

#### Supplementary File 4: Characteristics of Included Studies

Study ID	Study Design	Length of Intervention /Follow up	Number of Participants	Age (mean years)	Exposure (highest tertile/quartile/quintile or 'yes' to wholegrain foods)	Comparison (lowest tertile/quartile/quintile or 'no' to wholegrain foods)	Outcomes Measured	Funding Source	Disclosed author conflicts of interest
Djousse, L 2007 <sup>1*</sup>	Cohort	19.6 years (average)	21,376	53.7 ±9.5 years	Wholegrain Breakfast Cereal ≥ 7 (1 serving=1 cup [250 mL]) servings/week	Wholegrain Breakfast Cereal 0 servings/week	Heart Failure	Non-Industry <sup>1**</sup>	Yes <sup>a</sup>
Holmberg, S 2009 <sup>2</sup>	Cohort	12 years	1,752	50.2 years	Whole meal bread (wholegrain rye bread and crisp/hard bread)	White or Rye bread	Coronary Heart Disease Death or Event (death or hospitalization)	Industry <sup>2</sup>	No disclosure
Huang, T 2015 <sup>3</sup>	Cohort	14 years (average)	367,442	61.7 years	Wholegrain 1.20 oz eq/day	Wholegrain 0.13 oz eq/day	Cardiovascular Disease Death	Industry <sup>3</sup>	Yes <sup>b</sup>
Jacobs, DRJr 1998 <sup>4</sup>	Cohort	10 years	34,492	55–69 years	Wholegrain 22.5 servings/week (median)	Wholegrain 1.5 servings/week (median)	Ischemic Heart Disease Death	Non-Industry <sup>4</sup>	No disclosure
Jacobs, DRJr 1999 <sup>5</sup>	Cohort	10 years	38,740	61.5 years	Wholegrain 22.5 servings/week (median)	Wholegrain 1.5 servings/week (median)	Cardiovascular Disease Death (all cardiovascular disease)	Non-Industry <sup>5</sup>	No disclosure
Jacobs, DRJr 2001 <sup>6</sup>	Cohort	Baseline 1977-83, followed through to 1994	33,848	35-56 years	Wholegrain Bread Score (2.25-5.40) ***	Wholegrain Bread Score (0.05-0.60) ***	Cardiovascular Disease Death (total cardiovascular disease)	Non-Industry <sup>6</sup>	No disclosure
Jacobs, DRJr 2007 <sup>7</sup>	Cohort	17 years	27,312	55–69 years	Wholegrain ≥ 19 servings/week	Wholegrain 0–3.5 servings/week	Cardiovascular Disease Death	Industry <sup>7</sup>	No <sup>c</sup>
Jensen, MK 2004 <sup>8</sup>	Cohort	14 years	42,850	40-75 years	Wholegrain 42.4 g/day (median)	Wholegrain 3.5 g/day (median)	Coronary Heart Disease Death or Event (non-fatal MI infarction & fatal CHD)	Industry <sup>8</sup>	No <sup>d</sup>

Li, Y 2015 <sup>9</sup>	2 Cohorts	30 years & 24 years	127,536	NHS 30-55 years HPFS 40-75 years	Wholegrain 4.6 % of total Energy Intake	Wholegrain 0.4 % of total Energy Intake	Coronary Heart Disease Death or Event (non-fatal MI & CHD deaths)	Non-Industry <sup>9</sup>	Yes <sup>e</sup>
Liu, S 1999 <sup>10</sup>	Cohort	10 years	75,521	38-63 years	Wholegrain 2.70 servings/day (median)	Wholegrain 0.13 servings/day (median)	Coronary Heart Disease Death or Event (non-fatal MI & fatal CHD)	Non-Industry <sup>10</sup>	No disclosure
Liu, S 2000 <sup>11</sup>	Cohort	12 years	75,521	38-63 years	Wholegrain 2.70 servings/day (median)	Wholegrain 0.13 servings/day (median)	Ischemic Stroke Death or Event	Non-Industry <sup>11</sup>	No disclosure
Liu, S 2003 <sup>12</sup>	Cohort	5.5 years (average)	86,190	40-84 years	Wholegrain Breakfast Cereal 1 servings/day	Rarely	Cardiovascular Disease Deaths	Non-Industry <sup>12</sup>	Yes <sup>f</sup>
Lockheart, MSK 2007 <sup>13</sup>	Case Control		211	Case 62.5 ± 7.7 Control 62.25 ± 7.7	Wholegrain Breakfast Cereal 36 g/day (median) & Wholegrain breads 240 g/day (median)	0 94 g/day	Myocardial Infarction (first MI)	Industry <sup>13</sup>	No Disclosure
Mizrachi, A 2009 <sup>14</sup>	Cohort	24 years	3,932	40-74 years	Wholegrain Men 280-1321 g/day (range) Women 195-963 g/day (range)	Wholegrain Men 0-139 g/day (range) Women 0-89 g/day (range)	Cerebrovascular Disease Death or Event (total strokes, including all acute strokes, subarachnoidal haemorrhages and other, undefined strokes; ischaemic stroke and intracerebral haemorrhage)	Non-Industry <sup>14</sup>	No <sup>g</sup>
Muraki I, 2015 <sup>15</sup>	3 Cohorts	26 years, 20 years & 24 years	207,556	Not available	Brown Rice ≥ 5 servings/week	Brown Rice < 1 servings/week	Cardiovascular Disease Death or Event (nonfatal)	Non-Industry <sup>15</sup>	No <sup>h</sup>

							MI, fatal CAD, and stroke (nonfatal or fatal))		
Nettleton, JA 2008 <sup>16</sup>	Cohort	13.3 years (average)	14,153	45-64 years	Wholegrain 1.3 ± 0.01 servings/day	Wholegrain 1.1 ± 0.04 servings/day	Heart Failure Death or Event	Non-Industry <sup>16</sup>	No <sup>i</sup>
Sahyoun, NR 2006 <sup>17</sup>	Cohort	Baseline 1981-84, followed through to 1995	535	60-98 years	Wholegrain >1.94 servings/day	Wholegrain ≤0.56 servings/day	Cardiovascular Disease Death	Non-Industry <sup>17</sup>	No <sup>j</sup>
Sonestedt, E 2015 <sup>18</sup>	Cohort	14 year (average)	26,445	44-74 years	Wholegrain 2.5 portions/day	Wholegrain 0 portions/day	Cardiovascular Disease Death or Event (Incident CVD events, Stroke events, CHD (fatal or non-fatal myocardial infarction or death due to ischemic heart disease), Ischemic stroke).	Non-Industry <sup>18</sup>	No Disclosure
Steffen, L M 2003 <sup>19</sup>	Cohort	11 years	11,940	45-64 years	Wholegrain 3.0 servings/day	Wholegrain 0.1 servings/day	Coronary Artery Disease Death or Event (the first definite or probable MI, silent MI by electrocardiography, definite CAD death, or coronary revascularization) & Ischemic Stroke Death or Event (first definite or probable cardioembolic or thrombotic brain infarction)	Non-Industry <sup>19</sup>	Yes <sup>k</sup>

Tavani, A 2003 <sup>20</sup>	Case Control		881	25–79 years	Wholegrain Bread Consumers	Wholegrain Bread Non-Consumers	Myocardial Infarction (first acute)	Non-Industry <sup>20</sup>	No Disclosure
Tavani, A 2004 <sup>21</sup>	3 Case Controls		1,602	17–79 years	Wholegrain >2 portions/per week	Wholegrain <2 portions/per week	Myocardial Infarction (first acute)	Non-Industry <sup>21</sup>	No Disclosure
Wu, H 2015 <sup>22</sup>	2 Cohort	26 years & 24 years	118,085	NHS 30-55 years HPFS 32-87 years	Wholegrain NHS 33 g/day (median) HPFS 47.8 g/day (median)	Wholegrain NHS 4.2 g/day (median) HPFS 5.9 g/day (median)	Cardiovascular Disease Death	Non-Industry <sup>22</sup>	No <sup>1</sup>

\*Superscript is the reference citation

\*\* Superscript is in reference to the verbatim description of funding source

\*Wholegrain bread score: slices eaten per day (question 1) times the percentage wholegrain flour used in bread. Q5 = 9 slices of bread usually eaten per day x

60% wholegrain flour. Q1 = 1 slice of bread per day x 5% wholegrain flour

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- b) A Lee NutraSource (AWL), Royal Oak, MI 48073, USA. S Cho NutraSource (SSC), Clarksville, MD 21029, USA
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- h) All authors reported no conflicts of interest related to the study.
- i) The authors have no conflicts of interest to report
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l) None reported

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