

Table 2. Characteristics of included studies

1 st author, year of publication	Name of study	Examined food or antioxidant	Dietary assessment	Participants' country of origin	Year of data collection	Month of data collection	Sample size	Response rate (%)	Females (%)	Age range or mean (years)	Sampling method	Basis of sample	Quality score* (max:18)
1. DIETARY SURVEYS													
Kromhout 1989 ⁽²²⁾	Seven Countries Study	Fruits, vegetables	7d record	CEE: Yugoslavia	1960-64	Jan-May, Sep	150	nd	0	40-59	random	farm/factory workers, academics	9
				WE: Finland, Italy, Greece Netherlands	1959-65	Feb-Sep	286	nd	0	40-59	random	village inhabitants, railroad workers	
Winkler 1992 ⁽³¹⁾		Fruits, vegetables	3d record	CEE: GDR	1987	Oct-Dec	132	73	0	45-64	random	urban inhabitants	11
				WE: FDR	1984-85	Oct-May	424	70	0	45-64	cluster	urban inhabitants	
Schroll 1996 ⁽²³⁾	SENECA	Fruits, vegetables	Diet history	CEE: Poland	1993	Jan-Jun	120	51†	61	74-79	random	urban inhabitants	13
				WE: Belgium, Denmark, France, Italy, Netherlands, Portugal, Spain, UK, Switzerland	1993	Jan-Jun	1237	51†	51	74-79	random	urban inhabitants	
Karamanos 2002 ⁽²⁴⁾		Fruits, vegetables	Diet history	CEE: Bulgaria	nd	nd	288	nd	50	35-60	random	urban inhabitants	14
				WE: Italy, Greece	nd	nd	1058	nd	54	35-60	random	urban and rural inhabitants	
Serra-Majem 2003 ⁽²⁵⁾	WHO-CINDI	Fruits, vegetables	24hr recall	CEE: Poland	1991-94	nd	4440	nd	50	20-65	random	factory workers	14
				WE: Spain	1992	nd	2757	69	nd	6-75	random	general population	
Petkeviciene 2009 ⁽²⁶⁾	NORBAGREEN	Fruits, vegetables	FFQ	CEE: Lithuania	2002	Apr	99	68	57	19-75	random	general population	15
				WE: Finland	2002	Jan-May	125	91	nd	25-64	random	general population	
Lixandru 2010 ⁽³²⁾		Fruits, vegetables	FFQ	CEE: Romania	2005	Apr-Nov	40	nd	30	63	convenience	diabetic patients	12
				WE: Belgium	2005	Apr-Nov	30	nd	20	62	convenience	diabetic patients	
Paalanen 2011 ⁽³³⁾		Fruits, vegetables	FFQ	CEE: Russia	1992-07	Mar-May	2672	45-92	57	25-64	random	general population	16
				WE: Finland	1992-02	Mar-May	4365	67-81	53	25-64	random	general population	
Crispim 2011 ⁽³⁴⁾	EFCOVAL	Fruits, vegetables	24hr recall	CEE: Czech Republic	2007-08	Oct-Apr	118	nd	51	45-65	convenience	healthy individuals	16
				WE: Belgium, France, Norway Netherlands,	2007-08	Apr-Jul, Oct-Apr	482	nd	50	45-65	convenience	healthy individuals	
El Ansari 2012 ⁽³⁵⁾	CNSHS	Fruits, vegetables	FFQ	CEE: Bulgaria, Poland	2005	nd	1143	95	70	21	convenience	university students	14
				WE: Denmark, Germany	2005	nd	1236	85-92	53	21	convenience	university students	

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2. HEALTH BEHAVIOUR SURVEYS													
Wardle 1997 ⁽³⁶⁾	EHBS	Fruits	na	CEE: Poland, Hungary, GDR WE: Austria, Belgium, FDR, UK Denmark, Finland, Spain, France, Greece, Iceland, Ireland, Italy, Sweden, Netherlands, Norway, Portugal, Switzerland	1989-92	nd	2293	90-100	51	22	convenience	university students	13
Prattala 2007 ⁽³⁷⁾	Finbalt Health Monitor project	Fruits	na	CEE: Estonia, Latvia, Lithuania WE: Finland	1998-02	Apr-May	15740	62-80	57	20-64	random	general population	16
Prattala 2009 ⁽³⁸⁾	EUROTHIENE	Vegetables	na	CEE: Estonia, Latvia, Lithuania WE: Finland, Denmark, Spain, Germany, France, Italy	2000-04	nd	14219	60-73	58	20-64	random	general population	15
Hall 2009 ⁽³⁹⁾	WHS	Fruits, vegetables	na	CEE: Bosnia and Herzegovina, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Latvia, Russia, Slovakia, Slovenia, Ukraine WE: Spain	2002-03	nd	22475	69-100	53	18-99	random	general population	15
European Commission 2013 ⁽⁴⁰⁾	EHIS	Fruits, vegetables	na	CEE: Bulgaria, Czech Republic, Estonia, Latvia, Hungary, Poland, Romania, Slovakia, Slovenia WE: Belgium, Greece, Spain, France	2006-09	nd	85921	56-89	53	15-99	random	general population	na
Burisch 2014 ⁽⁴¹⁾	ECCO-EpiCom	Fruits, Vegetables	na	CEE: Croatia, Czech Rep, Estonia, Hungary, Lithuania, Moldova, Romania, Russia WE: Cyprus, Denmark, Finland, Greece, Iceland, Ireland, Israel, Italy, Portugal, Spain, Sweden, UK	2010	Jan-Dec	249	76†	42	15+	Convenience	IBD patients (at diagnosis)	16

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3. ANTIOXIDANT STUDIES													
Kardinaal 1993 ⁽²⁹⁾	EURAMIC	Beta-carotene in adipose tissue	na	CEE: Russia	1991-92	nd	200	79-97	0	51	convenience	hospital patients, healthy controls	16
				WE: Finland, Germany, Netherlands, Norway, UK, Spain, Switzerland	1991-92	nd	1180	50-98	0	54	convenience	hospital patients, healthy controls	
Kristenson 1997 ⁽⁴²⁾	LiVicordia	Beta-carotene in plasma	na	CEE: Lithuania	1993-94	Oct-Jun	100	83	0	50	random	urban inhabitants	14
				WE: Sweden	1993-94	Oct-Jun	95	83	0	50	random	urban inhabitants	
Bobak 1998 ⁽²⁷⁾		Beta-carotene in plasma	na	CEE: Czech Republic	1992	Sep-Nov	136	70	49	40-59	random	urban inhabitants	14
				WE: UK	1991-93	nd	358	73	31	40-59	random	civil servants	
Bobak 1999 ⁽⁴³⁾		Beta-carotene in plasma	na	CEE: Czech Republic	1995	Apr-Jun	188	70	0	45-64	random	general population	17
				WE: Germany	1995	Apr-Jun	153	70	0	45-64	random	general population	
Miere 2007 ⁽⁴⁴⁾		Vitamin C intake	24h recall	CEE: Romania	nd	nd	312	nd	87	21	convenience	university students	8
				WE: Spain	nd	nd	918	nd	58	22	convenience	university students	
Woodside 2013 ⁽⁴⁵⁾	EUREYE	Vitamin C and Beta-carotene in plasma	na	CEE: Estonia	2000-03	nd	833	58.6	66	65+	random	general population	15
				WE: Norway, UK, France, Italy, Greece, Spain	2000-03	nd	3300	36-56	52	65+	random	general population	

WHO-CINDI, World Health Organization Countrywide Integrated Non-communicable Disease Intervention; NORBAGREE, Consumption of vegetables and fruits and other dietary health indicator foods in the Nordic and Baltic countries; EFCOVAL, European Food Consumption Validation; CNSHS, Cross National Student Health Survey; EHBS, European Health and Behaviour Survey; WHS, World Health Survey; EHIS, European Health Interview Survey; EURAMIC, European Community Multicentre Study on Antioxidants, Myocardial Infarction and Breast Cancer; LiVicordia, Linkoping-Vilnius Coronary Disease Risk Assessment Study; ECCO-EpiCom, European Crohn's and Colitis Organization's Epidemiological Committee study; FDR, Federal Republic of Germany; GDR, German Democratic Republic; CEE: Central and Eastern Europe (or Former Soviet Union); WE, Western Europe; FFO, Food frequency questionnaire; na, not applicable; nd, no data available; IBD, Inflammatory bowel disease

*Based on evaluation using a modified STROBE checklist;

†Overall response rate