Supplementary Table 2. Results showing the dose-response relationships between occupational and recreational physical activity and the risk of colon and rectal cancer

| Covariates | Number of studies | Number of RRs | RR | 95% CI. | Q (PQ) | Ratio of RR | 95% CI.  | *P-value* |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Occupational physical activity [Per 210 MET hours per week]*a*** |
| Model with no covariates | 10 | 57 | 0.89 | 0.85,0.93 | 76.8(0.02) | - | - | - |
| Sex |  |  |  |  |  |  |  |  |
| Men | 10 | 41 | 0.87 | 0.82,0.92 | 73.5(0.03) | 1.00 | Referent |  |
|  Women | 5 | 16 | 0.96 | 0.87,1.05 |  | 1.10 | 0.99,1.23 | 0.07 |
| Cancer sub-site |  |  |  |  |  |  |  |  |
| Colon cancer | 10 | 33 | 0.86 | 0.80,0.91 | 73.4(0.03) | 1.00 | Referent |  |
| Rectal cancer | 8 | 24 | 0.94 | 0.87,1.01 |  | 1.09 | 0.99,1.02 | 0.06 |
| Sex and cancer sub-site |  |  |  |  |  |  |  |  |
|  Men Colon cancer | 10 | 23 | 0.82 | 0.76,0.88 | 67.7(0.06) | 1.00 | Referent |  |
| Rectal cancer | 8 | 18 | 0.93 | 0.86,1.01 |  | 1.14 | 1.02,1.27 | 0.02 |
|  Women Colon cancer | 5 | 10 | 0.96 | 0.86,1.08 | 74.6(0.04) | 1.00 | Referent |  |
| Rectal cancer | 3 |  6 | 0.95 | 0.82,1.09 |  | 0.99 | 0.76,1.28 | 0.22 |
| **Recreational physical activity [Per 20 MET hours per week]*b*** |
| Model with no covariates | 10 | 72 | 0.90 | 0.86,0.94 | 85.6(0.11) | - | - | - |
| Sex |  |  |  |  |  |  |  |  |
| Men | 10 | 42 | 0.89 | 0.85,0.95 | 85.6(0.09) | 1.00 | Referent |  |
|  Women | 8 | 30 | 0.90 | 0.83,0.97 |  | 1.01 | 0.91,1.11 | 0.88 |
| Cancer sub-site |  |  |  |  |  |  |  |  |
| Colon cancer | 9 | 44 | 0.84 | 0.79,0.90 | 79.4(0.20) | 1.00 | Referent |  |
| Rectal cancer | 6 | 28 | 0.95 | 0.89,1.01 |  | 1.12 | 1.03,1.23 | 0.01 |
| Sex and cancer sub-site |  |  |  |  |  |  |  |  |
|  Men Colon cancer | 8 | 25 | 0.82 | 0.75,0.90 | 78.4(0.18) | 1.00 | Referent |  |
| Rectal cancer | 6 | 17 | 0.95 | 0.88,1.02 |  | 1.16 | 1.04,1.30 | 0.01 |
|  Women Colon cancer | 6 | 19 | 0.88 | 0.79,0.97 |  80.6(0.21) | 1.00 | Referent |  |
| Rectal cancer | 4 | 11 | 0.93 | 0.83,1.04 |  | 1.06 | 0.82,1.37 | 0.38 |
|  |  |  |  |  |  |  |  |  |

Q= Goodness-of-fit χ2,(PQ) p-value for Goodness-of-Fit χ2

*a*Occupational activity level is the point of average intensity level covering various occupations (using average MET value of 6 and assuming working for 35 hours per week) *b* The matrix was selected based on common recreational physical activities and this approximates the energy expenditure by walking for exercise for 40 minutes per day, or running for exercise for 30 minutes a day or bicycling (at speed of 15 km per hours) for 30 minutes a day, all for 6 days a week. *P*-= p-value for interaction

c Studies included: Physical activity in occupational domain: [Men: colon cancer31,36,40,47,49,51,59 ,63,64, rectal cancer31,36,40,49,55,60,63,Women: colon cancer31,40,49,51,59,64, rectal cancer31,40,49,55]. Physical activity in recreation domain: [Men: colon cancer29,34,36,41,58,59,63, rectal cancer 29,36,54,55,58,60,63, Women: colon cancer29,33,34,51,58,59, rectal cancer29,54,55,58]