



Corrigendum

Corrigendum to “Changing dietary patterns is necessary to improve the sustainability of Western diets from a One Health perspective” [Sci. Total Environ. 811 (2022)/151437]



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The authors regret that the printed version of this article contained some flaws, which this corrigendum aims to clarify. The authors would like to apologise for any inconvenience caused.

The authors would like to clarify some flaws identified in the description of the methodology applied for the estimation of the human health impact results and associated figures in Section 3, namely Figs. 4 and 5l. The human health impact indicators are not estimated in absolute Disability-Adjusted Life Years (DALYs), as the aforementioned figures indicate, but as DALYs in percent (%DALYs) according to risk factor attribution. These capture the proportion of DALYs of a particular non-communicable disease (NCD) attributed to dietary risk factors. It should be noted that the %DALYs attributed to one specific disease result exclusively from dietary risk factors, while other risk factors (behavioral, metabolic) are not considered. Within the framework proposed, NCDs are generated through the chronic exposure to dietary risk factors by consuming the average diet over a lifetime. In other words, a diet chronically ingested increases the probability of developing NCDs. Hence, human health impact results are not expressed as DALYs per FU, but as the %DALYs for NCDs, assuming that the FU is consumed during the entire life of the individual. These methodological aspects are clarified in the paragraphs below, amending text in the original article.

- In the Methods, Section 2.3.3, “Human health indicators”, the first and second paragraphs should be amended with the information below:

Epidemiological data from the Global Burden of Disease (GBD) database were used as characterization factors for human health impacts, expressed as %DALYs, i.e., the proportion of DALYs attributed exclusively to the dietary risk factors for each NCD (GBD 2019, 2020). DALYs are a measure of the years of life lost due to death or disability caused by a specific disease (Kirch, 2008). The GBD database provides country-level DALY values related to fifteen dietary risk factors for several diseases, by gender (GBD 2019, 2020).

NCDs were assessed as indicators for food-consumption-related impacts on human health. Drawing from the GDB database (GBD 2019, 2020), attributable percent of DALYs associated with each selected NCD, by gender, were estimated for Germany in the year 2019. In this study, only DALYs attributed to dietary risk factors were considered to represent the disease burden associated with dietary choices, while other risk factors (behavioral, metabolic) are not considered.

- Figs. 4 and 5l should be replaced with the ones below, which show the correct units in the y-axis. Table S1 is also provided in replacement of the original Table S15 (in the Electronic Supplementary Material) to indicate the correct units.

DOI of original article: <http://dx.doi.org/10.1016/j.scitotenv.2021.151437>.

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<http://dx.doi.org/10.1016/j.scitotenv.2022.156616>

Available online 17 June 2022

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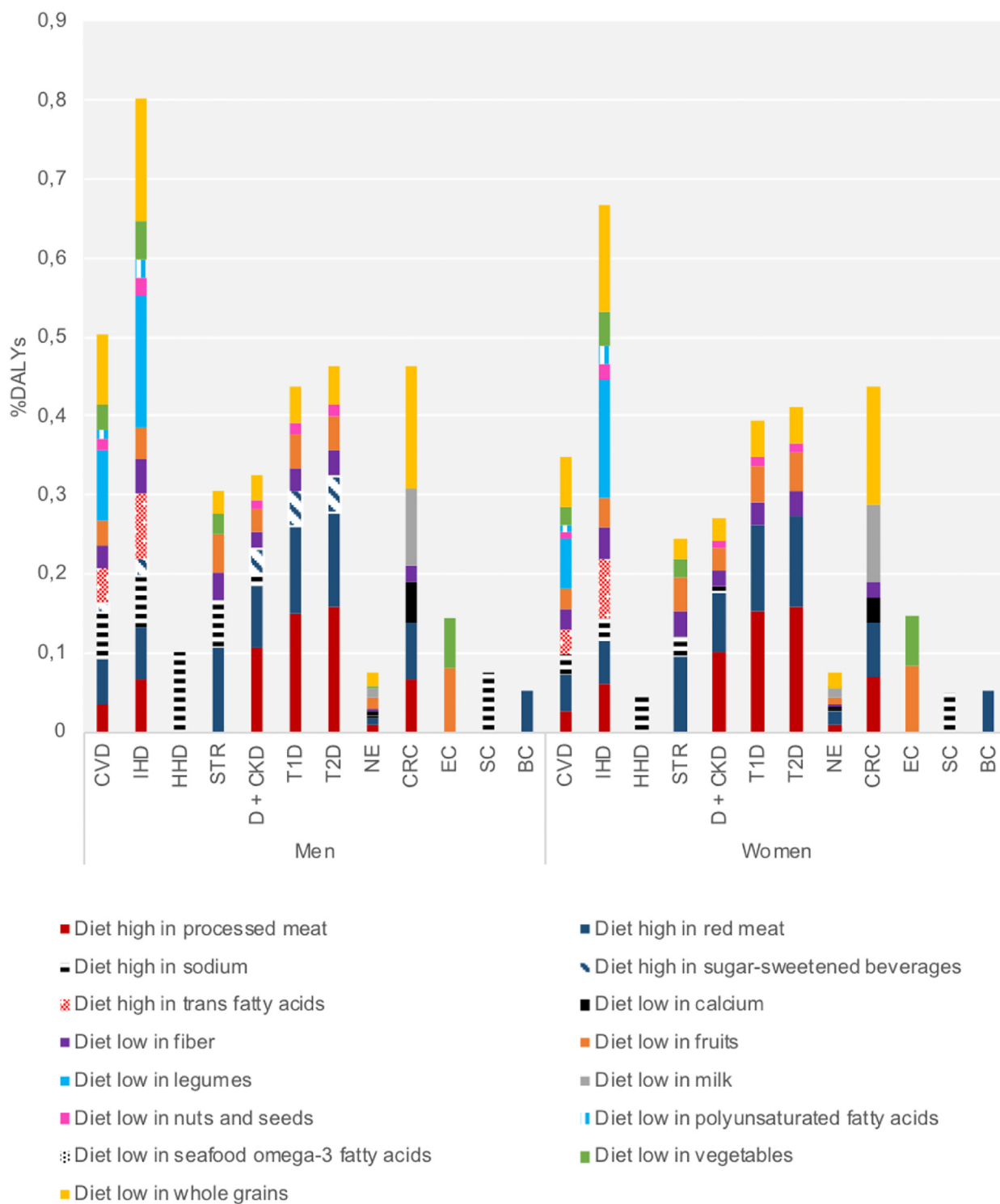


Fig. 4. Impacts on human health, by gender, in North Rhine-Westphalia in percent Disability-Adjusted Life Years (%DALYs) attributed to several non-communicable diseases (NCDs) due to the chronic exposure to dietary risk factors caused by the consumption of the FU over a lifetime. CVD: cardiovascular diseases; IHD: ischemic heart disease; HHI: hypertensive heart disease; STR: stroke; D + CKD: diabetes and chronic kidney diseases; T1D: type I diabetes; T2D: type II diabetes; NE: neoplasms; CRC: colon and rectum cancer; SC: stomach cancer; EC: esophageal cancer; BC: breast cancer.

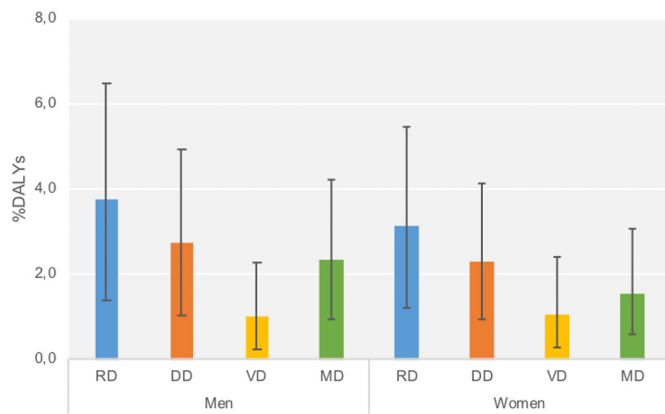


Fig. 51. Impacts on human health from all non-communicable diseases assessed in % DALYs attributed to the chronic exposure to dietary risk factors caused by alternative diets to the reference diet (RD) in North-Rhine Westphalia, of both men and women; namely, recommended diet by the German Nutrition Society (DD); vegan diet (VD) and Mediterranean diet (MD).

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

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Table S1

Mean, upper and lower bounds of human health impact values in percent Disability-Adjusted Life Years (%DALYs) for men and women, in the alternative dietary scenarios assessed.

NCDs	Men				Women			
	RD	DD	VD	MD	RD	DD	VD	MD
Cardiovascular diseases	0.503	0.359	0.174	0.278	0.348	0.221	0.149	0.159
Lower	0.153	0.098	0.037	0.072	0.120	0.077	0.049	0.043
Upper	0.840	0.633	0.355	0.527	0.590	0.408	0.296	0.322
Ischemic heart disease	0.802	0.558	0.278	0.434	0.666	0.395	0.280	0.318
Lower	0.203	0.120	0.066	0.095	0.173	0.097	0.081	0.078
Upper	1.344	0.982	0.531	0.815	1.128	0.736	0.526	0.605
Hypertensive heart disease	0.102	0.102	0.102	0.102	0.047	0.047	0.047	0.047
Lower	0.004	0.004	0.004	0.004	0.002	0.002	0.002	0.002
Upper	0.356	0.356	0.356	0.356	0.233	0.233	0.233	0.233
Stroke	0.304	0.244	0.062	0.168	0.246	0.189	0.095	0.072
Lower	0.122	0.107	0.003	0.077	0.106	0.093	0.030	0.023
Upper	0.536	0.435	0.175	0.307	0.433	0.336	0.218	0.177
Diabetes and kidney diseases	0.325	0.230	0.048	0.242	0.271	0.213	0.039	0.148
Lower	0.167	0.136	0.015	0.141	0.144	0.128	0.012	0.080
Upper	0.498	0.342	0.095	0.359	0.419	0.319	0.087	0.240
Diabetes mellitus	0.437	0.303	0.046	0.319	0.394	0.307	0.045	0.210
Lower	0.237	0.193	0.020	0.201	0.219	0.194	0.016	0.121
Upper	0.629	0.413	0.067	0.436	0.565	0.419	0.077	0.302
Diabetes mellitus type 2	0.463	0.322	0.048	0.339	0.412	0.321	0.047	0.219
Lower	0.252	0.205	0.021	0.213	0.229	0.203	0.017	0.126
Upper	0.667	0.438	0.072	0.462	0.591	0.439	0.080	0.316
Neoplasms	0.076	0.055	0.022	0.039	0.074	0.053	0.026	0.034
Lower	0.026	0.018	0.008	0.013	0.030	0.022	0.009	0.012
Upper	0.131	0.101	0.045	0.074	0.119	0.090	0.050	0.061
Colon and rectum cancer	0.464	0.290	0.151	0.290	0.438	0.268	0.131	0.200
Lower	0.171	0.107	0.062	0.107	0.156	0.094	0.050	0.076
Upper	0.723	0.478	0.245	0.478	0.692	0.447	0.216	0.323
Esophageal cancer	0.144	0.144	0.000	0.000	0.146	0.146	0.146	0.084
Lower	0.011	0.011	0.000	0.000	0.013	0.013	0.013	0.011
Upper	0.365	0.365	0.000	0.000	0.372	0.372	0.372	0.240
Stomach cancer	0.074	0.074	0.074	0.074	0.050	0.050	0.050	0.050
Lower	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Upper	0.308	0.308	0.308	0.308	0.257	0.257	0.257	0.257
Breast cancer	0.051	0.051	0.000	0.051	0.052	0.052	0.000	0.000
Lower	0.026	0.026	0.000	0.026	0.026	0.026	0.000	0.000
Upper	0.069	0.069	0.000	0.069	0.070	0.070	0.000	0.000

Note: RD: reference diet in NRW (baseline scenario); DD: DGE diet scenario; VD: Vegan diet scenario; MD: Mediterranean diet scenario. Attributable %DALYs are caused by the chronic exposure to the dietary risk factors associated with the consumption of the FU per diet over a lifetime.