**Table 2**: Epidemiological prospective cohort studies on dietary intake of flavonoids and colorectal cancer risk.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Flavonoid subclass** | **Certain compound** | **Cancer subsite** | **Studya** | **Population** | **Median follow-up (years)** | **Gen-derb** | **Cases/cohort** | **Intake comparison (low vs.** **high, mg/day)c** | **Multivariate-adjusted RR/HRd** | **P for trende** | **Commentsf** | **Refe-rence** |
| **Flavonoids** |  |  | NHS, HPFS | American | 10 | F, M | 878/107401 | (Q5) | 1.19 (0.94-1.49) | 0.15 | 30-75 y | [15] |
| **Flavonoids** |  |  | HPFS | American | 10 | M | 380/35425 | < 10.7 vs. > 30.5 (Q5) | 1.28 (0.89-1.83) | 0.21 | 40-75 y | [15] |
| **Flavonoids** |  |  | NHS | American | 10 | F | 498/71976 | < 9.6 vs. > 31.1 (Q5) | 1.13 (0.83-1.52) | 0.42 | 30-55 y | [15] |
| **Flavonoids** |  |  | WHS | American | 11.5 | F | 305/38408 | (Q5) | 1.01 (0.68-1.49) | 0.47 | ≥ 45 y | [26] |
| **Flavonoids** |  |  | FMC | Finnish | 24 | F, M | 72/9959 | < 2.1 vs. > 4.8 (M); < 2.4 vs. > 5.5 (F) | 0.74 (0.32-1.68) |  | 15-90 y | [27] |
| **Flavonoids** |  |  | FMC | Finnish | 30 | F, M | 90/9865 | 4.3 vs. 26.9 (M); 8.5 vs. 39.5 (F) (Q4) | 0.84 (0.43-1.64) | 0.95 |  | [28] |
| **Flavonoids** |  |  | KIHD | Finnish | 16.2 | M | 55/2590 | 9.1 vs. 416.3 (Q4) | 1.14 (0.70-1.84) | 0.970 | 42-60 y | [29] |
| **Flavonoids** |  | Colon, large bowel | NLCS | Dutch | 4.3 | F, M | 603/3123 | 12.7 vs. 43.5 (Q5) | 0.97 (0.71-1.32) | 0.950 | 55-69 y | [30] |
| **Flavones** |  |  | HPFS, NHS | American | 26 | F, M | 2519/118842 | (Q5) | 1.01 (0.89-1.15) | 0.81 | 30-75 y | [17] |
| **Flavones** |  |  | HPFS | American | 26 | M | 1061/42478 | (Q5) | 1.04 (0.85-1.27) | 0.67 | 40-75 y | [17] |
| **Flavones** |  |  | NHS | American | 26 | F | 1458/76364 | (Q5) | 0.99 (0.83-1.18) | 0.91 | 30-55 y | [17] |
| **Flavones** |  |  | KIHD | Finnish | 16.2 | M | 55/2590 | (Q4) | 0.73 (0.44-1.22) | 0.183 | 42-60 y | [29] |
| **Flavones** |  | Colon | HPFS, NHS | American | 26 | F, M | 1982/118842 | (Q5) | 1.07 (0.92-1.24) | 0.31 | 30-75 y | [17] |
| **Flavones** |  | Colon | HPFS | American | 26 | M | 831/42478 | (Q5) | 1.12 (0.89-1.40) | 0.33 | 40-75 y | [17] |
| **Flavones** |  | Colon | NHS | American | 26 | F | 1151/76364 | (Q5) | 1.00 (0.83-1.22) | 0.66 | 30-55 y | [17] |
| **Flavones** |  | Rectum | HPFS, NHS | American | 26 | F, M | 537/118842 | (Q5) | 0.81 (0.60-1.08) | 0.15 | 30-75 y | [17] |
| **Flavones** |  | Rectum | HPFS | American | 26 | M | 230/42478 | (Q5) | 0.75 (0.47-1.19) | 0.34 | 40-75 y | [17] |
| **Flavones** |  | Rectum | NHS | American | 26 | F | 307/76364 | (Q5) | 0.85 (0.58-1.24) | 0.27 | 30-55 y | [17] |
| **Flavonols** |  |  | HPFS, NHS | American | 26 | F, M | 2519/118842 | (Q5) | 1.04 (0.91-1.18) | 0.10 | 30-75 y | [17] |
| **Flavonols** |  |  | HPFS | American | 26 | M | 1061/42478 | (Q5) | 1.00 (0.82-1.22) | 0.25 | 40-75 y | [17] |
| **Flavonols** |  |  | NHS | American | 26 | F | 1458/76364 | (Q5) | 1.06 (0.90-1.26) | 0.23 | 30-55 y | [17] |
| **Flavonols** |  |  | KIHD | Finnish | 16.2 | M | 55/2590 | (Q4) | 0.99 (0.61-1.62) | 0.661 | 42-60 y | [29] |
| **Flavonols** |  | Colon | HPFS, NHS | American | 26 | F, M | 1982/118842 | (Q5) | 1.01 (0.86-1.17) | 0.16 | 30-75 y | [17] |
| **Flavonols** |  | Colon | HPFS | American | 26 | M | 831/42478 | (Q5) | 1.02 (0.82-1.28) | 0.16 | 40-75 y | [17] |
| **Flavonols** |  | Colon | NHS | American | 26 | F | 1151/76364 | (Q5) | 1.01 (0.83-1.22) | 0.54 | 30-55 y | [17] |
| **Flavonols** |  | Rectum | HPFS, NHS | American | 26 | F, M | 537/118842 | (Q5) | 1.11 (0.79-1.57) | 0.37 | 30-75 y | [17] |
| **Flavonols** |  | Rectum | HPFS | American | 26 | M | 230/42478 | (Q5) | 0.92 (0.59-1.42) | 0.86 | 40-75 y | [17] |
| **Flavonols** |  | Rectum | NHS | American | 26 | F | 307/76364 | (Q5) | 1.30 (0.90-1.90) | 0.15 | 30-55 y | [17] |
| **Flavonols** | **Kaempferol** |  | NHS, HPFS | American | 10 | F, M | 878/107401 | (Q5) | 1.12 (0.90-1.39) | 0.25 | 30-75 y | [15] |
| **Flavonols** | **Kaempferol** |  | HPFS | American | 10 | M | 380/35425 | (Q5) | 1.09 (0.78-1.52) | 0.29 | 40-75 y | [15] |
| **Flavonols** | **Kaempferol** |  | NHS | American | 10 | F | 498/71976 | (Q5) | 1.14 (0.85-1.52) | 055 | 30-55 y | [15] |
| **Flavonols** | **Kaempferol** |  | NLCS | Dutch | 13.3 | M | 1271/58279 | < 3.5 vs. 9.7-32.2 (Q5) | 0.94 (0.74-1.19) | 0.52 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Kaempferol** |  | NLCS | Dutch | 13.3 | F | 948/62573 | < 4.4 vs. 10.8-28.5 (Q5) | 0.88 (0.68-1.13) | 0.46 | 55-69 y; significant inverse association for women with BMI < 25 [0.69 (0.49-0.98), p 0.04\*], not ≥ 25 | [5] |
| **Flavonols** | **Kaempferol** |  | FMC | Finnish | 30 | F, M | 90/9865 | 0.1 vs. 0.8 (M); 0.2 vs. 0.9 (F) (Q4) | 1.13 (0.60-2.12) | 0.96 |  | [28] |
| **Flavonols** | **Kaempferol** | Colon | NLCS | Dutch | 13.3 | M | 820/58279 | < 3.5 vs. 9.7-32.2 (Q5) | 1.01 (0.77-1.33) | 0.92 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Kaempferol** | Colon | NLCS | Dutch | 13.3 | F | 695/62573 | < 4.4 vs. 10.8-28.5 (Q5) | 0.89 (0.68-1.17) | 0.44 | 55-69 y; stronger insignificant inverse association for women with BMI < 25, not ≥ 25 | [5] |
| **Flavonols** | **Kaempferol** | Colon, large bowel | NLCS | Dutch | 4.3 | F, M | 603/3123 | 2.4 vs. 12.4 (Q5) | 0.86 (0.64-1.17) | 0.734 | 55-69 y | [30] |
| **Flavonols** | **Kaempferol** | Rectum | NLCS | Dutch | 13.3 | M | 326/58279 | < 3.5 vs. 9.7-32.2 (Q5) | 0.88 (0.62-1.26) | 0.59 | 55-69 y; no significant effect modification by BMI ( < 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Kaempferol** | Rectum | NLCS | Dutch | 13.3 | F | 175/62573 | < 4.4 vs. 10.8-28.5 (Q5) | 0.95 (0.58-1.56) | 0.99 | 55-69 y; no significant effect modification by BMI ( < 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Myricetin** |  | NHS, HPFS | American | 10 | F, M | 878/107401 | (Q5) | 1.07 (0.67-1.59) | 0.70 | 30-75 y | [15] |
| **Flavonols** | **Myricetin** |  | HPFS | American | 10 | M | 380/35425 | (Q5) | 1.33 (0.93-1.89) | 0.43 | 40-75 y | [15] |
| **Flavonols** | **Myricetin** |  | NHS | American | 10 | F | 498/71976 | (Q5) | 0.89 (0.67-1.18) | 0.96 | 30-55 y | [15] |
| **Flavonols** | **Myricetin** |  | NLCS | Dutch | 13.3 | M | 1271/58279 | < 0.6 vs. 2.1-9.2 (Q5) | 0.94 (0.74-1.20) | 0.59 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Myricetin** |  | NLCS | Dutch | 13.3 | F | 948/62573 | < 0.9 vs. 2.3-7.4 (Q5) | 0.89 (0.69-1.14) | 0.40 | 55-69 y; significant inverse association for women with BMI < 25 [0.66 (0.47-0.94), p 0.03\*], not ≥ 25 | [5] |
| **Flavonols** | **Myricetin** |  | FMC | Finnish | 30 | F, M | 90/9865 | 0 vs. 0.11 (M); 0.03 vs. 0.20 (F) (Q4) | 1.31 (0.71-2.43) | 0.39 |  | [28] |
| **Flavonols** | **Myricetin** | Colon | NLCS | Dutch | 13.3 | M | 820/58279 | < 0.6 vs. 2.1-9.2 (Q5) | 1.01 (0.77-1.33) | 0.94 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Myricetin** | Colon | NLCS | Dutch | 13.3 | F | 695/62573 | < 0.9 vs. 2.3-7.4 (Q5) | 0.87 (0.66-1.15) | 0.27 | 55-69 y; significant inverse association for women with BMI < 25 [0.68 (0.47-0.99), p 0.05\*], not ≥ 25 | [5] |
| **Flavonols** | **Myricetin** | Rectum | NLCS | Dutch | 13.3 | M | 326/58279 | < 0.6 vs. 2.1-9.2 (Q5) | 0.85 (0.60-1.22) | 0.39 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Myricetin** | Rectum | NLCS | Dutch | 13.3 | F | 175/62573 | < 0.9 vs. 2.3-7.4 (Q5) | 1.05 (0.63-1.75) | 0.59 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Quercetin** |  | NHS, HPFS | American | 10 | F, M | 878/107401 | (Q5) | 1.06 (0.84-1.34) | 0.23 | 30-75 y | [15] |
| **Flavonols** | **Quercetin** |  | HPFS | American | 10 | M | 380/35425 | (Q5) | 1.16 (0.80-1.68) | 0.40 | 40-75 y | [15] |
| **Flavonols** | **Quercetin** |  | NHS | American | 10 | F | 498/71976 | (Q5) | 1.01 (0.75-1.35) | 0.40 | 30-55 y | [15] |
| **Flavonols** | **Quercetin** |  | NLCS | Dutch | 13.3 | M | 1271/58279 | 0.6-10.8 vs. 24.8-73.6 (Q5) | 0.95 (0.74-1.21) | 0.74 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Quercetin** |  | NLCS | Dutch | 13.3 | F | 948/62573 | 0.5-12.3 vs. 26.1-65.6 (Q5) | 0.89 (0.69-1.16) | 0.55 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Quercetin** |  | FMC | Finnish | 30 | F, M | 90/9865 | 1.5 vs. 3.9 (M); 1.8 vs 4.7 (F) (Q4) | 0.62 (0.33-1.17) | 0.22 |  | [28] |
| **Flavonols** | **Quercetin** | Colon | NLCS | Dutch | 13.3 | M | 820/58279 | 0.6-10.8 vs. 24.8-73.6 (Q5) | 0.92 (0.70-1.21) | 0.54 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Quercetin** | Colon | NLCS | Dutch | 13.3 | F | 695/62573 | 0.5-12.3 vs. 26.1-65.6 (Q5) | 0.93 (0.70-1.23) | 0.75 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Quercetin** | Colon, large bowel | NLCS | Dutch | 4.3 | F, M | 603/3123 | 8.4 vs. 30.3 (Q5) | 1.06 (0.77-1.45) | 0.593 | 55-69 y | [30] |
| **Flavonols** | **Quercetin** | Rectum | NLCS | Dutch | 13.3 | M | 326/58279 | 0.6-10.8 vs. 24.8-73.6 (Q5) | 0.98 (0.67-1.42) | 0.70 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavonols** | **Quercetin** | Rectum | NLCS | Dutch | 13.3 | F | 175/62573 | 0.5-12.3 vs. 26.1-65.6 (Q5) | 0.93 (0.56-1.55) | 0.78 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanones** |  |  | HPFS, NHS | American | 26 | F, M | 2519/118842 | (Q5) | 0.96 (0.84-1.10) | 0.62 | 30-75 y | [17] |
| **Flavanones** |  |  | HPFS | American | 26 | M | 1061/42478 | (Q5) | 1.02 (0.83-1.25) | 0.98 | 40-75 y | [17] |
| **Flavanones** |  |  | NHS | American | 26 | F | 1458/76364 | (Q5) | 0.93 (0.78-1.10) | 0.48 | 30-55 y | [17] |
| **Flavanones** |  |  | KIHD | Finnish | 16.2 | M | 55/2590 | (Q4) | 1.10 (0.64-1.89) | 0.587 | 42-60 y | [29] |
| **Flavanones** |  | Colon | HPFS, NHS | American | 26 | F, M | 1982/118842 | (Q5) | 0.96 (0.83-1.12) | 0.92 | 30-75 y | [17] |
| **Flavanones** |  | Colon | HPFS | American | 26 | M | 831/42478 | (Q5) | 1.01 (0.80-1.28) | 0.90 | 40-75 y | [17] |
| **Flavanones** |  | Colon | NHS | American | 26 | F | 1151/76364 | (Q5) | 0.93 (0.77-1.13) | 0.77 | 30-55 y | [17] |
| **Flavanones** |  | Rectum | HPFS, NHS | American | 26 | F, M | 537/118842 | (Q5) | 0.95 (0.71-1.27) | 0.33 | 30-75 y | [17] |
| **Flavanones** |  | Rectum | HPFS | American | 26 | M | 230/42478 | (Q5) | 1.00 (0.64-1.56) | 0.66 | 40-75 y | [17] |
| **Flavanones** |  | Rectum | NHS | American | 26 | F | 307/76364 | (Q5) | 0.92 (0.63-1.34) | 0.34 | 30-55 y | [17] |
| **Flavanones** | **Hesperetin** |  | FMC | Finnish | 30 | F, M | 90/9865 | 0 vs. 15.4 (M); 3.2 vs. 26.8 (F) (Q4) | 0.97 (0.50-1.90) | 0.84 |  | [28] |
| **Flavanones** | **Naringenin** |  | FMC | Finnish | 30 | F, M | 90/9865 | 0 vs. 4.7 (M); 0.9 vs. 7.7 (F) (Q4) | 0.93 (0.48-1.82) | 1.00 |  | [28] |
| **Flavanols** |  |  | HPFS, NHS | American | 26 | F, M | 2519/118842 | (Q5) | 1.07 (0.95-1.21) | 0.09 | 30-75 y | [17] |
| **Flavanols** |  |  | HPFS | American | 26 | M | 1061/42478 | (Q5) | 1.12 (0.92-1.36) | 0.18 | 40-75 y | [17] |
| **Flavanols** |  |  | NHS | American | 26 | F | 1458/76364 | (Q5) | 1.04 (0.88-1.23) | 0.25 | 30-55 y | [17] |
| **Flavanols** |  |  | NLCS | Dutch | 13.3 | M | 1271/58279 | < 24.2 vs. 84.3-290.1 (Q5) | 0.99 (0.77-1.25) | 0.65 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** |  |  | NLCS | Dutch | 13.3 | F | 948/62573 | < 36.2 vs. 95.9-287.3 (Q5) | 0.79 (0.61-1.02) | 0.20 | 55-69 y; significant inverse association for women with BMI < 25 [0.60 (0.43-0.86), p 0.02\*], not ≥ 25 | [5] |
| **Flavanols** |  |  | KIHD | Finnish | 16.2 | M | 55/2590 | (Q4) | 1.13 (0.70-1.82) | 0.941 | 42-60 y | [29] |
| **Flavanols** |  | Colon | HPFS, NHS | American | 26 | F, M | 1982/118842 | (Q5) | 1.09 (0.93-1.27) | 0.16 | 30-75 y | [17] |
| **Flavanols** |  | Colon | HPFS | American | 26 | M | 831/42478 | (Q5) | 1.20 (0.96-1.50) | 0.13 | 40-75 y | [17] |
| **Flavanols** |  | Colon | NHS | American | 26 | F | 1151/76364 | (Q5) | 1.02 (0.85-1.23) | 0.52 | 30-55 y | [17] |
| **Flavanols** |  | Colon | IWHS | American | 13 | F | 635/34651 | 3.6 vs. 75.1 (Q5) | 1.10 (0.85-1.44) | 0.63 | 55-69 y; postmenopausal | [31] |
| **Flavanols** |  | Colon | NLCS | Dutch | 13.3 | M | 820/58279 | < 24.2 vs. 84.3-290.1 (Q5) | 1.13 (0.86-1.48) | 0.65 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** |  | Colon | NLCS | Dutch | 13.3 | F | 695/62573 | < 36.2 vs. 95.9-287.3 (Q5) | 0.82 (0.62-1.09) | 0.25 | 55-69 y; significant inverse association for women with BMI < 25 [0.62 (0.43-0.91), p 0.04\*], not ≥ 25 | [5] |
| **Flavanols** |  | Colon, proximal | IWHS | American | 13 | F | 352/34651 | 3.6 vs. 75.1 (Q5) | 1.18 (0.84-1.66) | 0.11 | 55-69 y; postmenopausal | [31] |
| **Flavanols** |  | Colon, distal | IWHS | American | 13 | F | 268/34651 | 3.6 vs. 75.1 (Q5) | 1.04 (0.67-1.62) | 0.37 | 55-69 y; postmenopausal | [31] |
| **Flavanols** |  | Rectum | HPFS, NHS | American | 26 | F, M | 537/118842 | (Q5) | 1.02 (0.78-1.34) | 0.25 | 30-75 y | [17] |
| **Flavanols** |  | Rectum | HPFS | American | 26 | M | 230/42478 | (Q5) | 0.90 (0.60-1.35) | 0.97 | 40-75 y | [17] |
| **Flavanols** |  | Rectum | NHS | American | 26 | F | 307/76364 | (Q5) | 1.13 (0.79-1.63) | 0.20 | 30-55 y | [17] |
| **Flavanols** |  | Rectum | IWHS | American | 13 | F | 132/34651 | 3.6 vs. 75.1 (Q4) | 0.55 (0.32-0.95) | 0.02\* | 55-69 y; postmenopausal | [31] |
| **Flavanols** |  | Rectum | NLCS | Dutch | 13.3 | M | 326/58279 | < 24.2 vs. 84.3-290.1 (Q5) | 0.80 (0.56-1.14) | 0.24 | 55-69 y; significant inverse association for men with BMI ≥ 25 [0.63 (0.36-1.08), p 0.04\*], not < 25 | [5] |
| **Flavanols** |  | Rectum | NLCS | Dutch | 13.3 | F | 175/62573 | < 36.2 vs. 95.9-287.3 (Q5) | 0.80 (0.48-1.33) | 0.69 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(+)-Catechin** |  | NLCS | Dutch | 13.3 | M | 1271/58279 | < 2.4 vs. 5.7-36.4 (Q5) | 0.99 (0.78-1.26) | 0.81 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(+)-Catechin** |  | NLCS | Dutch | 13.3 | F | 948/62573 | < 2.7 vs. 6.2-23.2 (Q5) | 0.83 (0.64-1.09) | 0.14 | 55-69 y; significant inverse association for women with BMI < 25 [0.74 (0.52-1.06), p 0.04\*], not ≥ 25 | [5] |
| **Flavanols** | **(+)-Catechin** | Colon | NLCS | Dutch | 13.3 | M | 820/58279 | < 2.4 vs. 5.7-36.4 (Q5) | 1.04 (0.79-1.35) | 0.99 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(+)-Catechin** | Colon | NLCS | Dutch | 13.3 | F | 695/62573 | < 2.7 vs. 6.2-23.2 (Q5) | 0.81 (0.60-1.09) | 0.08 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(+)-Catechin** | Rectum | NLCS | Dutch | 13.3 | M | 326/58279 | < 2.4 vs. 5.7-36.4 (Q5) | 0.80 (0.56-1.16) | 0.28 | 55-69 y; significant inverse association for men with BMI ≥ 25 [0.52 (0.30-0.92), p 0.03\*], not < 25 | [5] |
| **Flavanols** | **(+)-Catechin** | Rectum | NLCS | Dutch | 13.3 | F | 175/62573 | < 2.7 vs. 6.2-23.2 (Q5) | 0.80 (0.48-1.33) | 0.61 | 55-69 y; stronger insignificant inverse association for women with BMI < 25, not ≥ 25 | [5] |
| **Flavanols** | **(-)-Epicatechin** |  | NLCS | Dutch | 13.3 | M | 1271/58279 | < 6.7 vs. 18.2-53.9 (Q5) | 1.08 (0.85-1.38) | 0.97 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epicatechin** |  | NLCS | Dutch | 13.3 | F | 948/62573 | < 8.6 vs. 20.4-51.4 (Q5) | 0.85 (0.66-1.10) | 0.16 | 55-69 y; significant inverse association for women with BMI < 25 [0.74 (0.52-1.05), p 0.04\*], not ≥ 25 | [59 |
| **Flavanols** | **(-)-Epicatechin** | Colon | NLCS | Dutch | 13.3 | M | 820/58279 | < 6.7 vs. 18.2-53.9 (Q5) | 1.07 (0.81-1.41) | 0.82 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epicatechin** | Colon | NLCS | Dutch | 13.3 | F | 695/62573 | < 8.6 vs. 20.4-51.4 (Q5) | 0.80 (0.61-1.06) | 0.07 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epicatechin** | Rectum | NLCS | Dutch | 13.3 | M | 326/58279 | < 6.7 vs. 18.2-53.9 (Q5) | 0.94 (0.64-1.36) | 0.60 | 55-69 y; significant inverse association for men with BMI ≥ 25 [0.66 (0.38-1.16), p 0.05\*], not < 25 | [5] |
| **Flavanols** | **(-)-Epicatechin** | Rectum | NLCS | Dutch | 13.3 | F | 175/62573 | < 8.6 vs. 20.4-51.4 (Q5) | 0.85 (0.49-1.48) | 0.64 | 55-69 y; stronger insignificant inverse association for women with BMI < 25, not ≥ 25 | [5] |
| **Flavanols** | **(-)-Epicatechin gallate** |  | NLCS | Dutch | 13.3 | M | 1271/58279 | < 7.3 vs. 29.1-109.0 (Q5) | 1.01 (0.79-1.29) | 0.76 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epicatechin gallate** |  | NLCS | Dutch | 13.3 | F | 948/62573 | < 7.4 vs. 29.5-109.2 (Q5) | 0.81 (0.62-1.04) | 0.23 | 55-69 y; significant inverse association for women with BMI < 25 [0.60 (0.42-0.86), p 0.02\*], not ≥ 25 | [5] |
| **Flavanols** | **(-)-Epicatechin gallate** | Colon | NLCS | Dutch | 13.3 | M | 820/58279 | < 7.3 vs. 29.1-109.0 (Q5) | 1.23 (0.93-1.61) | 0.30 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epicatechin gallate** | Colon | NLCS | Dutch | 13.3 | F | 695/62573 | < 7.4 vs. 29.5-109.2 (Q5) | 0.85 (0.64-1.12) | 0.35 | 55-69 y; stronger insignificant inverse association for women with BMI < 25, not ≥ 25 | [5] |
| **Flavanols** | **(-)-Epicatechin gallate** | Rectum | NLCS | Dutch | 13.3 | M | 326/58279 | < 7.3 vs. 29.1-109.0 (Q5) | 0.75 (0.52-1.07) | 0.11 | 55-69 y; stronger insignificant inverse association for men with BMI ≥ 25, not < 25 | [5] |
| **Flavanols** | **(-)-Epicatechin gallate** | Rectum | NLCS | Dutch | 13.3 | F | 175/62573 | < 7.4 vs. 29.5-109.2 (Q5) | 0.83 (0.49-1.38) | 0.65 | 55-69 y; stronger insignificant inverse association for women with BMI < 25, not ≥ 25 | [5] |
| **Flavanols** | **(-)-Epigallocatechin** |  | NLCS | Dutch | 13.3 | M | 1271/58279 | < 1.8 vs. 6.9-25.8 (Q5) | 0.96 (0.76-1.23) | 0.43 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epigallocatechin** |  | NLCS | Dutch | 13.3 | F | 948/62573 | < 2.4 vs. 7.6-25.0 (Q5) | 0.83 (0.65-1.08) | 0.39 | 55-69 y; significant inverse association for women with BMI < 25 [0.59 (0.42-0.83), p 0.02\*], not ≥ 25 | [5] |
| **Flavanols** | **(-)-Epigallocatechin** | Colon | NLCS | Dutch | 13.3 | M | 820/58279 | < 1.8 vs. 6.9-25.8 (Q5) | 1.12 (0.85-1.46) | 0.71 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epigallocatechin** | Colon | NLCS | Dutch | 13.3 | F | 695/62573 | < 2.4 vs. 7.6-25.0 (Q5) | 0.86 (0.65-1.13) | 0.44 | 55-69 y; significant inverse association for women with BMI < 25 [0.61 (0.42-0.89), p 0.05\*], not ≥ 25 | [5] |
| **Flavanols** | **(-)-Epigallocatechin** | Rectum | NLCS | Dutch | 13.3 | M | 326/58279 | < 1.8 vs. 6.9-25.8 (Q5) | 0.83 (0.59-1.19) | 0.19 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epigallocatechin** | Rectum | NLCS | Dutch | 13.3 | F | 175/62573 | < 2.4 vs. 7.6-25.0 (Q5) | 0.85 (0.51-1.42) | 0.82 | 55-69 y; stronger insignificant inverse association for women with BMI < 25, not ≥ 25 | [5] |
| **Flavanols** | **(-)-Epigallocatechin gallate** |  | NLCS | Dutch | 13.3 | M | 1271/58279 | < 5.4 vs. 24.3-81.0 (Q5) | 0.95 (0.74-1.22) | 0.46 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epigallocatechin gallate** |  | NLCS | Dutch | 13.3 | F | 948/62573 | < 5.4 vs. 24.3-81.0 (Q5) | 0.80 (0.62-1.03) | 0.25 | 55-69 y; significant inverse association for women with BMI < 25 [0.57 (0.40-0.81), p 0.01\*], not ≥ 25 | [5] |
| **Flavanols** | **(-)-Epigallocatechin gallate** | Colon | NLCS | Dutch | 13.3 | M | 820/58279 | < 5.4 vs. 24.3-81.0 (Q5) | 1.05 (0.79-1.39) | 0.80 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epigallocatechin gallate** | Colon | NLCS | Dutch | 13.3 | F | 695/62573 | < 5.4 vs. 24.3-81.0 (Q5) | 0.82 (0.62-1.08) | 0.29 | 55-69 y; significant inverse association for women with BMI < 25 [0.59 (0.40-0.86), p 0.03\*], not ≥ 25 | [5] |
| **Flavanols** | **(-)-Epigallocatechin gallate** | Rectum | NLCS | Dutch | 13.3 | M | 326/58279 | < 5.4 vs. 24.3-81.0 (Q5) | 0.85 (0.58-1.24) | 0.26 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(-)-Epigallocatechin gallate** | Rectum | NLCS | Dutch | 13.3 | F | 175/62573 | < 5.4 vs. 24.3-81.0 (Q5) | 0.84 (0.51-1.40) | 0.75 | 55-69 y; stronger insignificant inverse association for women with BMI < 25, not ≥ 25 | [5] |
| **Flavanols** | **(+)-Gallocatechin** |  | NLCS | Dutch | 13.3 | M | 1271/58279 | < 0.9 vs. 4.3-16.5 (Q5) | 1.01 (0.79-1.31) | 0.63 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(+)-Gallocatechin** |  | NLCS | Dutch | 13.3 | F | 645/58279 | < 0.9 vs. 4.3-11.1 (Q5) | 0.95 (0.66-1.38) | 0.59 | 55-69 y; BMI ≥ 25; significant inverse association for women with BMI < 25 [0.60/0.42-0.86), p 0.02\*], not ≥ 25 | [5] |
| **Flavanols** | **(+)-Gallocatechin** | Colon | NLCS | Dutch | 13.3 | M | 820/58279 | < 0.9 vs. 4.3-16.5 (Q5) | 1.24 (0.93-1.66) | 0.46 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(+)-Gallocatechin** | Colon | NLCS | Dutch | 13.3 | F | 695/62573 | < 1.2 vs. 4.4-16.0 (Q5) | 0.84 (0.63-1.11) | 0.39 | 55-69 y; significant inverse association for women with BMI < 25 [0.62 (0.42-0.92), p 0.05\*], not ≥ 25 | [5] |
| **Flavanols** | **(+)-Gallocatechin** | Rectum | NLCS | Dutch | 13.3 | M | 326/58279 | < 0.9 vs. 4.3-16.5 (Q5) | 0.74 (0.50-1.09) | 0.17 | 55-69 y; no significant effect modification by BMI (< 25 vs. ≥ 25) | [5] |
| **Flavanols** | **(+)-Gallocatechin** | Rectum | NLCS | Dutch | 13.3 | F | 175/62573 | < 1.2 vs. 4.4-16.0 (Q5) | 0.84 (0.51-1.38) | 0.71 | 55-69 y; stronger insignificant inverse association for women with BMI < 25, not ≥ 25 | [5] |
| **Isoflavones** |  |  | SWHS | Chinese | 6.4 | F | 321/68412 | (T3) | 0.76 (0.56-1.01) | 0.06 | 40-70 y | [16] |
| **Isoflavones** |  |  | JPHC | Japanese | 7.6 | M | 886/39069 | (Q4) | 0.89 (0.67-1.17) | 0.25 | 45-74 y | [3] |
| **Isoflavones** |  |  | JPHC | Japanese | 7.6 | F | 886/43994 | (Q4) | 1.07 (0.78-1.47) | 0.44 | 45-74 y | [3] |
| **Isoflavones** |  | Colon | JPHC | Japanese | 7.6 | M | 886/39069 | (Q4) | 0.76 (0.55-1.07) | 0.08 | 45-74 y | [3] |
| **Isoflavones** |  | Colon | JPHC | Japanese | 7.6 | F | 886/43994 | (Q4) | 1.11 (0.77-1.61) | 0.43 | 45-74 y | [3] |
| **Isoflavones** |  | Colon |  | Japanese | 8 | M | 111/13894 | 22.45 vs. 59.58 (T3) | 1.47 (0.90-2.40) | 0.12 | ≥35 y | [32] |
| **Isoflavones** |  | Colon |  | Japanese | 8 | F | 102/16327 | 21.65 vs. 54.59 (T3) | 0.73 (0.44-1.18) | 0.20 | ≥35 y | [32] |
| **Isoflavones** |  | Colon, proximal | JPHC | Japanese | 7.6 | M | 886/39069 | (Q4) | 0.55 (0.33-0.92) | 0.007\* | 45-74 y | [3] |
| **Isoflavones** |  | Colon, proximal | JPHC | Japanese | 7.6 | F | 886/43994 | (Q4) | 1.10 (0.65-1.85) | 0.79 | 45-74 y | [3] |
| **Isoflavones** |  | Colon, distal | JPHC | Japanese | 7.6 | M | 886/39069 | (Q4) | 0.98 (0.61-1.57) | 0.95 | 45-74 y | [3] |
| **Isoflavones** |  | Colon, distal | JPHC | Japanese | 7.6 | F | 886/43994 | (Q4) | 1.02 (0.57-1.84) | 0.76 | 45-74 y | [3] |
| **Isoflavones** |  | Rectum | JPHC | Japanese | 7.6 | M | 886/39069 | (Q4) | 1.17 (0.72-1.91) | 0.61 | 45-74 y | [3] |
| **Isoflavones** |  | Rectum | JPHC | Japanese | 7.6 | F | 886/43994 | (Q4) | 0.97 (0.52-1.79) | 0.79 | 45-74 y | [3] |
| **Anthocyanins** |  |  | HPFS, NHS | American | 26 | F, M | 2519/118842 | (Q5) | 0.98 (0.81-1.19) | 0.98 | 30-75 y | [17] |
| **Anthocyanins** |  |  | HPFS | American | 26 | M | 1061/42478 | (Q5) | 0.88 (0.72-1.08) | 0.36 | 40-75 y | [17] |
| **Anthocyanins** |  |  | NHS | American | 26 | F | 1458/76364 | (Q5) | 1.08 (0.90-1.28) | 0.35 | 30-55 y | [17] |
| **Anthocyanidins** |  |  | KIHD | Finnish | 16.2 | M | 55/2590 | (Q4) | 1.41 (0.85-2.33) | 0.178 | 42-60 y | [29] |
| **Anthocyanidins** |  | Colon | HPFS, NHS | American | 26 | F, M | 1982/118842 | (Q5) | 0.95 (0.77-1.16) | 0.76 | 30-75 y | [17] |
| **Anthocyanidins** |  | Colon | HPFS | American | 26 | M | 831/42478 | (Q5) | 0.85 (0.67-1.07) | 0.26 | 40-75 y | [17] |
| **Anthocyanidins** |  | Colon | NHS | American | 26 | F | 1151/76364 | (Q5) | 1.04 (0.86-1.27) | 0.57 | 30-55 y | [17] |
| **Anthocyanidins** |  | Rectum | HPFS, NHS | American | 26 | F, M | 537/118842 | (Q5) | 1.10 (0.83-1.45) | 0.40 | 30-75 y | [17] |
| **Anthocyanidins** |  | Rectum | HPFS | American | 26 | M | 230/42478 | (Q5) | 0.99 (0.65-1.50) | 0.83 | 40-75 y | [17] |
| **Anthocyanidins** |  | Rectum | NHS | American | 26 | F | 307/76364 | (Q5) | 1.04 (0.71-1.52) | 0.35 | 30-55 y | [17] |

aFMC: The Finnish Mobile Clinic Health Examination Survey; HPFS: The Health Professionals Follow-Up Study; IWHS: The Iowa Women`s Health Study; JPHC: The Japan Public Health Center-based prospective study; KIHD: The Kuopio Ischaemic Heart Disease Risk Factor Study; NHS: The Nurses Health Study; NLCS: The Netherlands Cohort Study; SWHS: The Shanghai Women`s Health Study; WHS: The Women`s Health Study; bF: Female; M: Male; cQ4: Quartile; Q5: Quintile; T3: Tertile; dHR: Hazard Ratio; RR: Relative Risk; eStatistically significant effects (p for trend < 0.05) are marked by asterisk; fBMI: Body Mass Index.