

Assessment of a causal relationship between body mass index and atopic dermatitis

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Association of BMI genetic instruments with BMI in UK Biobank and HUNT. BMI variants reported by Locke *et al.* (2015)

SNP	CHR	Position (bp)	Effect allele	BMI ^a (UK Biobank)		BMI ^a (HUNT)		BMI ^b (Locke 2015)	
				Beta (95% CI)	P value	Beta (95% CI)	P value	Beta (95% CI)	P value
rs977747	1	47684677	T	0.08 (0.06,0.10)	1.24E-13	0.03 (-0.06,0.12)	0.53	0.02 (0.01,0.02)	8.65E-08
rs657452	1	49589847	A	0.08 (0.06,0.10)	5.38E-12	0.09 (0.00,0.19)	0.05	0.02 (0.02,0.03)	5.48E-13
rs11583200	1	50559820	C	0.07 (0.05,0.09)	1.48E-09	0.08 (-0.01,0.18)	0.08	0.02 (0.01,0.02)	1.48E-08
rs3101336**	1	72751185	C	0.11 (0.08,0.13)	1.68E-21	0.18 (0.09,0.27)	8.96E-05	0.03 (0.03,0.04)	2.66E-26
rs12566985**	1	75002193	G	0.08 (0.06,0.11)	1.36E-14	0.09 (0.00,0.18)	0.05	0.02 (0.02,0.03)	3.28E-15
rs12401738	1	78446761	A	0.08 (0.06,0.10)	1.17E-12	0.08 (-0.01,0.18)	0.07	0.02 (0.02,0.03)	1.15E-10
rs11165643	1	96924097	T	0.09 (0.06,0.11)	8.99E-15	0.05 (-0.04,0.14)	0.26	0.02 (0.02,0.03)	2.07E-12
rs17024393**	1	110154688	C	0.31 (0.24,0.37)	6.26E-19	0.31 (0.03,0.59)	0.03	0.07 (0.05,0.08)	7.03E-14
rs543874**	1	177889480	G	0.24 (0.21,0.27)	3.36E-71	0.37 (0.26,0.47)	1.03E-11	0.05 (0.04,0.06)	2.62E-35
rs2820292	1	201784287	C	0.09 (0.07,0.11)	5.58E-17	0.12 (0.03,0.21)	0.01	0.02 (0.01,0.03)	1.83E-10
rs13021737**	2	632348	G	0.26 (0.23,0.29)	3.95E-74	0.19 (0.07,0.31)	1.72E-03	0.06 (0.05,0.07)	1.11E-50
rs10182181**	2	25150296	G	0.17 (0.15,0.19)	2.39E-55	0.21 (0.12,0.30)	6.30E-06	0.03 (0.03,0.04)	8.78E-24
rs11126666	2	26928811	A	0.01 (-0.01,0.04)	2.29E-01	0.01 (-0.09,0.11)	0.82	0.02 (0.02,0.03)	1.33E-09
rs1016287	2	59305625	T	0.09 (0.07,0.12)	5.07E-15	0.15 (0.05,0.25)	2.78E-03	0.02 (0.02,0.03)	2.25E-11
rs11688816	2	63053048	G	0.05 (0.03,0.07)	2.24E-05	-0.02 (-0.12,0.07)	0.60	0.02 (0.01,0.02)	1.89E-08
rs2121279	2	143043285	T	0.05 (0.02,0.08)	2.18E-03	-0.01 (-0.14,0.12)	0.93	0.02 (0.02,0.03)	2.31E-08
rs1460676	2	164567689	C	0.06 (0.03,0.09)	2.24E-05	0.06 (-0.07,0.18)	0.36	0.02 (0.01,0.03)	8.98E-07
rs1528435	2	181550962	T	0.08 (0.05,0.10)	8.76E-12	0.07 (-0.02,0.17)	0.12	0.02 (0.01,0.02)	1.2E-08
rs17203016	2	208255518	G	0.06 (0.04,0.09)	2.67E-06	0.04 (-0.07,0.15)	0.47	0.02 (0.01,0.03)	8.15E-08
rs7599312	2	213413231	G	0.08 (0.05,0.10)	7.65E-10	0.11 (0.01,0.21)	0.03	0.02 (0.02,0.03)	1.17E-10
rs492400	2	219349752	C	0.05 (0.03,0.08)	9.08E-07	0.07 (-0.02,-0.16)	0.15	0.02 (0.01,0.02)	4.17E-07
rs2176040	2	227092802	A	0.01 (-0.01,0.04)	0.23	-0.02 (-0.11,0.07)	0.64	0.01 (0.01,0.02)	6.06E-06
rs6804842	3	25106437	G	0.06 (0.04,0.09)	7.57E-09	0.10 (0.01,0.19)	0.03	0.02 (0.01,0.02)	2.48E-09
rs2365389	3	61236462	C	0.07 (0.05,0.09)	8.70E-11	0.04 (-0.05,0.13)	0.37	0.02 (0.01,0.03)	1.63E-10
rs3849570	3	81792112	A	0.06 (0.04,0.08)	4.03E-07	0.02 (-0.07,0.12)	0.63	0.02 (0.01,0.02)	2.6E-08
rs13078960	3	85807590	G	0.09 (0.06,0.12)	2.06E-11	0.09 (-0.02,0.20)	0.12	0.03 (0.02,0.04)	1.74E-14
rs16851483	3	141275436	T	0.18 (0.14,0.22)	1.45E-16	0.01 (-0.18,0.20)	0.91	0.05 (0.03,0.06)	3.55E-10
rs1516725	3	185824004	C	0.16 (0.13,0.19)	4.80E-25	0.13 (-0.01,0.27)	0.06	0.04 (0.04,0.05)	1.89E-22
rs10938397**	4	45182527	G	0.15 (0.13,0.17)	7.36E-41	0.18 (0.08,0.27)	1.59E-04	0.04 (0.03,0.05)	3.21E-38
rs17001654	4	77129568	G	0.08 (0.05,0.11)	3.14E-07	0.14 (0.02,0.27)	0.03	0.03 (0.02,0.04)	7.76E-09
rs13107325**	4	103188709	T	0.23 (0.19,0.27)	7.60E-30	0.13 (-0.07,0.33)	0.21	0.05 (0.03,0.06)	1.83E-12
rs11727676	4	145659064	T	0.04 (0.00,0.07)	3.42E-02	0.12 (-0.04,0.28)	0.13	0.04 (0.02,0.05)	2.55E-08
rs2112347	5	75015242	T	0.14 (0.11,0.16)	1.03E-33	0.04 (-0.05,0.14)	0.37	0.03 (0.02,0.03)	6.19E-17
rs7715256**	5	153537893	G	0.08 (0.05,0.10)	6.96E-12	0.08 (-0.01,0.17)	0.09	0.02 (0.01,0.02)	1.7E-07
rs205262	6	34563164	G	0.14 (0.12,0.16)	2.69E-30	0.20 (0.09,0.30)	1.6E-04	0.02 (0.01,0.03)	1.75E-10
rs2033529	6	40348653	G	0.10 (0.07,0.12)	2.60E-16	0.02 (-0.08,0.12)	0.64	0.02 (0.01,0.02)	1.39E-08
rs2207139**	6	50845490	G	0.19 (0.16,0.22)	2.57E-39	0.16 (0.04,0.28)	7.98E-03	0.04 (0.04,0.05)	4.13E-29
rs9400239	6	108977663	C	0.08 (0.06,0.11)	6.69E-12	0.08 (-0.02,0.18)	0.13	0.02 (0.01,0.02)	1.61E-08
rs9374842	6	120185665	T	0.06 (0.04,0.09)	2.15E-06	0.01 (-0.09,0.11)	0.85	0.02 (0.02,0.03)	2.67E-08
rs13201877	6	137675541	G	0.04 (0.01,0.07)	1.58E-02	0.00(-0.13,0.12)	0.96	0.02 (0.01,0.03)	2.35E-07
rs13191362	6	163033350	A	0.10 (0.06,0.13)	8.09E-09	0.16 (0.03,0.30)	0.01	0.03 (0.02,0.04)	7.34E-09
rs1167827	7	75163169	G	0.10 (0.08,0.12)	2.99E-20	0.07 (-0.02,0.16)	0.13	0.02 (0.01,0.03)	6.33E-10
rs2245368	7	76608143	C	0.12 (0.09,0.15)	3.76E-17	0.16 (0.04,0.28)	8.69E-03	0.03 (0.02,0.04)	3.19E-08

rs9641123	7	93197732	C	0.04 (0.02,0.06)	1.83E-04	0.09 (0.00,0.18)	0.06	0.03 (0.02,0.04)	2.08E-10
rs6465468	7	95169514	T	0.03 (0.01,0.05)	1.09E-02	0.06 (-0.04,0.16)	0.21	0.02 (0.01,0.02)	2.32E-06
rs17405819	8	76806584	T	0.09 (0.07,0.12)	2.01E-15	0.11 (0.02,0.21)	0.02	0.02 (0.02,0.03)	2.07E-11
rs16907751	8	81375457	C	0.09 (0.06,0.13)	7.25E-07	0.02 (-0.13,0.17)	0.77	0.04 (0.02,0.05)	1.26E-07
rs2033732	8	85079709	C	0.05 (0.02,0.07)	1.01E-04	0.02 (-0.08,0.13)	0.66	0.02 (0.01,0.03)	4.89E-08
rs4740619	9	15634326	T	0.09 (0.07,0.11)	1.24E-15	0.13 (0.04,0.22)	3.45E-03	0.02 (0.01,0.02)	4.56E-09
rs10968576	9	28414339	G	0.12 (0.10,0.14)	5.79E-26	0.14 (0.04,0.23)	0.01	0.02 (0.02,0.03)	6.61E-14
rs6477694	9	111932342	C	0.06 (0.04,0.08)	4.80E-08	0.04 (-0.05,0.13)	0.40	0.02 (0.01,0.02)	2.67E-08
rs1928295	9	120378483	T	0.06 (0.04,0.08)	1.19E-08	0.10 (0.01,0.19)	0.03	0.02 (0.01,0.02)	7.91E-10
rs10733682	9	129460914	A	0.07 (0.04,0.09)	4.20E-09	0.07 (-0.02,0.15)	0.16	0.02 (0.01,0.02)	1.83E-08
rs7899106	10	87410904	G	0.13 (0.09,0.18)	8.60E-08	0.32 (0.09,0.54)	5.45E-03	0.04 (0.03,0.05)	2.96E-08
rs17094222	10	102395440	C	0.07 (0.04,0.09)	4.41E-07	0.09 (-0.02,0.21)	0.11	0.02 (0.02,0.03)	5.94E-11
rs11191560	10	104869038	C	0.12 (0.08,0.16)	3.49E-09	-0.01 (-0.18,0.15)	0.87	0.03 (0.02,0.04)	8.45E-09
rs7903146	10	114758349	C	0.08 (0.06,0.11)	2.38E-12	0.15 (0.04,0.25)	5.79E-03	0.02 (0.02,0.03)	1.1E-11
rs4256980	11	8673939	G	0.09 (0.06,0.11)	8.36E-14	0.10 (0.00,0.19)	0.04	0.02 (0.02,0.03)	2.9E-11
rs11030104**	11	27684517	A	0.18 (0.15,0.20)	7.14E-39	0.09 (-0.03,0.20)	0.13	0.04 (0.03,0.05)	5.56E-28
rs2176598	11	43864278	T	0.09 (0.06,0.11)	2.10E-12	0.10 (-0.01,0.20)	0.07	0.02 (0.01,0.03)	2.97E-08
rs3817334	11	47650993	T	0.11 (0.09,0.14)	6.01E-25	0.10 (0.00,0.19)	0.04	0.03 (0.02,0.03)	5.15E-17
rs12286929	11	115022404	G	0.08 (0.06,0.10)	1.97E-14	0.10 (0.01,0.19)	0.03	0.02 (0.02,0.03)	1.31E-12
rs7138803**	12	50247468	A	0.13 (0.11,0.15)	4.35E-32	0.14 (0.05,0.23)	3.21E-03	0.03 (0.03,0.04)	8.15E-24
rs11057405	12	122781897	G	0.13 (0.10,0.17)	1.76E-13	0.18 (0.03,0.33)	0.02	0.03 (0.02,0.04)	2.02E-08
rs9581854*	13	28017782	T	0.05 (0.02,0.07)	9.85E-04	0.07 (-0.04,0.18)	0.24	0.03 (0.02,0.04)	2.29E-10
rs12429545**	13	54102206	A	0.14 (0.10,0.17)	1.44E-16	0.16 (0.03,0.29)	0.02	0.03 (0.02,0.04)	1.09E-12
rs9540493	13	66205704	A	0.07 (0.05,0.09)	6.31E-10	0.02 (-0.07,0.11)	0.61	0.02 (0.01,0.03)	4.97E-08
rs1441264**	13	79580919	A	0.09 (0.07,0.11)	2.73E-15	0.05 (-0.04,0.14)	0.29	0.02 (0.01,0.02)	6.04E-08
rs10132280	14	25928179	C	0.11 (0.09,0.14)	1.41E-21	0.10 (0.01,0.20)	0.04	0.02 (0.02,0.03)	1.14E-11
rs12885454	14	29736838	C	0.07 (0.05,0.10)	5.74E-11	0.05 (-0.04,0.15)	0.25	0.02 (0.02,0.03)	1.94E-10
rs11847697**	14	30515112	T	0.12 (0.06,0.17)	1.11E-05	0.32 (0.07,0.57)	0.01	0.05 (0.03,0.06)	3.99E-09
rs7141420	14	79899454	T	0.09 (0.07,0.11)	1.69E-16	0.10 (0.01,0.19)	0.04	0.02 (0.02,0.03)	1.23E-14
rs3736485	15	51748610	A	0.07 (0.05,0.09)	3.49E-11	0.01 (-0.08,0.10)	0.83	0.02 (0.01,0.02)	7.41E-09
rs16951275	15	68077168	T	0.13 (0.11,0.16)	5.11E-24	0.17 (0.06,0.28)	2.36E-03	0.03 (0.02,0.04)	1.91E-17
rs7164727	15	73093991	T	0.08 (0.06,0.10)	1.86E-11	0.07 (-0.03,0.17)	0.16	0.02 (0.01,0.02)	6.83E-08
rs758747	16	3627358	T	0.05 (0.03,0.08)	1.83E-05	0.11 (0.00,0.21)	0.05	0.02 (0.02,0.03)	7.47E-10
rs12446632**	16	19935389	G	0.14 (0.11,0.17)	5.18E-20	0.22 (0.09,0.36)	1.15E-03	0.04 (0.03,0.05)	1.48E-18
rs2650492	16	28333411	A	0.09 (0.07,0.12)	2.54E-14	0.18 (0.09,0.28)	2.22E-04	0.02 (0.01,0.03)	1.92E-09
rs3888190**	16	28889486	A	0.13 (0.11,0.15)	8.47E-31	0.20 (0.11,0.29)	1.94E-05	0.03 (0.03,0.04)	3.14E-23
rs4787491	16	30015337	G	0.08 (0.06,0.11)	6.15E-15	0.14 (0.05,0.23)	1.69E-03	0.02 (0.01,0.03)	2.7E-08
rs9925964	16	31129895	A	0.12 (0.10,0.14)	6.83E-26	0.04 (-0.06,0.13)	0.46	0.02 (0.01,0.02)	8.11E-10
rs2080454	16	49062590	C	0.05 (0.03,0.07)	2.31E-05	0.09 (0.00,0.18)	0.04	0.02 (0.01,0.02)	6.55E-08
rs1558902**	16	53803574	A	0.36 (0.34,0.38)	5.99E-234	0.35 (0.26,0.44)	7.66E-14	0.08 (0.08,0.09)	7.5E-153
rs9914578	17	2005136	G	0.04 (0.02,0.07)	1.33E-03	0.09 (-0.01,0.20)	0.09	0.02 (0.01,0.03)	8.99E-08
rs1000940	17	5283252	G	0.07 (0.05,0.10)	7.48E-10	0.03 (-0.07,0.12)	0.61	0.02 (0.01,0.02)	1.28E-08
rs12940622	17	78615571	G	0.08 (0.06,0.11)	1.33E-14	0.09 (0.00,0.18)	0.05	0.02 (0.01,0.02)	2.49E-09
rs1808579**	18	21104888	C	0.11 (0.09,0.13)	1.91E-23	0.12 (0.03,0.21)	8.84E-03	0.02 (0.01,0.02)	4.17E-08
rs7239883	18	40147671	G	0.05 (0.03,0.07)	1.93E-05	0.03 (-0.06,0.13)	0.46	0.02 (0.01,0.02)	1.63E-07
rs7243357	18	56883319	T	0.09 (0.06,0.11)	2.03E-09	0.05 (-0.07,0.18)	0.41	0.02 (0.01,0.03)	3.86E-08

rs6567160**	18	57829135	C	0.26 (0.23,0.28)	3.29E-89	0.30 (0.20,0.40)	8.32E-09	0.06 (0.05,0.06)	3.93E-53
rs17724992	19	18454825	A	0.07 (0.05,0.10)	1.77E-09	-0.02 (-0.12,0.09)	0.76	0.02 (0.01,0.03)	3.42E-08
rs29941**	19	34309532	G	0.08 (0.06,0.10)	1.32E-11	0.12 (0.02,0.21)	0.02	0.02 (0.01,0.02)	2.41E-08
rs2075650	19	45395619	A	0.09 (0.06,0.12)	1.35E-09	0.08 (-0.04,0.21)	0.19	0.03 (0.02,0.04)	1.25E-08
rs2287019	19	46202172	C	0.15 (0.13,0.18)	1.75E-27	0.11 (0.00,0.22)	0.05	0.04 (0.03,0.04)	4.59E-18
rs3810291**	19	47569003	A	0.13 (0.11,0.15)	8.19E-29	0.07 (-0.03,0.16)	0.16	0.03 (0.02,0.04)	4.81E-15
rs6091540	20	51087862	C	0.09 (0.07,0.11)	2.95E-14	0.04 (-0.06,0.13)	0.47	0.02 (0.01,0.02)	2.32E-06
rs2836754	21	40291740	C	0.05 (0.03,0.08)	1.29E-06	0.06 (-0.04,0.15)	0.23	0.02 (0.01,0.02)	4.16E-07

^aEstimate given for raw BMI (kg/m²); ^bEstimate given for inverse-transformed BMI; *Proxy SNP for rs12016871 ($r^2 = 1.0$) **SNPs also reported for childhood BMI (Felix et al, 2016); Bp, base position; CHR, chromosome; CI, confidence interval.

Association of BMI genetic instruments with atopic dermatitis (AD) in UK Biobank and HUNT. BMI variants reported by Locke *et al* (2015)

SNP	CHR	Position (bp)	Effect allele	AD (UK Biobank)		AD (HUNT)		AD (Paternoster)	
				OR (95% CI)	P value	OR (95% CI)	P value	OR (95% CI)	P value
rs977747	1	47684677	T	1.02 (0.99, 1.05)	0.19	1.07 (0.99, 1.15)	0.07	1.01 (0.98, 1.03)	0.47
rs657452	1	49589847	A	0.99 (0.97, 1.02)	0.72	0.99 (0.92, 1.06)	0.73	0.99 (0.97, 1.02)	0.57
rs11583200	1	50559820	C	0.99 (0.96, 1.02)	0.66	1.01 (0.94, 1.08)	0.85	1.00 (0.98, 1.03)	0.89
rs3101336**	1	72751185	C	1.02 (0.99, 1.05)	0.21	1.08 (1.01, 1.16)	0.04	1.01 (0.99, 1.04)	0.26
rs12566985**	1	75002193	G	1.00 (0.97, 1.03)	0.94	0.97 (0.90, 1.04)	0.38	1.01 (0.98, 1.03)	0.59
rs12401738	1	78446761	A	1.00 (0.97, 1.03)	1.00	1.02 (0.95, 1.09)	0.51	0.98 (0.96, 1.01)	0.19
rs11165643	1	96924097	T	0.99 (0.96, 1.02)	0.63	1.08 (1.01, 1.16)	0.03	1.00 (0.98, 1.03)	0.82
rs17024393**	1	110154688	C	1.04 (0.96, 1.14)	0.34	1.19 (0.97, 1.45)	0.10	1.07 (0.99, 1.15)	0.08
rs543874**	1	177889480	G	0.99 (0.95, 1.02)	0.46	0.99 (0.91, 1.07)	0.79	1.02 (0.99, 1.05)	0.19
rs2820292	1	201784287	C	0.99 (0.96, 1.02)	0.39	1.02 (0.95, 1.09)	0.55	1.00 (0.97, 1.02)	0.83
rs13021737**	2	632348	G	1.00 (0.96, 1.04)	0.93	1.06 (0.96, 1.16)	0.27	1.01 (0.97, 1.04)	0.70
rs10182181**	2	25150296	G	1.00 (0.97, 1.03)	1.00	1.00 (0.93, 1.07)	0.97	1.04 (1.02, 1.07)	0.00
rs11126666	2	26928811	A	1.01 (0.97, 1.04)	0.71	0.92 (0.85, 0.99)	0.03	1.00 (0.97, 1.02)	0.79
rs1016287	2	59305625	T	0.99 (0.96, 1.03)	0.71	0.98 (0.90, 1.05)	0.58	1.01 (0.99, 1.04)	0.28
rs11688816	2	63053048	G	1.01 (0.98, 1.04)	0.41	0.96 (0.90, 1.03)	0.28	0.99 (0.97, 1.01)	0.39
rs2121279	2	143043285	T	0.99 (0.95, 1.03)	0.68	1.01 (0.91, 1.12)	0.89	1.01 (0.97, 1.05)	0.61
rs1460676	2	164567689	C	1.01 (0.97, 1.05)	0.75	1.09 (1.00, 1.20)	0.06	0.99 (0.96, 1.02)	0.53
rs1528435	2	181550962	T	0.99 (0.96, 1.02)	0.51	1.06 (0.98, 1.14)	0.13	1.00 (0.98, 1.03)	0.83
rs17203016	2	208255518	G	0.99 (0.96, 1.03)	0.75	0.98 (0.90, 1.06)	0.64	1.00 (0.96, 1.03)	0.85
rs7599312	2	213413231	G	0.99 (0.96, 1.03)	0.72	0.97 (0.90, 1.05)	0.51	1.01 (0.98, 1.04)	0.47
rs492400	2	219349752	C	1.01 (0.98, 1.04)	0.41	1.14 (1.06, 1.22)	0.00	0.99 (0.97, 1.02)	0.61
rs2176040	2	227092802	A	0.99 (0.96, 1.02)	0.59	0.98 (0.91, 1.05)	0.57	1.02 (1.00, 1.05)	0.07
rs6804842	3	25106437	G	1.03 (1.00, 1.05)	0.08	1.00 (0.93, 1.07)	0.90	0.99 (0.97, 1.02)	0.50
rs2365389	3	61236462	C	1.02 (0.99, 1.04)	0.29	0.97 (0.90, 1.04)	0.39	0.99 (0.96, 1.01)	0.28
rs3849570	3	81792112	A	1.02 (0.99, 1.05)	0.15	1.08 (1.00, 1.16)	0.04	1.02 (1.00, 1.05)	0.06
rs13078960	3	85807590	G	1.01 (0.97, 1.04)	0.64	0.95 (0.87, 1.04)	0.29	0.99 (0.96, 1.03)	0.74
rs16851483	3	141275436	T	0.96 (0.90, 1.02)	0.17	1.18 (1.02, 1.35)	0.02	0.96 (0.91, 1.01)	0.15
rs1516725	3	185824004	C	1.00 (0.96, 1.04)	0.97	1.04 (0.93, 1.15)	0.53	0.98 (0.95, 1.02)	0.34
rs10938397**	4	45182527	G	1.01 (0.98, 1.04)	0.51	0.98 (0.91, 1.05)	0.63	1.00 (0.98, 1.03)	0.76
rs17001654	4	77129568	G	0.99 (0.95, 1.03)	0.75	1.02 (0.92, 1.13)	0.68	1.02 (0.98, 1.05)	0.34
rs13107325**	4	103188709	T	0.99 (0.94, 1.05)	0.74	0.95 (0.81, 1.12)	0.53	1.04 (0.99, 1.10)	0.08
rs11727676	4	145659064	T	1.04 (0.99, 1.09)	0.14	1.09 (0.96, 1.23)	0.18	0.98 (0.94, 1.03)	0.48
rs2112347	5	75015242	T	1.00 (0.97, 1.03)	0.95	0.99 (0.92, 1.07)	0.85	1.00 (0.98, 1.03)	0.90
rs7715256**	5	153537893	G	1.01 (0.98, 1.04)	0.35	0.98 (0.91, 1.05)	0.50	1.00 (0.97, 1.02)	0.80
rs205262	6	34563164	G	0.99 (0.96, 1.02)	0.62	1.07 (0.99, 1.16)	0.08	1.01 (0.98, 1.04)	0.46
rs2033529	6	40348653	G	1.00 (0.97, 1.03)	0.89	1.00 (0.92, 1.08)	0.97	0.99 (0.97, 1.02)	0.51
rs2207139**	6	50845490	G	0.99 (0.95, 1.02)	0.44	0.98 (0.89, 1.07)	0.61	1.02 (0.99, 1.05)	0.29
rs9400239	6	108977663	C	1.04 (1.01, 1.07)	0.01	1.04 (0.96, 1.13)	0.31	1.01 (0.98, 1.04)	0.42
rs9374842	6	120185665	T	0.99 (0.96, 1.03)	0.76	0.98 (0.90, 1.06)	0.56	0.98 (0.96, 1.01)	0.29
rs13201877	6	137675541	G	0.97 (0.93, 1.01)	0.17	1.00 (0.90, 1.09)	0.96	1.02 (0.98, 1.06)	0.27
rs13191362	6	163033350	A	0.99 (0.95, 1.04)	0.72	1.01 (0.91, 1.12)	0.85	0.99 (0.95, 1.03)	0.71
rs1167827	7	75163169	G	0.99 (0.96, 1.02)	0.40	0.99 (0.93, 1.06)	0.88	0.99 (0.97, 1.02)	0.58
rs2245368	7	76608143	C	1.02 (0.98, 1.05)	0.38	1.05 (0.96, 1.15)	0.29	1.01 (0.96, 1.05)	0.79

rs9641123	7	93197732	C	0.99 (0.96, 1.01)	0.32	0.96 (0.90, 1.04)	0.32	1.00 (0.98, 1.03)	0.94
rs6465468	7	95169514	T	1.00 (0.97, 1.04)	0.77	0.97 (0.90, 1.04)	0.38	0.97 (0.95, 1.00)	0.03
rs17405819	8	76806584	T	1.00 (0.97, 1.03)	0.89	1.01 (0.93, 1.08)	0.88	0.99 (0.96, 1.01)	0.32
rs16907751	8	81375457	C	1.04 (0.99, 1.09)	0.10	1.06 (0.94, 1.19)	0.37	1.01 (0.97, 1.05)	0.77
rs2033732	8	85079709	C	1.05 (1.02, 1.08)	0.00	1.00 (0.92, 1.08)	0.98	1.00 (0.98, 1.03)	0.80
rs4740619	9	15634326	T	0.98 (0.95, 1.01)	0.20	0.94 (0.88, 1.01)	0.08	1.02 (0.99, 1.04)	0.18
rs10968576	9	28414339	G	1.02 (0.99, 1.05)	0.26	0.99 (0.91, 1.06)	0.74	1.00 (0.97, 1.02)	0.77
rs6477694	9	111932342	C	1.00 (0.97, 1.03)	0.83	0.99 (0.92, 1.06)	0.72	1.00 (0.98, 1.03)	0.94
rs1928295	9	120378483	T	1.00 (0.97, 1.03)	0.86	0.99 (0.93, 1.06)	0.88	1.01 (0.99, 1.04)	0.23
rs10733682	9	129460914	A	0.98 (0.95, 1.01)	0.28	1.00 (0.93, 1.07)	0.98	1.00 (0.98, 1.02)	0.98
rs7899106	10	87410904	G	0.99 (0.92, 1.06)	0.76	0.89 (0.75, 1.07)	0.22	1.03 (0.97, 1.09)	0.30
rs17094222	10	102395440	C	1.01 (0.98, 1.05)	0.44	0.95 (0.87, 1.04)	0.32	0.99 (0.96, 1.02)	0.45
rs11191560	10	104869038	C	1.04 (0.99, 1.09)	0.12	0.95 (0.84, 1.08)	0.45	1.04 (0.99, 1.09)	0.09
rs7903146	10	114758349	C	0.98 (0.95, 1.01)	0.20	1.05 (0.97, 1.14)	0.23	1.00 (0.97, 1.02)	0.81
rs4256980	11	8673939	G	1.02 (0.99, 1.04)	0.32	1.04 (0.97, 1.12)	0.30	1.00 (0.97, 1.02)	0.97
rs11030104**	11	27684517	A	1.05 (1.01, 1.08)	0.01	0.96 (0.89, 1.05)	0.39	1.02 (0.99, 1.05)	0.22
rs2176598	11	43864278	T	1.01 (0.98, 1.04)	0.57	0.98 (0.90, 1.06)	0.59	1.00 (0.97, 1.03)	0.92
rs3817334	11	47650993	T	0.99 (0.96, 1.02)	0.45	1.05 (0.98, 1.13)	0.21	1.00 (0.97, 1.02)	0.78
rs12286929	11	115022404	G	0.98 (0.95, 1.01)	0.14	1.01 (0.94, 1.08)	0.75	1.00 (0.97, 1.02)	0.78
rs7138803**	12	50247468	A	0.99 (0.96, 1.02)	0.66	0.97 (0.90, 1.04)	0.40	0.98 (0.96, 1.01)	0.22
rs11057405	12	122781897	G	1.04 (1.00, 1.09)	0.08	1.03 (0.92, 1.16)	0.58	1.07 (1.02, 1.11)	0.01
rs9581854*	13	28017782	T	0.98 (0.95, 1.02)	0.42	0.99 (0.90, 1.07)	0.76	0.98 (0.95, 1.02)	0.32
rs12429545**	13	54102206	A	1.01 (0.97, 1.05)	0.62	0.99 (0.90, 1.09)	0.84	0.99 (0.95, 1.02)	0.44
rs9540493	13	66205704	A	1.01 (0.98, 1.03)	0.73	0.99 (0.92, 1.06)	0.84	1.00 (0.98, 1.03)	0.92
rs1441264**	13	79580919	A	1.00 (0.97, 1.03)	0.80	1.02 (0.94, 1.09)	0.68	1.03 (1.01, 1.06)	0.01
rs10132280	14	25928179	C	1.00 (0.96, 1.03)	0.77	1.01 (0.94, 1.09)	0.72	0.96 (0.94, 0.99)	0.01
rs12885454	14	29736838	C	1.00 (0.97, 1.03)	0.78	0.98 (0.91, 1.05)	0.57	1.00 (0.98, 1.03)	0.87
rs11847697**	14	30515112	T	0.98 (0.91, 1.05)	0.55	1.01 (0.83, 1.22)	0.96	1.01 (0.95, 1.08)	0.70
rs7141420	14	79899454	T	1.02 (0.99, 1.05)	0.17	0.98 (0.91, 1.05)	0.55	0.99 (0.96, 1.01)	0.29
rs3736485	15	51748610	A	1.00 (0.97, 1.03)	0.81	1.06 (0.99, 1.14)	0.08	0.98 (0.96, 1.01)	0.12
rs16951275	15	68077168	T	0.99 (0.96, 1.03)	0.63	0.98 (0.90, 1.06)	0.58	0.99 (0.97, 1.02)	0.69
rs7164727	15	73093991	T	0.99 (0.96, 1.02)	0.39	0.98 (0.91, 1.06)	0.69	1.00 (0.98, 1.03)	0.89
rs758747	16	3627358	T	1.01 (0.98, 1.04)	0.65	0.94 (0.87, 1.02)	0.15	1.01 (0.98, 1.04)	0.43
rs12446632**	16	19935389	G	1.01 (0.97, 1.05)	0.60	1.08 (0.97, 1.20)	0.16	0.98 (0.94, 1.01)	0.21
rs2650492	16	28333411	A	1.00 (0.97, 1.04)	0.80	1.02 (0.95, 1.11)	0.57	1.01 (0.98, 1.04)	0.72
rs3888190**	16	28889486	A	1.02 (0.99, 1.05)	0.23	1.03 (0.96, 1.11)	0.45	1.00 (0.98, 1.03)	0.89
rs4787491	16	30015337	G	1.03 (1.00, 1.05)	0.09	0.99 (0.92, 1.06)	0.70	1.01 (0.98, 1.03)	0.46
rs9925964	16	31129895	A	0.98 (0.95, 1.01)	0.30	0.97 (0.90, 1.04)	0.41	0.99 (0.97, 1.02)	0.58
rs2080454	16	49062590	C	0.99 (0.96, 1.02)	0.34	1.00 (0.93, 1.07)	0.97	1.02 (0.99, 1.04)	0.22
rs1558902**	16	53803574	A	1.02 (0.99, 1.05)	0.14	1.01 (0.94, 1.08)	0.80	1.02 (0.99, 1.04)	0.19
rs9914578	17	2005136	G	0.97 (0.93, 1.00)	0.09	0.92 (0.85, 1.00)	0.06	0.98 (0.95, 1.01)	0.26
rs1000940	17	5283252	G	1.02 (0.99, 1.05)	0.30	1.07 (0.99, 1.15)	0.08	0.99 (0.96, 1.01)	0.33
rs12940622	17	78615571	G	1.00 (0.97, 1.03)	0.90	1.00 (0.93, 1.07)	0.94	0.99 (0.96, 1.01)	0.34
rs1808579**	18	21104888	C	1.01 (0.98, 1.04)	0.60	0.99 (0.92, 1.06)	0.75	0.97 (0.95, 1.00)	0.03
rs7239883	18	40147671	G	0.97 (0.94, 1.00)	0.07	1.03 (0.96, 1.11)	0.45	0.99 (0.97, 1.02)	0.46
rs7243357	18	56883319	T	0.97 (0.93, 1.00)	0.09	0.97 (0.88, 1.07)	0.52	0.98 (0.95, 1.01)	0.21

rs6567160**	18	57829135	C	1.00 (0.97, 1.04)	0.92	0.98 (0.90, 1.06)	0.62	1.00 (0.98, 1.03)	0.74
rs17724992	19	18454825	A	1.01 (0.97, 1.04)	0.70	1.00 (0.92, 1.08)	0.99	0.99 (0.96, 1.02)	0.58
rs29941**	19	34309532	G	0.98 (0.95, 1.01)	0.19	1.04 (0.96, 1.12)	0.31	1.01 (0.98, 1.04)	0.43
rs2075650	19	45395619	A	0.99 (0.95, 1.03)	0.79	1.05 (0.96, 1.16)	0.28	1.01 (0.98, 1.05)	0.50
rs2287019	19	46202172	C	1.01 (0.97, 1.04)	0.77	1.02 (0.93, 1.11)	0.66	1.01 (0.97, 1.04)	0.71
rs3810291**	19	47569003	A	1.00 (0.97, 1.03)	0.77	0.99 (0.91, 1.06)	0.71	0.99 (0.96, 1.01)	0.36
rs6091540	20	51087862	C	1.00 (0.97, 1.04)	0.79	0.96 (0.90, 1.04)	0.32	1.02 (0.99, 1.05)	0.14
rs2836754	21	40291740	C	1.00 (0.98, 1.03)	0.76	0.99 (0.91, 1.06)	0.72	1.01 (0.98, 1.03)	0.52

*Proxy SNP for rs12016871 ($r^2 = 1.0$) **SNPs also reported for childhood BMI (Felix et al, 2016); Bp, base position; CHR, chromosome; CI, confidence interval.

Association of atopic dermatitis (AD) genetic instruments with AD in UK Biobank and HUNT data sets. Atopic dermatitis variants reported by Paternoster *et al.* (2015)

SNP	CHR	Position (bp)	Effect allele	AD (UK Biobank)		AD (HUNT)		AD (Paternoster 2015)	
				OR (95% CI)	P value	OR (95% CI)	P value	OR (95% CI)	P value
rs61816761	1	152285861	A	2.03 (1.86, 2.21)	1.88E-57	1.74 (1.40, 2.16)	4.66E-07	1.65 (1.47, 1.87)	3.49E-16
rs2228145	1	154426970	C	1.09 (1.06, 1.12)	1.46E-08	1.01 (0.94, 1.08)	8.33E-01	1.08 (1.05, 1.11)	1.33E-09
rs112111458	2	71100105	A	1.06 (1.01, 1.10)	1.15E-02	0.91 (0.82, 1.01)	8.85E-02	1.10 (1.06, 1.15)	2.93E-07
rs13015714	2	102971865	G	1.11 (1.07, 1.14)	2.23E-09	1.09 (1.00, 1.18)	5.37E-02	1.10 (1.07, 1.14)	5.64E-12
rs1057258	2	234115629	C	1.08 (1.04, 1.12)	9.78E-05	1.02 (0.93, 1.12)	6.51E-01	1.07 (1.03, 1.10)	0.0001
rs17389644	4	123497697	A	1.08 (1.04, 1.12)	1.00E-05	0.99 (0.91, 1.07)	7.87E-01	1.07 (1.04, 1.10)	7.03E-06
rs10214237	5	35883734	T	1.09 (1.06, 1.13)	1.04E-07	1.01 (0.93, 1.09)	8.52E-01	1.08 (1.05, 1.11)	6.47E-08
rs2897442	5	132049027	C	1.09 (1.06, 1.13)	8.78E-08	1.12 (1.04, 1.21)	2.69E-03	1.09 (1.06, 1.12)	4.13E-10
rs12153855	6	32074804	T	1.17 (1.11, 1.22)	1.11E-09	NA	#N/A	1.10 (1.05, 1.14)	1.69E-05
rs6473227	8	81285892	C	1.05 (1.02, 1.08)	5.41E-04	1.02 (0.95, 1.10)	5.01E-01	1.08 (1.05, 1.10)	3.71E-09
rs10995251	10	64398466	C	1.04 (1.01, 1.07)	9.54E-03	1.02 (0.95, 1.10)	6.17E-01	1.02 (1.00, 1.05)	0.10763
rs12295535	11	36432024	T	1.24 (1.15, 1.34)	6.46E-08	1.22 (1.00, 1.51)	5.45E-02	1.16 (1.08, 1.25)	5.14E-05
rs479844	11	65551957	G	1.09 (1.06, 1.12)	1.79E-09	1.07 (1.00, 1.14)	5.90E-02	1.11 (1.09, 1.14)	1.43E-17
rs7927894	11	76301316	T	1.11 (1.08, 1.14)	8.59E-13	1.08 (1.01, 1.16)	3.14E-02	1.08 (1.05, 1.10)	6.35E-09
rs7127307	11	128187383	T	1.09 (1.06, 1.12)	2.60E-09	1.07 (0.99, 1.14)	6.96E-02	1.08 (1.05, 1.11)	1.06E-09
rs2227483	12	68648176	T	1.04 (1.01, 1.07)	1.98E-02	1.03 (0.96, 1.10)	4.85E-01	1.06 (1.03, 1.09)	4.07E-06
rs2143950	14	35572357	T	1.10 (1.06, 1.15)	1.47E-07	1.07 (0.98, 1.18)	1.36E-01	1.10 (1.07, 1.14)	1.8E-09
rs7146581	14	103301072	C	1.06 (1.02, 1.10)	1.39E-03	1.08 (0.99, 1.17)	8.12E-02	1.06 (1.03, 1.09)	0.00
rs2041733	16	11229589	T	1.12 (1.09, 1.16)	8.44E-16	1.08 (1.01, 1.15)	3.32E-02	1.08 (1.06, 1.11)	7.77E-11
rs17881320	17	40485239	T	1.07 (1.02, 1.12)	6.68E-03	0.95 (0.83, 1.09)	4.86E-01	1.12 (1.07, 1.17)	3.59E-06
rs16948048	17	47440466	G	1.05 (1.02, 1.08)	1.69E-03	1.07 (1.00, 1.15)	5.87E-02	1.05 (1.03, 1.08)	2.75E-05
rs11657987	17	76387363	T	1.02 (0.99, 1.05)	1.09E-01	0.99 (0.92, 1.06)	7.66E-01	1.06 (1.04, 1.09)	0.000002
rs2164983	19	8789381	A	1.05 (1.01, 1.09)	1.93E-02	1.10 (1.01, 1.21)	3.59E-02	1.12 (1.08, 1.15)	6.06E-11
rs6010620	20	62309839	G	1.14 (1.09, 1.18)	1.10E-13	1.05 (0.97, 1.14)	2.59E-01	1.09 (1.06, 1.13)	5.64E-09

Bp, base position; CHR, chromosome; CI, confidence interval

Association of AD genetic instruments with BMI in UK Biobank and HUNT data sets. AD variants reported by Paternoster *et al.* (2015)

SNP	CHR	Position (bp)	Effect allele	BMI (UK Biobank)		BMI (HUNT)		BMI (Locke 2015)	
				Beta (95% CI)	P value	Beta (95% CI)	P value	Beta (95% CI)	P value
rs61816761	1	152285861	A	-0.08 (-0.18, 0.02)	0.105675	0.27 (-0.07, 0.62)	0.12094	NA	NA
rs2228145	1	154426970	C	0.01 (-0.02, 0.03)	0.531216	0.12 (0.02, 0.21)	0.014734	0.01 (0.00, 0.01)	0.04049
rs112111458	2	71100105	A	0.02 (-0.02, 0.05)	0.360634	-0.05 (-0.19, 0.09)	0.464924	NA	NA
rs13015714	2	102971865	G	0.01 (-0.02, 0.04)	0.498693	-0.01 (-0.12, 0.10)	0.880712	0.00 (-0.01, 0.01)	0.8379
rs1057258	2	234115629	C	-0.01 (-0.04, 0.02)	0.648936	0.11 (-0.01, 0.24)	0.074709	0.00 (-0.01, 0.01)	0.5511
rs17389644	4	123497697	A	0.01 (-0.02, 0.04)	0.556557	0.10 (-0.01, 0.21)	0.068277	0.01 (0.00, 0.02)	0.07826
rs10214237	5	35883734	T	-0.01 (-0.04, 0.01)	0.377918	0.04 (-0.06, 0.14)	0.487732	0.00 (-0.01, 0.01)	0.6964
rs2897442	5	132049027	C	0.01 (-0.01, 0.04)	0.293844	0.01 (-0.09, 0.11)	0.828119	0.00 (-0.01, 0.01)	0.981
rs12153855	6	32074804	T	-0.04 (-0.08, 0.00)	0.061588	NA	#N/A	0.00 (-0.01, 0.01)	0.8669
rs6473227	8	81285892	C	0.01 (-0.02, 0.03)	0.451338	-0.01 (-0.10, 0.09)	0.885062	0.00 (-0.01, 0.01)	0.8128
rs10995251	10	64398466	C	-0.02 (-0.04, 0.01)	0.217871	0.05 (-0.05, 0.14)	0.334794	0.00 (0.00, 0.01)	0.5839
rs12295535	11	36432024	T	-0.02 (-0.09, 0.05)	0.640319	-0.06 (-0.35, 0.23)	0.682557	0.01 (-0.01, 0.04)	0.2627
rs479844	11	65551957	G	-0.01 (-0.04, 0.01)	0.256363	-0.07 (-0.16, 0.02)	0.115748	0.00 (-0.01, 0.01)	0.8288
rs7927894	11	76301316	T	0.01 (-0.02, 0.03)	0.620515	-0.02 (-0.11, 0.08)	0.715547	0.00 (-0.01, 0.01)	0.5996
rs7127307	11	128187383	T	0.00 (-0.03, 0.02)	0.767382	-0.02 (-0.11, 0.08)	0.739172	0.00 (-0.01, 0.01)	0.981
rs2227485	12	68647713	A	NA	NA	NA	NA	0.00 (-0.01, 0.01)	0.5454
rs2227483	12	68648176	T	-0.01 (-0.04, 0.01)	0.260073	0.00 (-0.10, 0.09)	0.924914	NA	NA
rs2143950	14	35572357	T	0.01 (-0.02, 0.04)	0.580299	0.06 (-0.06, 0.18)	0.351199	0.01 (0.00, 0.02)	0.1114
rs7146581	14	103301072	C	-0.07 (-0.10, -0.04)	1.78E-06	-0.06 (-0.17, 0.05)	0.259433	-0.01 (-0.02, 0.00)	0.02593
rs2041733	16	11229589	T	-0.01 (-0.03, 0.02)	0.543636	0.06 (-0.03, 0.15)	0.18112	0.00 (0.00, 0.01)	0.4902
rs17881320	17	40485239	T	-0.06 (-0.10, -0.01)	0.008111	-0.01 (-0.19, 0.16)	0.871053	NA	NA
rs16948048	17	47440466	G	0.04 (0.02, 0.06)	0.001547	0.05 (-0.05, 0.14)	0.32451	0.01 (0.00, 0.02)	0.00107
rs11657987	17	76387363	T	-0.01 (-0.04, 0.01)	0.317827	0.00 (-0.09, 0.09)	0.934643	NA	NA
rs4129767	17	76403984	A	NA	NA	NA	NA	0.00 (-0.01, 0.01)	0.8653
rs2164983	19	8789381	A	-0.02 (-0.06, 0.01)	0.193217	0.02 (-0.11, 0.14)	0.807445	0.00 (-0.01, 0.01)	0.747
rs6010620	20	62309839	G	0.04 (0.01, 0.07)	0.002812	0.05 (-0.06, 0.15)	0.391716	0.00 (-0.01, 0.01)	0.4133

Bp, base position; CHR, chromosome; CI, confidence interval.