

Supplemental Table 3. Number of events, total risk time, incidence rate (IR) per 10,000 person-years and hazard ratios (HR) with 95% confidence intervals (CI) of the examined outcomes in fathers of children with atopic dermatitis (AD) compared with fathers of non-AD children.

	Risk time	Events	IR	95% CI	Crude model			Model 1			Model 2		
					HR	95% CI	p	aHR	95% CI	p	faHR	95% CI	p
Depression													
Father of non-AD child	603,349	293	4.86	(4.33-5.45)	ref								
Father of AD child	65,949	34	5.16	(3.68-7.22)	1.05	(0.73-1.49)	0.799	0.98	(0.68-1.43)	0.934	0.90	(0.61-1.34) 0.616	
Anxiety													
Father of non-AD child	604,099	180	2.98	(2.57-3.45)	ref								
Father of AD child	66,013	22	3.33	(2.19-5.06)	1.10	(0.71-1.72)	0.660	1.01	(0.64-1.61)	0.960	1.08	(0.67-1.76) 0.748	
Adjustment disorder													
Father of non-AD child	603,559	299	4.95	(4.94-5.55)	ref								
Father of AD child	66,002	28	4.24	(2.93-6.14)	0.88	(0.59-1.28)	0.474	0.82	(0.55-1.23)	0.344	0.77	(0.51-1.18) 0.230	
Substance abuse													
Father of non-AD child	594,694	860	14.46	(13.53-15.46)	ref								
Father of AD child	65,117	107	16.43	(13.60-19.86)	1.13	(0.92-1.38)	0.251	1.11	(0.90-1.37)	0.311	1.06	(0.85-1.31) 0.626	
Self-harming behavior													
Father of non-AD child	605,345	46	0.76	(0.57-1.01)	ref								
Father of AD child	66,126	7	1.06	(0.50-2.22)	1.40	(0.63-3.12)	0.404	0.91	(0.35-2.39)	0.853	1.13	(0.39-3.28) 0.819	
Suicide													
Father of non-AD child	605,542	66	1.09	(0.86-1.39)	ref								
Father of AD child	66,143	15	2.27	(1.37-3.76)	2.03	(1.16-3.56)	0.013	2.38	(1.32-4.29)	0.004	2.20	(1.12-4.32) 0.022	
Antidepressants													
Father of non-AD child	516,725	6444	124.71	(121.70-127.79)	ref								
Father of AD child	58,008	789	136.02	(126.85-145.84)	1.08	(1.00-1.17)	0.037	1.06	(0.98-1.14)	0.153	1.01	(0.93-1.10) 0.775	
Antidepressants for depression													
Father of non-AD child	554,546	4857	87.59	(85.16-90.08)	ref								
Father of AD child	61,180	592	96.76	(89.27-104.88)	1.10	(1.01-1.20)	0.031	1.07	(0.98-1.17)	0.114	1.01	(0.92-1.11) 0.863	
Antidepressants for anxiety													
Father of non-AD child	591,796	1446	24.43	(23.21-25.73)	ref								
Father of AD child	64,756	177	27.33	(23.59-31.67)	1.11	(0.95-1.30)	0.187	1.05	(0.89-1.23)	0.581	1.00	(0.84-1.19) 1.000	
Anxiolytics													
Father of non-AD child	561,751	3016	53.69	(51.81-55.64)	ref								
Father of AD child	62,235	354	56.88	(51.25-63.13)	1.05	(0.94-1.17)	0.412	1.02	(0.91-1.14)	0.714	0.98	(0.87-1.11) 0.781	
Anxiolytics for anxiety/calming													
Father of non-AD child	585,599	2321	39.63	(38.05-41.28)	ref								
Father of AD child	64,225	264	41.11	(36.43-46.38)	1.03	(0.90-1.17)	0.692	0.99	(0.87-1.13)	0.939	0.94	(0.82-1.08) 0.368	
Psychiatrist consultation													
Father of non-AD child	587,733	1895	32.24	(30.82-33.73)	ref								

Father of AD child	64,435	230	35.69	(31.37-40.62)	1.11	(0.97-1.27)	0.138	1.07	(0.93-1.24)	0.320	1.05	(0.90-1.22)	0.522
Psychologist consultation													
Father of non-AD child	571,623	3675	64.29	(62.25-66.40)	ref								
Father of AD child	62,834	445	70.82	(64.54-77.72)	1.10	(1.00-1.21)	0.060	1.07	(0.97-1.18)	0.187	1.06	(0.95-1.18)	0.282
Migraine													
Father of non-AD child	603,530	286	4.74	(4.22-5.32)	ref								
Father of AD child	65,944	29	4.40	(3.06-6.33)	0.92	(0.63-1.35)	0.677	0.89	(0.60-1.32)	0.571	0.88	(0.59-1.33)	0.553
Other headache syndromes													
Father of non-AD child	603,256	367	6.08	(5.49-6.74)	ref								
Father of AD child	65,919	41	6.22	(4.58-8.45)	1.02	(0.74-1.41)	0.897	1.01	(0.72-1.40)	0.965	0.94	(0.66-1.34)	0.732
Fibromyalgia													
													N/A
Migraine medication													
Father of non-AD child	580,879	1541	26.53	(25.24-27.89)	ref								
Father of AD child	64,002	177	27.66	(23.87-32.05)	1.04	(0.89-1.22)	0.597	1.01	(0.86-1.18)	0.928	0.98	(0.83-1.16)	0.790
Pain medication													
Father of non-AD child	441,785	17528	396.75	(390.92-402.67)	ref								
Father of AD child	50,209	2152	428.61	(410.88-447.11)	1.08	(1.04-1.14)	0.001	1.07	(1.02-1.12)	0.003	1.02	(0.97-1.07)	0.465
Opioids only													
Father of non-AD child	474,065	11396	240.39	(236.02-244.84)	ref								
Father of AD child	53,700	1398	260.33	(247.04-274.34)	1.08	(1.03-1.15)	0.005	1.06	(1.01-1.13)	0.031	1.03	(0.97-1.09)	0.387
Sleep medication													
Father of non-AD child	551,962	4781	86.62	(84.20-89.11)	ref								
Father of AD child	60,994	586	96.07	(88.60-104.18)	1.11	(1.02-1.21)	0.021	1.09	(0.99-1.19)	0.065	1.05	(0.96-1.16)	0.276
Divorce													
Father of non-AD child	293,200	5775	196.96	(191.95-202.11)	ref								
Father of AD child	31,364	686	218.72	(202.95-235.72)	1.16	(1.07-1.26)	0.001	1.15	(1.06-1.26)	0.001	1.13	(1.03-1.24)	0.008

AD = atopic dermatitis, IR = incidence rate, HR = hazard ratio, CI = confidence interval, p = p value, ref = reference group. Model 1 was adjusted for sex, age, father's atopic disease, index child's psychiatric disease, socioeconomic status, having a later AD child and history of outcome. Model 2 was further adjusted for index child's atopic comorbidity. Analysis for divorce was only conducted on fathers being married at index and was further adjusted for length of marriage at index. Bold marking indicates statistical significance after Bonferroni correction.