Supplemental material

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Supplementary material 3: Included studies for main and sensitivity analyses.

Author	Year	Outcome	Number of studies			Selection discussion	Reason for exclusion	Random effect model performed in the original meta-analysis*	
			Cohort	Case-Control	Total			RR/OR/HR (High vs low)	95%CI
All-cause mortality									
Coenen et al. (1)	2018	All-cause mortality	17	0	17	Included		Males= **HR=1.18** Females= **HR=0.90**	Males= **(1.05-1.34)** Females= **(0.80-1.01)**
Samitz G et al. (2)	2012	All-cause mortality	6	0	6	Included sensitivity analyses **Excluded (Funnel plot)**	Fewer studies than Coenen et al.	Both **OR=0.83** Males= **OR=0.94** Females= **OR=0.66**	Both **(0.71-0.97)** Males= **(0.75-1.19)** Females= **(0.49-0.89)**
Cardio-vascular diseases									
Wendel-Vos et al. (3)	2004	Stroke	11	0	11	Included		Stroke= *Physical active vs inactive* **RR=0.74** *Physical active vs moderate* **RR= 0.92** Ischemic stroke= *Physical active vs inactive* **RR= 0.57** *Physical active vs moderate* **RR= 0.84**	 **(0.49-1.12)** **(0.68-1.24)** **(0.43-0.77)** **(0.60-0.98)**

Sattelmair et al. (4)	2011	Coronary Heart Disease	4	0	4	Included		CHD **RR=0.84**	**0.79-0.90**
Li J et al. (5)	2013	CVD/CHD/Unclassified CVD	-	-	-	Excluded	Critically low AMSTAR	-	
Colon cancer									
Mahmood et al. (6)	2017	Colon cancer	10	5	15	Included		**RR=0.74**	**(0.67-0.82)**
Robsahm et al. (7)	2013	Proximal Distal	5	0	5	Included		Proximal colon cancer **RR=0.59** Distal Colon cancer **RR=0.61**	**(0.53-0.66)** **(0.53-0.70)**
Boyle et al. (8)	2012	Proximal Distal	6	4	10	Included sensitivity analyses **Excluded (Funnel plot)**	Lower AMSTAR score than Boyle	Proximal colon **RR=0.72** Distal colon **RR=0.75**	**(0.61-0.85)** **(0.66-0.83)**
Wolin et al. (9)	2009	Colon cancer	-	-	-	Excluded	Critically low AMSTAR score		
Samad et al. (10)	2005	Colon cancer	-	-	-	Excluded	Critically low AMSTAR score		
Rectal cancer									
Mahmood et al . (6)	2017	Rectal cancer	5	7	12	Included		**RR=0.88**	**(0.79-0.98)**
Robsahm et al. (7)	2013	Rectal cancer	3	0	3	Included sensitivity analyses **Excluded (Funnel plot)**	Fewer studies included than Mahmood.	**RR=0.80**	**(0.72-0.89)**
Breast cancer									
Pizot et al. (11)	2015	Breast cancer	11	0	11	Included		**RR=0.88**	**(0.82-0.95)**
Chen et al (12)	2019	Breast cancer	6	0	6	Included sensitivity analyses **Excluded (Funnel plot)**	Fewer studies included than Pizot.	**RR=0.91**	**(0.84-0.99)**
Wu Y et al (13)	2013	Breast cancer	7	0	7	Included sensitivity analyses	Fewer studies included than Pizot	**RR=0.90**	**0.83-0.97)**

						Excluded (Funnel plot)			
Endometrial cancer									
Schmid et al. (14)	2015	Endometrial cancer	12	7	19	Included		**RR-0.81**	**0.75-0.87**
Voskuil et al. (15)	2007	Endometrial cancer	4	10	14	Included sensitivity analyses **Excluded (Funnel plot)**	Fewer studies included than Pizot, and lower GRADE score	Case Control studies **0.80** Cohort studies **Not estimated**	**0.66-0.96**
Lymphoma									
Vermaete et al. (16)	2013	Lymphoma	1	4	5	Included		**OR=0.98**	**(0.80-1.21)**
Gastric cancer									
Chen et al. (17)	2014	Gastric	3	3	6	Included		**RR=0.79**	**(0.65-0.95)**
Behrens et al. (18)	2014	Gastric	4	3	7	Included sensitivity analyses **Excluded (Funnel plot)**	Lower GRADE score than Chen	**RR=0.84**	**(0.70-1.02)**
Singh et al. (19)	2014	Gastric	2	4	6	Included sensitivity analyses **Excluded (Funnel plot)**	Lower GRADE score than Chen	**OR=0.90**	**(0.69-1.18)**
Psaltopoulou et al. (20)	2016	Gastric	2	3	5	Included sensitivity analyses **Excluded (Funnel plot)**	Lower GRADE score than Chen	**RR=0.89**	**(0.62-1.27)**
Oesophageal cancer									
Behrens et al. (18)	2014	Oesophageal	4	2	6	Included		**RR=0.91**	**(0.46-1.81)**
Chen et al. (17)	2014	Oesophageal	-	-	-	Excluded	Not enough studies about oesophageal		
Renal									

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Behrens et al. (21)	2013	Renal	6	5	11	Included		**RR=0.91**	**(0.79-1.04)**
Shephard et al. (22)	2016	Renal	7	7	14	Included sensitivity analyses **Excluded (Funnel plot)**	Did not provide meta-analyses	No meta-analyses only narrative	
Prostate									
Liu et al. (23)	2011	Prostate	9	18	27	Included		Combined **RR=0.81** Cohort **RR= 0.91** Case control **RR= 0.71** High quality studies (13) **RR = 0.86** Low quality studies **RR 0.75**	**(0.73-0.91)** **(0.87-0.95)** **(0.62-0.87)** **(0.78-0.94)** **(0.61-0.94)**
Benke et al. (24).	2018	Prostate	28	-	-	Included sensitivity analyses **Excluded (Funnel plot)**	Lower GRADE score than Liu	Overall **RR=0.91** Long term (10 years) **RR=0.83**	**(0.82-1.01)** **(0.71-0.98)**
Shephard et al. (25)	2017	Prostate	19	16	35	Included sensitivity analyses **Excluded (Funnel plot)**	Lower GRADE score than Liu	No meta analyis	
Krstev et al. (26)	2019	Prostate	-	-	-	Excluded	Excluded because of critically low AMSTAR	-	
Pancreatic cancer									
O Rorke et al. (27)	2010	Pancreatic	4	-	4	Included		**RR=0.75**	**(0.59-0.96)**
Bao et al (28)	2008	Pancreatic	3	-	3	Included sensitivity analyses	Lower included studies	**RR=0.75**	**(0.58-0.96)**

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						Excluded (funnel plots)			
Bladder cancer									
Keimling et al. (29)	2014	Bladder cancer	-	-	-	Excluded	Excluded because of critically low AMSTAR	-	-
Diabetes Mellitus type 2									
Aune et al. (30)	2015	Diabetes type 2	3	0	3	Included		**RR=0.85**	**(0.79-0.92)**
Osteoarthritis									
McWilliams (31)	2011	Knee osteoarthritis	2	6	8	Included		Knee osteoarthritis **OR=1.45**	**(1.20-1.76)**
Gignac et al. (32)	2019	Osteoarthritis	6	2	3	Included sensitivity analyses **Excluded (Funnel plot)**	No-meta analysis	-	
Palmer et al (33)	2012	Osteoarthritis	-	-	-	Excluded	Excluded because of critically low AMSTAR		
Mental Health									
White et al. (34)	2017	Mental-Health Mental-Ill Health	1	12	13	Included		Mental ill-health *R=0.10* Mental health R=0.13	**(0.04-0.16)** **(0.08-0.18)**
Insomnia									
Yang (35)	2018	Insomnia	3	4	7	Included		**OR=2.76**	**(1.71-4.45)**
Hypertension									
Haui (36)	2013	Hypertension	6	0	6	Included		High level OPA **RR=0.93** Moderate level OPA **RR=0.96**	**(0.81-1.08)** **(0.87-1.06)**

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