**Supplementary Table S1a.** Results of multinomial logistic regression analyses for physical activity levels of women with breast cancer at baseline and 6, 12 and 18 months, compared to the Dutch female population a,b,c,d

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Dutch population(N=11,709)** |  | **Women with breast cancer** |
|  |  | **Baseline (N=1,655)** |  | **6 months (N=1,414)** |  | **12 months (N=1,186)** |  | **18 months (N=957)** |
|  | N |  |  | N | OR (95% CI) |  | N | OR (95% CI) |  | N | OR (95% CI) |  | N | OR (95% CI) |
| **Sports** |
| No | 6,151 | Ref |  | 958 | Ref |  | 732 | Ref |  | 508 | Ref |  | 418 | Ref |
| Low | 1,812 | Ref |  | 256 | 0.96 (0.83-1.12) |  | 220 | 1.11 (0.94-1.30) |  | 217 | **1.60 (1.35-1.89)** |  | 183 | **1.64 (1.37-1.97)** |
| Moderate  | 1,866 | Ref |  | 237 | 0.89 (0.77-1.04) |  | 272 | **1.39 (1.20-1.62)** |  | 277 | **2.10 (1.79-2.45)** |  | 212 | **1.94 (1.63-2.31)** |
| High  | 1,877 | Ref |  | 204 | **0.75 (0.64-0.88)** |  | 190 | 0.94 (0.79-1.11) |  | 184 | **1.34 (1.12-1.60)** |  | 144 | **1.27 (1.05-1.55)** |
| **Leisure time activities (sports excluded)** |
| No | 1,397 | Ref |  | 244 | Ref |  | 259 | Ref |  | 167 | Ref |  | 136 | Ref |
| Low | 3,061 | Ref |  | 504 | 1.05 (0.89-1.24) |  | 407 | **0.82 (0.69-0.97)** |  | 346 | 1.10 (0.91-1.34) |  | 287 | 1.13 (0.91-1.40) |
| Moderate  | 3,633 | Ref |  | 536 | 0.89 (0.76-1.05) |  | 430 | **0.69 (0.58-0.82)** |  | 385 | 0.97 (0.80-1.18) |  | 320 | 0.99 (0.80-1.22) |
| High  | 3,615 | Ref |  | 371 | **0.60 (0.50-0.71)** |  | 318 | **0.49 (0.41-0.58)** |  | 288 | **0.69 (0.57-0.85)** |  | 214 | **0.63 (0.50-0.79)** |
| **Total activity e** |
| No | 815 | Ref |  | 169 | Ref |  | 198 | Ref |  | 109 | Ref |  | 79 | Ref |
| Low | 3,551 | Ref |  | 632 | 0.87 (0.72-1.05) |  | 471 | **0.57 (0.47-0.68)** |  | 402 | 0.92 (0.73-1.15) |  | 309 | 0.98 (0.76-1.28) |
| Moderate  | 3,643 | Ref |  | 493 | **0.66 (0.55-0.80)** |  | 462 | **0.55 (0.45-0.66)** |  | 378 | 0.86 (0.67-1.07) |  | 333 | 1.04 (0.80-1.35) |
| High  | 3,700 | Ref |  | 361 | **0.49 (0.40-0.60)** |  | 283 | **0.34 (0.28-0.41)** |  | 297 | **0.68 (0.53-0.86)** |  | 236 | **0.75 (0.57-0.98)** |

Ref = reference; OR = odd ratio; CI = confidence interval

a Adjusted for age.

b OR < 1.00: Women with breast cancer were less likely to be active compared to the Dutch female population; OR > 1.00: Women with breast cancer were more likely to be active compared to the Dutch female population.

c To illustrate, women with breast cancer were less likely compared to the Dutch female population to have high levels of sports activities relative to no sports activities at baseline (OR = 0.75, 95% CI = 0.64-0.88).

d In bold if statistically significant (the 95% confidence intervals does not contain 1).

e Total activity was calculated by summing up the minutes spent in commuting activities, sports, leisure time activities and moderate/vigorous activities at work.

**Supplementary Table S1b.** Results of multinomial logistic regression analyses for physical activity levels of women with breast cancer at 24, 30 and 36 months, compared to the Dutch female population a,b,c,d

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Dutch population(N=11,709)** |  | **Women with breast cancer** |
|  |  | **24 months (N=743)** |  | **30 months (N=554)** |  | **36 months (N=377)** |
|  | N |  |  | N | OR (95% CI) |  | N | OR (95% CI) |  | N | OR (95% CI) |
| **Sports** |
| No | 6,151 | Ref |  | 328 | Ref |  | 254 | Ref |  | 189 | Ref |
| Low | 1,812 | Ref |  | 150 | **1.74 (1.42-2.13)** |  | 132 | **1.99 (1.60-2.47)** |  | 80 | **1.63 (1.25-2.1)** |
| Moderate  | 1,866 | Ref |  | 159 | **1.90 (1.56-2.32)** |  | 92 | **1.42 (1.11-1.82)** |  | 59 | 1.25 (0.93-1.69) |
| High  | 1,877 | Ref |  | 106 | 1.21 (0.97-1.52) |  | 76 | 1.13 (0.87-1.48) |  | 49 | 0.99 (0.72-1.36) |
| **Leisure time activities (sports excluded)** |
| No | 1,397 | Ref |  | 115 | Ref |  | 81 | Ref |  | 58 | Ref |
| Low | 3,061 | Ref |  | 225 | 1.06 (0.84-1.34) |  | 162 | 1.10 (0.84-1.46) |  | 116 | 1.12 (0.81-1.56) |
| Moderate  | 3,633 | Ref |  | 236 | 0.88 (0.69-1.10) |  | 172 | 0.91 (0.70-1.20) |  | 131 | 0.99 (0.72-1.35) |
| High  | 3,615 | Ref |  | 167 | **0.59 (0.46-0.75)** |  | 139 | **0.70 (0.52-0.92)** |  | 72 | **0.51 (0.36-0.72)** |
| **Total activity e** |
| No | 815 | Ref |  | 65 | Ref |  | 58 | Ref |  | 39 | Ref |
| Low | 3,551 | Ref |  | 263 | 1.05 (0.79-1.40) |  | 183 | 0.84 (0.61-1.14) |  | 130 | 0.91 (0.63-1.32) |
| Moderate  | 3,643 | Ref |  | 251 | 0.99 (0.74-1.31) |  | 170 | 0.76 (0.56-1.04) |  | 120 | 0.82 (0.57-1.20) |
| High  | 3,700 | Ref |  | 164 | **0.66 (0.49-0.89)** |  | 143 | **0.66 (0.48-0.91)** |  | 88 | **0.62 (0.42-0.92)** |

Ref = reference; OR = odd ratio; CI = confidence interval

a Adjusted for age.

b OR < 1.00: Women with breast cancer were less likely to be active compared to the Dutch female population; OR > 1.00: Women with breast cancer were more likely to be active compared to the Dutch female population.

c To illustrate, women with breast cancer were more likely compared to the Dutch female population to have low levels of sports activities relative to no sports activities at 24 months (OR = 1.74, 95% CI = 1.42-2.13).

d In bold if statistically significant (the 95% confidence intervals does not contain 1).

e Total activity was calculated by summing up the minutes spent in commuting activities, sports, leisure time activities and moderate/vigorous activities at work.

**Supplementary Table S2a.** Results of multinomial logistic regression analyses for physical activity levels of women with breast cancer at baseline and 6, 12 and 18 months who had local therapy with or without systemic therapy, compared to the Dutch female population a,b,c,d

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Dutch population(N=11,709)** |  | **Women with breast cancer** |
|  |  | **Baseline (Nlocal=497, Nsystemic=765)** |  | **6 months (Nlocal=468, Nsystemic=708)** |  | **12 months (Nlocal=436, Nsystemic=638)** |  | **18 months (Nlocal=359, Nsystemic=528)** |
|  | N |  |  | N | OR (95% CI) |  | N | OR (95% CI) |  | N | OR (95% CI) |  | N | OR (95% CI) |
| **Sports** |
|  |  |  |  | *Local therapy only* |
| No | 6,151 | Ref |  | 287 | Ref |  | 236 | Ref |  | 224 | Ref |  | 187 | Ref |
| Low | 2,535 | Ref |  | 84 | 1.13 (0.88-1.45) |  | 80 | **1.34 (1.03-1.74)** |  | 81 | **1.43 (1.10-1.86)** |  | 51 | 1.09 (0.79-1.50) |
| Moderate  | 1,193 | Ref |  | 63 | 0.88 (0.66-1.16) |  | 80 | **1.39 (1.07-1.81)** |  | 69 | 1.28 (0.97-1.69) |  | 70 | **1.57 (1.18-2.08)** |
| High  | 1,827 | Ref |  | 63 | 0.84 (0.64-1.11) |  | 72 | 1.19 (0.91-1.57) |  | 62 | 1.09 (0.82-1.45) |  | 51 | 1.09 (0.79-1.49) |
|  |  |  |  | *Additional systemic therapy* |
| No | 6,151 | Ref |  | 461 | Ref |  | 368 | Ref |  | 238 | Ref |  | 204 | Ref |
| Low | 2,535 | Ref |  | 113 | 0.84 (0.68-1.04) |  | 106 | 1.01 (0.81-1.26) |  | 113 | **1.70 (1.35-2.14)** |  | 119 | **2.08 (1.65-2.63)** |
| Moderate  | 1,193 | Ref |  | 105 | **0.77 (0.62-0.96)** |  | 144 | **1.36 (1.12-1.67)** |  | 183 | **2.76 (2.26-3.38)** |  | 125 | **2.20 (1.75-2.77)** |
| High  | 1,827 | Ref |  | 86 | **0.62 (0.49-0.79)** |  | 90 | 0.84 (0.66-1.06) |  | 104 | **1.53 (1.21-1.94)** |  | 80 | **1.37 (1.05-1.79)** |
| **Leisure time activities (sports excluded)** |
|  |  |  |  | *Local therapy only* |
| No | 1,397 | Ref |  | 72 | Ref |  | 78 | Ref |  | 75 | Ref |  | 54 | Ref |
| Low | 3,533 | Ref |  | 132 | 1.04 (0.77-1.40) |  | 116 | 0.86 (0.64-1.16) |  | 111 | 0.87 (0.64-1.18) |  | 94 | 1.04 (0.74-1.46) |
| Moderate  | 3,414 | Ref |  | 169 | 1.02 (0.77-1.36) |  | 146 | 0.83 (0.63-1.10) |  | 142 | 0.85 (0.64-1.13) |  | 123 | 1.03 (0.74-1.43) |
| High  | 3,362 | Ref |  | 124 | **0.70 (0.52-0.94)** |  | 128 | **0.67 (0.50-0.90)** |  | 108 | **0.59 (0.44-0.80)** |  | 88 | **0.67 (0.48-0.95)** |
|  |  |  |  | *Additional systemic therapy* |
| No | 1,397 | Ref |  | 125 | Ref |  | 120 | Ref |  | 74 | Ref |  | 70 | Ref |
| Low | 3,533 | Ref |  | 252 | 0.94 (0.75-1.18) |  | 227 | 0.91 (0.72-1.14) |  | 209 | **1.39 (1.05-1.82)** |  | 172 | 1.21 (0.91-1.61) |
| Moderate  | 3,414 | Ref |  | 227 | **0.70 (0.56-0.88)** |  | 210 | **0.69 (0.54-0.87)** |  | 207 | 1.12 (0.85-1.47) |  | 174 | 0.99 (0.75-1.32) |
| High  | 3,362 | Ref |  | 161 | **0.50 (0.39-0.63)** |  | 151 | **0.49 (0.38-0.63)** |  | 148 | 0.78 (0.59-1.04) |  | 112 | **0.63 (0.46-0.85)** |
| **Total activity e** |
|  |  |  |  | *Local therapy only* |
| No | 815 | Ref |  | 53 | Ref |  | 61 | Ref |  | 54 | Ref |  | 41 | Ref |
| Low | 3,817 | Ref |  | 186 | 0.95 (0.69-1.31) |  | 137 | **0.63 (0.46-0.83)** |  | 143 | 0.76 (0.55-1.05) |  | 107 | 0.77 (0.53-1.11) |
| Moderate  | 3,509 | Ref |  | 139 | **0.70 (0.50-0.97)** |  | 157 | **0.70 (0.52-0.96)** |  | 129 | **0.67 (0.48-0.94)** |  | 120 | 0.84 (0.58-1.22) |
| High  | 3,568 | Ref |  | 119 | **0.62 (0.44-0.86)** |  | 113 | **0.52 (0.38-0.73)** |  | 110 | **0.60 (0.42-0.84)** |  | 91 | **0.67 (0.46-0.98)** |
|  |  |  |  | *Additional systemic therapy* |
| No | 815 | Ref |  | 87 | Ref |  | 86 | Ref |  | 45 | Ref |  | 29 | Ref |
| Low | 3,817 | Ref |  | 304 | **0.71 (0.55-0.92)** |  | 267 | **0.66 (0.51-0.85)** |  | 222 | 1.09 (0.78-1.53) |  | 181 | 1.40 (0.93-2.09) |
| Moderate  | 3,509 | Ref |  | 220 | **0.50 (0.39-0.66)** |  | 225 | **0.54 (0.42-0.71)** |  | 210 | 1.01 (0.72-1.41) |  | 187 | 1.41 (0.94-2.11) |
| High  | 3,568 | Ref |  | 154 | **0.35 (0.26-0.46)** |  | 130 | **0.31 (0.23-0.42)** |  | 161 | 0.78 (0.55-1.10) |  | 131 | 0.99 (0.66-1.50) |

Ref = reference; OR = odd ratio; CI = confidence interval

a Adjusted for age.

b OR < 1.00: Women with breast cancer were less likely to be active compared to the Dutch female population; OR > 1.00: Women with breast cancer were more likely to be active compared to the Dutch female population.

c To illustrate, women with breast cancer were more likely compared to the Dutch female population to have low levels of sports activities relative to no sports activities at 24 months (OR = 1.74, 95% CI = 1.42-2.13).

d In bold if statistically significant (the 95% confidence intervals does not contain 1).

e Total activity was calculated by summing up the minutes spent in commuting activities, sports, leisure time activities and moderate/vigorous activities at work.

**Supplementary Table S2b.** Results of multinomial logistic regression analyses for physical activity levels of women with breast cancer at 24, 30 and 36 months who had local therapy with or without systemic therapy, compared to the Dutch female population a,b,c,d

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Dutch population(N=11,709)** |  | **Women with breast cancer** |
|  |  | **24 months (Nlocal=266, Nsystemic=421)** |  | **30 months (Nlocal=198, Nsystemic=311)** |  | **36 months (Nlocal=138, Nsystemic=211)** |
|  | N |  |  | N | OR (95% CI) |  | N | OR (95% CI) |  | N | OR (95% CI) |
| **Sports** |
|  |  |  |  | *Local therapy only* |
| No | 6,151 | Ref |  | 126 | Ref |  | 97 | Ref |  | 70 | Ref |
| Low | 2,535 | Ref |  | 51 | **1.64 (1.18-2.28)** |  | 43 | **1.81 (1.25-2.60)** |  | 30 | **1.77 (1.15-2.73)** |
| Moderate  | 1,193 | Ref |  | 45 | **1.53 (1.08-2.16)** |  | 29 | 1.29 (0.85-1.96) |  | 15 | 0.95 (0.54-1.66) |
| High  | 1,827 | Ref |  | 44 | 1.41 (0.99-2.00) |  | 29 | 1.22 (0.80-1.86) |  | 23 | 1.36 (0.84-2.19) |
|  |  |  |  | *Additional systemic therapy* |
| No | 6,151 | Ref |  | 178 | Ref |  | 137 | Ref |  | 108 | Ref |
| Low | 2,535 | Ref |  | 88 | **1.80 (1.39-2.34)** |  | 80 | **2.14 (1.62-2.84)** |  | 46 | **1.57 (1.11-2.23)** |
| Moderate  | 1,193 | Ref |  | 102 | **2.12 (1.65-2.72)** |  | 54 | **1.47 (1.06-2.02)** |  | 38 | 1.32 (0.91-1.92) |
| High  | 1,827 | Ref |  | 53 | 1.07 (0.78-1.46) |  | 40 | 1.05 (0.74-1.51) |  | 19 | 0.64 (0.39-1.04) |
| **Leisure time activities (sports excluded)** |
|  |  |  |  | *Local therapy only* |
| No | 1,397 | Ref |  | 47 | Ref |  | 31 | Ref |  | 22 | Ref |
| Low | 3,533 | Ref |  | 70 | 0.90 (0.61-1.31) |  | 52 | 1.03 (0.65-1.62) |  | 37 | 1.06 (0.62-1.80) |
| Moderate  | 3,414 | Ref |  | 83 | 0.80 (0.56-1.16) |  | 65 | 0.96 (0.63-1.49) |  | 49 | 1.04 (0.63-1.73) |
| High  | 3,362 | Ref |  | 66 | **0.58 (0.40-0.85)** |  | 50 | 0.67 (0.43-1.06) |  | 30 | **0.57 (0.33-0.99)** |
|  |  |  |  | *Additional systemic therapy* |
| No | 1,397 | Ref |  | 60 | Ref |  | 42 | Ref |  | 32 | Ref |
| Low | 3,533 | Ref |  | 139 | 1.18 (0.86-1.61) |  | 94 | 1.16 (0.80-1.68) |  | 68 | 1.11 (0.73-1.71) |
| Moderate  | 3,414 | Ref |  | 135 | 0.92 (0.67-1.25) |  | 102 | 1.00 (0.69-1.44) |  | 73 | 0.95 (0.62-1.45) |
| High  | 3,362 | Ref |  | 87 | 0.57 (0.41-0.80) |  | 73 | 0.69 (0.47-1.01) |  | 38 | **0.47 (0.29-0.76)** |
| **Total activity e** |
|  |  |  |  | *Local therapy only* |
| No | 815 | Ref |  | 32 | Ref |  | 22 | Ref |  | 16 | Ref |
| Low | 3,817 | Ref |  | 87 | 0.81 (0.54-1.23) |  | 63 | 0.88 (0.53-1.44) |  | 42 | 0.84 (0.47-1.51) |
| Moderate  | 3,509 | Ref |  | 86 | 0.79 (0.52-1.20) |  | 54 | 0.74 (0.45-1.23) |  | 44 | 0.87 (0.48-1.55) |
| High  | 3,568 | Ref |  | 61 | **0.59 (0.38-0.91)** |  | 59 | 0.85 (0.51-1.40) |  | 36 | 0.75 (0.41-1.37) |
|  |  |  |  | *Additional systemic therapy* |
| No | 815 | Ref |  | 28 | Ref |  | 28 | Ref |  | 19 | Ref |
| Low | 3,817 | Ref |  | 160 | 1.35 (0.89-2.04) |  | 103 | 0.88 (0.57-1.36) |  | 78 | 1.00 (0.60-1.67) |
| Moderate  | 3,509 | Ref |  | 142 | 1.17 (0.77-1.78) |  | 106 | 0.89 (0.58-1.37) |  | 69 | 0.86 (0.51-1.45) |
| High  | 3,568 | Ref |  | 91 | 0.76 (0.49-1.17) |  | 74 | **0.63 (0.40-0.98)** |  | 45 | **0.57 (0.33-0.99)** |

Ref = reference; OR = odd ratio; CI = confidence interval

a Adjusted for age.

b OR < 1.00: Women with breast cancer were less likely to be active compared to the Dutch female population; OR > 1.00: Women with breast cancer were more likely to be active compared to the Dutch female population.

c To illustrate, women with breast cancer were more likely compared to the Dutch female population to have low levels of sports activities relative to no sports activities at 24 months (OR = 1.74, 95% CI = 1.42-2.13).

d In bold if statistically significant (the 95% confidence intervals does not contain 1).

e Total activity was calculated by summing up the minutes spent in commuting activities, sports, leisure time activities and moderate/vigorous activities at work.