

SUPPLEMENTARY MATERIALS

Adherence to the Danish food-based dietary guidelines and risk of myocardial infarction – a cohort study

Supplementary table 1 Median intakes of foods and nutrients and baseline characteristics of the study population by Danish Dietary Guidelines Index score. Values are medians unless otherwise indicated.

	Men (n 25 961)				Women (n 29 061)			
	Score < 3 (n 5661)	Score 3 - < 4 (n 12638)	Score 4 - < 5 (n 6740)	Score ≥ 5 (n 922)	Score < 3 (n 2720)	Score 3 - < 4 (n 11389)	Score 4 - < 5 (n 12117)	Score ≥ 5 (n 2834)
Intake of vegetables, fruits and juice (g/day)								
Vegetables	85.1	139.2	196.2	246.6	83.6	132.5	196.0	274.7
Fruits	61.5	111.5	169.7	216.3	90.6	141.5	203.8	284.9
Juice	5.1	8.6	14.3	14.4	5.1	8.6	14.4	14.9
Fish (g/week)								
Total	189.2	296.2	368.6	436.7	151.0	209.3	280.3	381.4
Fatty fish *	59.5	107.0	151.0	203.7	44.2	69.2	103.0	167.7
Whole grains (g/day)	26.1	41.4	59.0	71.0	22.5	28.4	41.0	61.7
Red and processed meat (g/week)	1094.6	1017.6	798.6	532.8	810.8	655.4	540.7	450.4
Dairy (g/day)								
Low-fat dairy †	81.9	144.0	221.8	235.5	84.8	154.0	220.5	255.3
High-fat dairy ‡	60.2	63.8	68.1	60.8	64.3	64.3	65.9	67.2
Butter (g/day)	16.1	15.0	6.0	0.8	15.0	10.9	5.6	2.1
Margarines (g/day)	13.0	14.3	12.2	7.8	10.7	9.9	8.1	6.3
Vegetable oils (g/day)	1.7	3.7	6.8	8.6	1.3	2.3	5.1	7.3
Sodium chloride (table salt) (g/day)	8.5	9.2	9.2	8.6	6.8	6.8	7.0	7.7
Added sugar (E%)	6.1	5.5	5.3	4.9	8.7	6.6	5.7	5.1
Water incl. tea and coffee (L/day)	1.6	1.7	1.8	1.9	1.8	1.9	2.0	2.2
Soft drinks (mL/day)	17.8	17.0	9.0	4.7	16.7	7.1	4.7	3.6
Energy (MJ)	9.3	10.0	10.3	9.9	7.8	7.8	8.2	9.1
Fat (E%)								
Total	39.2	37.2	33.7	29.2	38.3	35.9	32.5	28.9
Saturated fat	15.7	14.1	12.1	10.0	15.7	14.2	12.2	10.3
Protein (E%)	17.9	18.0	17.8	17.4	17.2	17.7	17.8	17.6
Carbohydrates (E%)	42.8	44.8	48.4	53.1	44.2	46.2	49.5	53.2
Alcohol (g/day)	18.9	20.2	19.0	17.4	6.5	9.1	10.1	9.2
Alcohol abstinence (%)								
Age (y)	55.4	55.8	56.4	57.2	56.1	56.0	56.3	57.0
BMI at baseline (kg/m ²)	26.5	26.2	25.8	25.2	25.0	25.0	24.7	24.5
Waist circumference at baseline (cm)	96.5	95.0	94.0	92.0	82.0	81.0	80.0	79.0
Moderate to vigorous physical activity								
Yes (%)	67.3	78.7	86.5	90.6	71.3	81.1	88.1	91.9
hours/week	1.5	2.0	3.0	4.0	1.5	2.0	3.0	4.0
Smoking (%)								
Never	21	26	30	34	32	42	47	50
Former	26	33	42	45	16	21	26	31
Current	53	41	28	21	52	37	27	19
Education (%)								
≤ 7 y	43	35	28	21	46	34	27	24
8-10 y	41	42	41	42	45	51	51	49
> 10 y	16	23	31	37	9	15	22	27
Hypertension (%)								
Yes	14	14	15	18	16	17	17	18
No	66	69	71	70	71	72	73	74
Don't know	20	17	14	12	13	11	10	8
Hypercholesterolemia (%)								
Yes	6	7	10	16	5	5	6	10
No	48	51	52	51	50	50	51	52
Don't know	46	42	38	33	45	45	43	38
Diabetes (%)								
Yes	2	2	4	4	1	1	2	3
No	91	92	92	92	94	95	94	94
Don't know	7	6	4	4	5	4	4	3

Abbreviations: E %, energy percentage.

* Defined as fish containing >1 g n-3 PUFA / 100 g; includes trout, salmon, herring, mackerel and lumpfish roe.

† Includes skimmed (0.5 g fat/100 g product) and semiskimmed milk (1.5 g fat/100 g product), buttermilk (0.5 g fat/100 g product), low-fat yogurt (1.5 g fat/100 g product), cottage cheese (5 g fat/100 g product), cheese, firm (16 g fat/100 g product), low-fat ice cream (3 g fat/100 g product), processed cheese (17 g fat/100 g product), unripened smoked cheese (0.5 g fat/100 g product).

‡ Includes whole milk (3.5 g fat/100 g product), whole milk yogurt (3.5 g fat/100 g product), cream (13 or 38 g fat/100 g product), cheese, firm (25 g fat/100 g product), brie (28 g fat/100 g product), camembert (22 g fat/100 g product), Roquefort/danablue (30 g fat/100 g product), cream cheese (37 g fat/100 g product), ice cream (10 g fat/100 g product), unripened smoked cheese (10 g fat/100 g product).

Supplementary table 2 Spearman's rank correlation coefficients between the Danish Dietary Guidelines Index and the individual components of the index.

	DDGI	item1	item2	item3	item4	item5	item6
DDGI	1.0000						
Item 1	0.6197	1.0000					
Item 2	0.4276	0.2351	1.0000				
Item 3	0.4659	0.1989	0.1728	1.0000			
Item 4	0.4952	0.0544	-0.1964	-0.1088	1.0000		
Item 5	0.5969	0.3374	0.0779	0.1404	0.2515	1.0000	
Item 6	0.2816	0.1043	0.0946	0.1134	-0.0306	-0.0915	1.0000

DDGI: Danish Dietary Guidelines Index

Item 1: Eat fruits and lots of vegetables

Item 2: Eat more fish

Item 3: Choose whole grains

Item 4: Choose lean meats and cold meats

Item 5: Eat less saturated fat

Item 6: Eat less sugar

Supplementary table 3 Hazard ratios (HR) and 95 % confidence intervals (CI) of myocardial infarction by the Danish Dietary Guidelines Index with analysis time split into three age periods in men.

	Cases, n	Model 1a		Model 1b		Model 2	
		HR	95 % CI	HR	95 % CI	HR	95 % CI
<i>< 65 years</i>							
Danish Dietary Guidelines Index							
score < 3	252	1.00	ref.	1.00	ref.	1.00	ref.
score 3 - < 4	386	0.67	0.58, 0.80	0.78	0.66, 0.91	0.77	0.66, 0.91
score 4 - < 5	169	0.57	0.47, 0.70	0.73	0.60, 0.89	0.72	0.59, 0.87
score ≥ 5	22	0.57	0.37, 0.89	0.79	0.51, 1.23	0.77	0.50, 1.19
p for trend*		< 0.001		0.003		0.001	
<i>65 - 74 years</i>							
Danish Dietary Guidelines Index							
score < 3	283	1.00	ref.	1.00	ref.	1.00	ref.
score 3 - < 4	535	0.79	0.69, 0.92	0.90	0.78, 1.04	0.88	0.76, 1.02
score 4 - < 5	256	0.67	0.56, 0.79	0.83	0.70, 0.99	0.80	0.67, 0.95
score ≥ 5	43	0.77	0.56, 1.06	1.03	0.74, 1.42	0.97	0.70, 1.34
p for trend*		< 0.001		0.137		0.050	
<i>≥ 75 years</i>							
Danish Dietary Guidelines Index							
score < 3	35	1.00	ref.	1.00	ref.	1.00	ref.
score 3 - < 4	98	1.12	0.76, 1.65	1.25	0.85, 1.84	1.21	0.82, 1.79
score 4 - < 5	59	1.14	0.75, 1.73	1.37	0.90, 2.09	1.29	0.84, 1.97
score ≥ 5	6	0.64	0.27, 1.54	0.84	0.35, 2.00	0.76	0.32, 1.81
p for trend*		0.845		0.431		0.677	

* Test for trend was performed by including the categorized index as a linear variable.

All analyses were stratified by date of enrolment (tertiles).

Model 1a: adjusted for length of follow-up (i.e. baseline age)

Model 1b: model 1a + alcohol intake, alcohol abstinence, physical activity, smoking and education

Model 2: model 1b + baseline BMI, waist circumference, hypertension, hypercholesterolemia and diabetes

Supplementary table 4 Hazard ratios (HR) and 95 % confidence intervals (CI) of myocardial infarction by the Danish Dietary Guidelines Index with analysis time split into three age periods in women.

	Cases, n	Model 1a		Model 1b		Model 2	
		HR	95 % CI	HR	95 % CI	HR	95 % CI
<i>< 65 years</i>	245						
Danish Dietary Guidelines Index							
score < 3	46	1.00	ref.	1.00	ref.	1.00	ref.
score 3 - < 4	99	0.51	0.36, 0.72	0.66	0.46, 0.93	0.64	0.45, 0.91
score 4 - < 5	82	0.40	0.28, 0.58	0.64	0.44, 0.92	0.61	0.42, 0.88
score ≥ 5	18	0.39	0.23, 0.67	0.69	0.40, 1.20	0.65	0.38, 1.13
p for trend*		< 0.001		0.088		0.052	
<i>65 - 74 years</i>	510						
Danish Dietary Guidelines Index							
score < 3	87	1.00	ref.	1.00	ref.	1.00	ref.
score 3 - < 4	202	0.55	0.43, 0.71	0.70	0.54, 0.90	0.67	0.52, 0.86
score 4 - < 5	174	0.44	0.34, 0.56	0.67	0.51, 0.87	0.62	0.48, 0.81
score ≥ 5	47	0.48	0.33, 0.68	0.84	0.59, 1.21	0.76	0.53, 1.10
p for trend*		< 0.001		0.129		0.036	
<i>≥ 75 years</i>	147						
Danish Dietary Guidelines Index							
score < 3	10	1.00	ref.	1.00	ref.	1.00	ref.
score 3 - < 4	60	1.45	0.74, 2.84	1.78	0.91, 3.49	1.74	0.89, 3.40
score 4 - < 5	60	1.26	0.64, 2.46	1.84	0.94, 3.60	1.70	0.87, 3.34
score ≥ 5	17	1.38	0.63, 3.03	2.32	1.05, 5.09	2.06	0.94, 4.54
p for trend*		0.862		0.064		0.154	

* Test for trend was performed by including the categorized index as a linear variable.

All analyses were stratified by date of enrolment (tertiles).

Model 1a: adjusted for length of follow-up (i.e. baseline age)

Model 1b: model 1a + alcohol intake, alcohol abstinence, physical activity, smoking and education

Model 2: model 1b + baseline BMI, waist circumference, hypertension, hypercholesterolemia and diabetes

Supplementary table 5 Hazard ratios (HR) and 95 % confidence intervals (CI) of myocardial infarction by compliance to the individual components in the Danish Dietary Guidelines Index in men.

Compliance with guideline	Cases, n	Model 1a		Model 1b		Model 2	
		HR	95 % CI	HR	95 % CI	HR	95 % CI
Eat fruits and lots of vegetables							
no	2071	1.00	ref.	1.00	ref.	1.00	ref.
yes	73	1.04	0.82, 1.32	1.17	0.92, 1.48	1.10	0.87, 1.39
Eat more fish							
no	1758	1.00	ref.	1.00	ref.	1.00	ref.
yes	386	0.94	0.84, 1.05	0.97	0.87, 1.08	0.94	0.84, 1.05
Choose whole grains							
no	1949	1.00	ref.	1.00	ref.	1.00	ref.
yes	195	0.79	0.68, 0.92	0.83	0.71, 0.96	0.90	0.77, 1.04
Choose lean meats and cold meats							
no	2023	1.00	ref.	1.00	ref.	1.00	ref.
yes	121	0.85	0.70, 1.02	0.91	0.75, 1.10	0.94	0.78, 1.14
Eat less saturated fat							
no	1993	1.00	ref.	1.00	ref.	1.00	ref.
yes	151	1.06	0.89, 1.26	1.16	0.98, 1.38	1.04	0.87, 1.24
Eat less sugar							
no	351	1.00	ref.	1.00	ref.	1.00	ref.
yes	1793	0.83	0.74, 0.94	0.87	0.77, 0.97	0.84	0.75, 0.95

All analyses were stratified by date of enrolment (tertiles) and mutually adjusted for the index components.

Model 1a: adjusted for length of follow-up (i.e. baseline age)

Model 1b: model 1a + alcohol intake, alcohol abstinence, physical activity, smoking and education

Model 2: model 1b + baseline BMI, waist circumference, hypertension, hypercholesterolemia and diabetes

Supplementary table 6 Hazard ratios (HR) and 95 % confidence intervals (CI) of myocardial infarction by compliance to the individual components in the Danish Dietary Guidelines Index in women.

Compliance with guideline	Cases, n	Model 1a		Model 1b		Model 2	
		HR	95 % CI	HR	95 % CI	HR	95 % CI
Eat fruits and lots of vegetables							
no	837	1.00	ref.	1.00	ref.	1.00	ref.
yes	65	0.87	0.68, 1.14	1.04	0.81, 1.36	1.04	0.80, 1.36
Eat more fish							
no	800	1.00	ref.	1.00	ref.	1.00	ref.
yes	102	0.82	0.66, 1.01	0.88	0.71, 1.09	0.84	0.68, 1.04
Choose whole grains							
no	864	1.00	ref.	1.00	ref.	1.00	ref.
yes	38	0.77	0.55, 1.06	0.83	0.59, 1.15	0.81	0.58, 1.13
Choose lean meats and cold meats							
no	602	1.00	ref.	1.00	ref.	1.00	ref.
yes	300	0.90	0.78, 1.03	0.95	0.83, 1.10	1.00	0.86, 1.15
Eat less saturated fat							
no	783	1.00	ref.	1.00	ref.	1.00	ref.
yes	119	1.15	0.94, 1.40	1.25	1.02, 1.53	1.12	0.91, 1.38
Eat less sugar							
no	172	1.00	ref.	1.00	ref.	1.00	ref.
yes	730	0.92	0.78, 1.09	1.03	0.87, 1.22	0.98	0.83, 1.16

All analyses were stratified by date of enrolment (tertiles) and mutually adjusted for the index components.

Model 1a: adjusted for length of follow-up (i.e. baseline age)

Model 1b: model 1a + alcohol intake, alcohol abstinence, physical activity, smoking and education

Model 2: model 1b + baseline BMI, waist circumference, hypertension, hypercholesterolemia and diabetes

Supplementary table 7 Hazard ratios (HR) and 95 % confidence intervals (CI) of myocardial infarction by the Danish Dietary Guidelines Index. Analyses stratified by baseline self reported disease (diabetes, hypertension and/or hypercholesterolemia).

Self reported disease	Men				Women			
	No (<i>n</i> 20 559)		Yes (<i>n</i> 5 402)		No (<i>n</i> 22 805)		Yes (<i>n</i> 6 255)	
	HR	P5, P95	HR	P5, P95	HR	P5, P95	HR	P5, P95
Danish Dietary Guidelines Index								
score < 3	1.00	ref.	1.00	ref.	1.00	ref.	1.00	ref.
score 3 - < 4	0.82	0.73, 0.93	0.94	0.77, 1.14	0.81	0.63, 1.03	0.66	0.47, 0.91
score 4 - < 5	0.78	0.67, 0.91	0.81	0.64, 1.01	0.73	0.56, 0.95	0.69	0.50, 0.96
score ≥ 5	0.81	0.58, 1.13	0.87	0.59, 1.29	0.84	0.57, 1.22	0.84	0.54, 1.29
p for trend*	0.002		0.083		0.093		0.521	

* Test for trend was performed by including the categorized index as a linear variable in the model.

All analyses were stratified by date of enrolment (tertiles).

Adjusted for length of follow-up (i.e. baseline age), alcohol intake, alcohol abstinence, physical activity, smoking and education.