) | 18 (69) | 51.7 (13.3) | 31·5 (5·6) | up-titrated from 0·6 mg to 1·8 mg/day | 3·6 (3·4) | 8·7 (0·5) | 40·7 (3·2) | 87·2 (8·1) | 3·8 (0·3) | 141·0 (2·0) | 66·6 (10·4) | 31·7 (14·7) | 81·2 (20·5) | 9·9 (3·4) |
| Colesevelam | 25 | 11 (42) | 14 (54) | 48.7 (12.8) | 28·3 (4·1) |  625 mg/twice daily | 4·4 (3·2) | 8·9 (0·8) | 41·5 (3·1) | 89·1 (2·6) | 4·0 (0·3) | 141·4 (1·8) | 65·3 (9·6) | 34·8 (17·7) | 75·3 (15·0) | 9·6 (3·0) |
| Odunsi–Shiyanbade et al. 2010 (B) | Colesevelam | 12 | \_ | \_ | \_ | \_ | 1.875 g/twice daily | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Placebo | 12 | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Vijayvargiya 2020 | Colesevelam  | 15 | 2 (13.3) | 13 (86.67) | 54.75 (7.83) | 32.95 (2.39) | 625 mg, 3 tabs/day | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| Placebo | 15 | 4 (26.67) | 11 (73.34) | 43.5 (5.2) | 32.78 (2.52) | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ | \_ |
| \*Weight per Kg |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |