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| **Name in ITHIM (new name)** | **Name of the disease group in the Global Burden of Disease 2010 data** | **Description and possible modifications** | **Background burden in England & Wales (DALY)** | **RR/HR/OR** | **Reference and description** |
| Stroke | * Cerebrovascular disease | We use same RR for these three disease groups but they are separated because we assume that underlying links between physical activity and diseases vary. | 594 000 | 0.84 per 5.4 METh per week | Hamer M, Chida Y. Walking and primary prevention: a meta-analysis of prospective cohort studies. Br J Sports Med 2008; 42: 238–43.  0.84 is the pooled HR for CVD. |
| Ischemic heart disease | * Ischemic heart disease | 1 297 000 |
| Other cardiovascular and circulatory diseases | * Atrial fibrillation and flutter * Aortic aneurysm * Peripheral vascular disease * Other cardiovascular and circulatory diseases * Hypertensive heart disease | 437 000 |
| Type-2 diabetes | * Diabetes mellitus | Current assumption: 1.5% of diabetes mellitus burden is due to type-2 for age<30, for age 30+ 90% is due to type-2 diabetes.  The assumption for age group <30 could be improved. | 160 000 | 0.83 per 5.6 METh per week | Jeon CY, Lokken RP, Hu FB, van Dam RM. Physical activity of moderate intensity and risk of type 2 diabetes: a systematic review. Diabetes Care 2007; 30: 744–52.  0.83 is the BMI-adjusted RR. |
| Colon cancer | * Colon and rectum cancers | Current assumption: 62% of burden is assumed to be due to colon cancer. Physical activity is not assumed to have impact to rectum cancer. | 180 000 | 0.80 per 31 METh per week for male, 0.86 per 30 METh per week for female | Harriss DJ, Atkinson G, Batterham A, et al. Lifestyle factors and colorectal cancer risk (2): a systematic review and meta-analysis of associations with leisure-time physical activity. Colorectal Dis 2009; 11: 689–701.  RRs are the main results (in abstract). |
| Breast cancer | * Breast cancer | RR is strongest for menopausal breast cancer but at the moment we use same RR for all age groups.  For ITHIM menopausal vs. non-menopausal wont make a difference but if we consider older age groups, it might? | 261 000 | 0.94 per 3.5 METh per week change | Monninkhof EM, Elias SG, Vlems FA, et al. Physical activity and breast cancer: a systematic review. Epidemiology 2007; 18: 137–57.  “Compared with inactive persons, the OR for being physically active for 1 hour/week was 0.94” |
| Dementia and Alzheimer's disease | * Alzheimer's disease and other dementias | RR is for dementia but Hamer et al. found association also for Alzheimer’s disease and therefore we use same RR for all of them. | 348 000 | 0.72 per 24.5 METh per week change | Hamer M, Chida Y. Physical activity and risk of neurodegenerative disease: a systematic review of prospective evidence. Psychol Med 2009; 39: 3–11  “The pooled RR of overall dementia in the highest physical activity category compared with the lowest was 0.72” |
| Depression | * Unipolar depressive disorders | Unipolar depressive disorders includes “Major depressive disorder” and “Dysthymia”. | 481 000 (depression is causing only YLD, not YLL) | 0.957 per 0.78 METh per week change | Paffenbarger RS Jr, Lee IM, Leung R. Physical activity and personal characteristics associated with depression and suicide in American college men. Acta Psychiatr Scand Suppl 1994; 377: 16–22.  RR is calculated somewhere else? |
| Pedestrian injury | * Pedestrian road injury | In GBD 2013a supplement associated with ICD-10 codes V01-V04.99,V06-V09.9 (**pedestrian injured in transport acciden**t) |  |  |  |
| Cycling injury | * Bicycle road injury | In GBD 2013a supplement associated with ICD-10 codes V10-V19.9 (**Pedal cyclist injured in transport accident**) |  |  |  |
| Motorcycle and mopeds injury | * 2‐Wheel road injury | In GBD 2013a supplement associated with ICD-10 codes V20-V29.9 (**Motorcycle rider injured in transport accident**) |  |  |  |
| Car, van, bus and truck injury | * 4‐Wheel road injury | In GBD 2013a supplement associated with ICD-10 codes V30-V79.9,V87.2,V87.3 (**3-wheel, car, van, heavy transport, bus**) |  |  |  |
| Other road injury | * Other road injury | In GBD 2013a supplement associated with ICD-10 codes V80-V80.929,V82-V82.9 (**rider, streetcar**) |  |  |  |
| Other transport injury | * Other transport injuries | In GBD 2013a supplement associated with ICD-10 codes V00-V00.898,V05-V05.99,V81-V81.9,V83-  V86.99,V88.2,V88.3,V91-V91.9,V93-V98.8 (**pedestrian-train, train passenger, industrial, agricultural, construction, off-road, non-traffic, ships**) |  |  |  |

a Global, regional, and national age–sex specific all-cause and cause-specific mortality for 240 causes of death, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013, http://www.sciencedirect.com/science/article/pii/S0140673614616822