

## **Vitamin E administration may decrease the incidence of pneumonia in elderly males**

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Pages 2 and 3: show tables comparing the baseline balance of vitamin E and no-vitamin E participants of groups A and B in Figs. 1 and 3; see Table 1 of the paper. Adjusted RR values are also calculated for the estimate of vitamin E effect in the subgroup.

Page 4: The 27 cases of pneumonia in participants who had quit smoking

**Table S1. Baseline comparison of participants in Fig. 1A by vitamin E administration.**

The number of participants and pneumonia cases, and the baseline characteristics of ATBC Study participants who initiated smoking at older age ( $\geq 20$  yr), smoked less (5-19 cigarettes/day), and carried out exercise at leisure time, by vitamin E supplementation; see Table 1.

Baseline variables	vitamin E participants	no-vitamin E participants	Baseline difference in percentages *	
			Difference	95%CI
<b>Participants</b>	1118	1098		
<b>Person years</b>	6567	6279		
<b>Pneumonia cases</b>	14	43		
<b>Unadjusted RR (95% CI):</b>	0.31 (95% CI 0.17 to 0.57)			
<b>Adjusted RR (95% CI): **</b>	0.30 (95% CI 0.15 to 0.57)			
BMI (kg/m <sup>2</sup> )	25.99	26.01	0.0%	-1.1%, +1.1%
Cigarettes (1/d)	11.50	11.54	-0.3%	-3%, +2%
Age at smoking initiation (y)	25.6	25.9	-1.1%	-3%, +0.7%
Duration of regular smoking (y) **	29.8	29.6	0.7%	-2%, +4%
Alcohol intake (g/d)	10.9	11.3	-4.1%	-15%, +7%
Coffee intake (L/d)	0.542	0.535	1.5%	-3%, +6%
Employed (%)	46.5	48.9	-4.9%	-13%, +4%

The table shows the mean values for the baseline variables that were associated with pneumonia risk in the ATBC Study, see Ref. 12.

\* Per cent difference compares the vitamin E group baseline with the no-vitamin E group baseline.

\*\* Because of missing data in the baseline variables, the adjusted RR is based on N=2050 and 52 pneumonia cases; unadjusted RR is based on N=2216 and 57 pneumonia cases.

**Table S2. Baseline comparison of participants in Fig. 1B by vitamin E administration.**

The number of participants and pneumonia cases, and the baseline characteristics of ATBC Study participants who initiated smoking at younger age ( $\leq 20$  yr), smoked more ( $\geq 20$  cigarettes/day), and did not carry out exercise at leisure time, by vitamin E supplementation, see Table 1.

Baseline variables	vitamin E participants	no-vitamin E participants	Baseline difference in percentages *	
			Difference	95%CI
<b>Participants</b>	2660	2593		
<b>Person years</b>	15453	15015		
<b>Pneumonia cases</b>	65	74		
<b>Unadjusted RR (95% CI):</b>	0.86 (95% CI 0.62 to 1.21)			
<b>Adjusted RR (95% CI): **</b>	0.80 (95% CI 0.56 to 1.15)			
BMI (kg/m <sup>2</sup> )	26.59	26.56	0.1%	-0.7%, +0.9%
Cigarettes (1/d)	22.9	22.1	0.9%	-1.1%, +3%
Age at smoking initiation (y)	24.9	25.0	-0.5%	-1.6%, +0.6%
Duration of regular smoking (y) **	30.53	30.49	0.1%	-1.3%, +1.6%
Alcohol intake (g/d)	17.9	17.4	3%	-4%, +10%
Coffee intake (L/d)	0.591	0.601	-1.7%	-5%, +1.5%
Employed (%)	36.5	35.5	-2%	-5%, +10%

The table shows the mean values for the baseline variables that were associated with pneumonia risk in the ATBC Study, see Ref. 12.

\* Per cent difference compares the vitamin E group baseline with the no-vitamin E group baseline.

\*\* Because of missing data in the baseline variables, the adjusted RR is based on N=4841 and 121 pneumonia cases; unadjusted RR is based on N=5253 and 139 pneumonia cases.

**Table S3. Baseline comparison of participants in Fig. 3A by vitamin E administration.**

The number of participants who quit smoking and their baseline characteristics among the ATBC Study participants who initiated smoking at older age ( $\geq 20$  yr), smoked less (5-19 cigarettes/day), and exercised at leisure time, by vitamin E supplementation.

Baseline variables	vitamin E participants	no-vitamin E participants	Baseline difference in percentages *	
			Difference	95%CI
<b>Participants who quit</b>	477	479		
<b>Person years</b>	1604	1597		
<b>Pneumonia cases among quitters</b>	3	9		
<b>Unadjusted RR (95% CI):</b>	0.31 (95% CI 0.08 to 1.2)			
BMI (kg/m <sup>2</sup> )	26.30	26.31	0.0%	-2%, +2%
Cigarettes (1/d)	10.9	11.0	-1.0%	-6%, +2%
Age at smoking initiation (y)	26.2	26.4	-0.7%	-4%, +2%
Duration of regular smoking (y)	28.6	28.2	1.5%	-3%, +6%
Alcohol intake (g/d)	10.3	10.4	-1.7%	-17%, +14%
Coffee intake (L/d)	0.544	0.533	2.2%	-5%, +9%
Employed (%)	43.7	46.3	-5%	-19%, +8%

The table shows the mean values for the baseline variables that were associated with pneumonia risk in the ATBC Study, see Ref. 12.

\* Per cent difference compares the vitamin E group baseline with the no-vitamin E group baseline.

**Table S4. Baseline comparison of participants in Fig. 3B by vitamin E administration.**

The number of participants who quit smoking and their baseline characteristics among the ATBC Study participants who initiated smoking at younger age ( $\leq 20$  yr), smoked more ( $\geq 20$  cigarettes/day), and did not carry out exercise at leisure time, by vitamin E supplementation.

Baseline variables	vitamin E participants	no-vitamin E participants	Baseline difference in percentages *	
			Difference	95%CI
<b>Participants who quit</b>	815	794		
<b>Person years</b>	2480	2474		
<b>Pneumonia cases in quitters</b>	3	12		
<b>Unadjusted RR (95% CI):</b>	0.24 (95% CI 0.067, 0.86)			
BMI (kg/m <sup>2</sup> )	26.93	26.97	-0.2%	-1.6%, +1.2%
Cigarettes (1/d)	20.7	20.6	0.9%	-3%, +5%
Age at smoking initiation (y)	25.4	25.6	-0.9%	-3%, +15
Duration of regular smoking (y)	29.6	29.3	1%	-2%, +4%
Alcohol intake (g/d)	14.2	13.8	3%	-9%, +16%
Coffee intake (L/d)	0.594	0.607	-2%	-8%, +4%
Employed (%)	36.9	34.4	7%	-6%, +20%

The table shows the mean values for the baseline variables that were associated with pneumonia risk in the ATBC Study, see Ref. 12.

\* Per cent difference compares the vitamin E group baseline with the no-vitamin E group baseline.

## 27 participants who got pneumonia after reporting that they had quit smoking by vitamin E administration

**ID:** identification code of the ATBC Study participant.

**Vit E:** vitamin E was administered (1), and no-vitamin E (0).

**Pneumonia at years:** indicates the time after randomization when pneumonia occurred.

**Pneumonia at 3 x years:** transformation of the time to the follow-up visit scale, 3 follow-up visits per year.

**Pneumonia before visit:** the follow-up visit immediately preceding the occurrence of pneumonia; ie integer.

**Follow-up visit:** data about smoking at the visits prior to the occurrence of pneumonia: continued smoking after the previous visit (3), did not smoke after the previous visit (1), quit after the previous visit (2). The dot “.” indicates that the participant missed the follow-up visit. Red indicates the visit immediately preceding pneumonia, yellow indicates all other preceding visits on which the participant continuously did not smoke.

If the comparison is restricted to participants who did not miss the follow-up visit immediately preceding the occurrence of pneumonia (“.”), there were 4 cases of pneumonia among the vitamin E participants vs. 18 among the no-vitamin E participants, corresponding to RR = 0.18.

If the comparison is restricted to participants who did not smoke at any of the 3 follow-up visits preceding the occurrence of pneumonia (ie more committed quitters), there were 4 cases of pneumonia among the vitamin E participants vs. 13 among the no-vitamin E participants, corresponding to RR = 0.31.

ID	Vit E	Pneumonia at		The visit before pneumonia	Follow-up visit																							
		years	3 x years		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
7750	0	0.4	1.1	1	2																							
16661	0	2.3	6.9	6	3	3	3	3	3	2																		
26508	0	2.3	7.0	7	3	3	3	3	3	3	1																	
26775	0	2.5	7.6	7	3	3	3	2	1	1	1																	
49298	0	3.0	9.0	8	3	3	3	3	3	3	3	2																
27850	0	3.5	10.6	10	3	3	3	3	3	3	3	3	2															
301	0	4.0	11.9	11	3	3	3	3	.	3	3	.	.	1	.													
43524	0	4.1	12.4	12	3	3	3	3	3	2	1	1	1	1	1	1	1											
22497	0	4.5	13.4	13	3	3	3	2	1	1	1	1	1	1	1	1	1	1										
48337	0	4.5	13.5	13	3	3	3	3	3	2	1	1	1	1	1	1	1	1	1									
14233	0	4.6	13.7	13	3	3	3	3	3	3	3	3	3	3	3	3	2	.										
19535	0	4.8	14.3	14	3	3	3	3	3	3	3	3	3	3	3	3	2	1	1	1								
43007	0	5.1	15.3	15	3	3	3	3	3	3	3	3	3	3	3	3	2	.	1	1	1							
28901	0	5.5	16.4	16	3	3	3	1	1	1	1	1	1	1	1	.	.	1	1	.	1							
4929	0	5.6	16.8	16	3	3	3	3	3	3	3	3	3	3	3	2	1	1	1	1	1	1						
20116	0	6.0	18.0	17	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1	1	1		
1923	0	6.1	18.4	18	3	3	3	3	3	3	3	3	2	1	.	1	1	1	1	1	1	1	1	1	1	1	1	
6171	0	6.2	18.6	18	3	3	3	2	3	3	3	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	
145	0	6.8	20.3	20	3	3	3	3	3	3	3	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	
6353	0	7.1	21.4	21	3	3	3	3	3	3	3	3	3	3	3	3	2	.	3	.	.	3	.	3	.	2		
6	0	8.1	24.3	24	3	2	1	1	1	1	1	1	1	1	.	1	1	1	1	1	1	.	.	1	.	1	1	1
12950	1	1.4	4.2	4	3	3	1	.																				
216	1	2.0	6.1	6	2	2	1	1	1	.																		
50396	1	2.2	6.5	6	3	2	1	1	1	1	1																	
9001	1	5.2	15.7	15	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2								
14208	1	5.3	16.0	15	3	3	3	2	3	3	2	1	2	2	1	1	1	1	1	1	1							
16207	1	6.0	18.0	18	3	2	2	1	2	1	1	1	1	2	1	1	2	1	1	2	1	1	2	1	1	1	1	