

Supplementary Table S2. Best area under the curve (AUC) at a population level and mean (standard deviation) loss of AUC for each predicted trait in ALSPAC young people (YP) (N = 8564).

trait	full AUC	loss of AUC
blue eyes	0.939	0.00042 (0.00098)
intermediate eyes	0.736	0.00172 (0.00398)
brown eyes	0.946	0.00071 (0.00167)
blond hair	0.813	0.00403 (0.00445)
brown hair	0.741	0.00252 (0.00390)
red hair	0.929	0.00858 (0.01692)
black hair	0.859	0.00196 (0.00341)
hair shade	0.905	0.00160 (0.00297)
very pale skin	0.830	0.00101 (0.00314)
pale skin	0.763	0.00225 (0.00335)
intermediate skin	0.783	0.00307 (0.00434)
dark skin	0.981	0.00087 (0.00207)
dark to black skin	0.993	0.00051 (0.00081)

Supplementary Table S3. Text answers of ALSPAC young people (YP) who responded “other” to the question “Why do you like to tan?”. Percentages over the total number of answers are shown.

reasons	n = 331 answers	%
like or enjoy being under the sun	49	14.8
like tanned skin	48	14.5
look or be healthier	47	14.2
helps with skin problems such as acne, eczema, spots	44	13.3
associated to holidays or beach	21	6.3
increase vitamin D	17	5.2
look or feel good/nice	17	5.2
is relaxing/enjoyable	15	4.5
social reasons & professional reasons	12	3.6
have glowing skin	11	3.3
look more attractive	10	3.0
due to outside activities/sports	8	2.4
feel warm or summery	7	2.1
feel happy	5	1.5
other reasons (YP is naturally tanned, just happens, likes freckles, no special reason, does it sometimes, why not do that, photos/shoots, does not do it frequently)	20	6.0

Supplementary Table S4. Text answers of ALSPAC young people (YP) who reported having “other” hair colour. Percentages over the total number of answers are shown.

hair colour category	n = 79 answers	%
red	26	32.9
blond	15	19.0
ginger	14	17.7
brown	12	15.2
auburn	7	8.9
other	5	6.3

Supplementary Table S5. Text answers of ALSPAC young people (YP) who reported having “other” eye colour. Percentages over the total number of answers are shown.

eye colour category	n = 257 answers	%
hazel	110	42.8
green	56	21.8
blue	35	13.6
black/brown	27	10.5
grey	14	5.4
other	10	3.9
changing	5	1.9

Supplementary Table S7. Text answers of ALSPAC young people (YP) who reported taking “other” measures for sun protection.

Percentages over the total number of answers are shown.

sun protective measures	n = 48 answers	%
sit in the shade	13	27.1
use protection sometimes & frequent breaks from the sun & physical barriers such as clothing	9	18.8
sunscreen products	8	16.7
sunglasses	6	12.5
moisturizing products & tanning oils	6	12.5
other measures (drink water, wear make-up, depends how hot it is, all of the above, lip protection)	6	12.5

Supplementary Table S8. Factors associated with reasons for liking to tan. Only those with the strongest evidence for association are shown.

reason for tanning	it gives YP more confidence ^a	it makes YP feel happier ^a	makes YP look better in photos ^a	makes YP look thinner ^a	conceals body imperfections ^a	YP looks more attractive to others ^a	pale skin is unattractive ^a
sex (0=female/1=male) (N=1930)	0.34 (0.27,0.42), < 10 ⁻²⁶	0.44 (0.35,0.54), 1.35x10 ⁻¹³	0.67 (0.54,0.82), 1.57x10 ⁻⁴	0.05 (0.03,0.09), < 10 ⁻²⁶	0.14 (0.09,0.20), < 10 ⁻²⁶	1.17 (0.95,1.44), 0.136	0.81 (0.62,1.05), 0.106
mother's social class (0>manual/1=non-manual) (N=1598)	1.33 (0.98,1.80), 0.068	1.19 (0.86,1.64), 0.290	0.94 (0.70,1.26), 0.695	1.04 (0.74,1.45), 0.837	1.23 (0.88,1.72), 0.223	1.27 (0.95,1.70), 0.109	0.61 (0.44,0.84), 0.003
father's social class (0>manual/1=non-manual) (N=1704)	0.96 (0.78,1.20), 0.743	1.02 (0.81,1.27), 0.875	1.10 (0.90,1.34), 0.357	1.00 (0.79,1.27), 0.996	1.00 (0.79,1.25), 0.973	1.26 (1.03,1.53), 0.025	0.78 (0.61,0.99), 0.041
maternal education (N=1814) (model p-value) ¹	0.834	0.250	0.989	0.578	0.099	0.007	0.039
0 level	1.09 (0.82,1.45), 0.548	1.19 (0.88,1.60), 0.260	1.02 (0.78,1.33), 0.896	0.99 (0.73,1.36), 0.971	1.33 (0.97,1.81), 0.078	1.33 (1.02,1.74), 0.037	0.77 (0.57,1.05), 0.105
> 0 level	1.05 (0.80,1.38), 0.717	0.98 (0.74,1.29), 0.866	1.00 (0.78,1.29), 0.972	0.88 (0.65,1.20), 0.423	1.38 (1.02,1.87), 0.034	1.50 (1.16,1.93), 0.002	0.68 (0.51,0.91), 0.011
skin colour (N=1929) (model p-value) ²	0.023	0.038	0.013	0.386	0.039	0.004	4.99x10 ⁻⁵
fair	0.64 (0.45,0.89), 0.008	1.31 (0.96,1.79), 0.093	0.74 (0.55,1.00), 0.051	0.85 (0.61,1.17), 0.318	0.73 (0.53,0.99), 0.044	0.66 (0.49,0.88), 0.005	0.55 (0.41,0.76), < 2.31x10 ⁻⁴

olive	0.81 (0.56,1.16), 0.249	1.58 (1.11,2.24), 0.011	0.92 (0.66,1.28), 0.633	0.91 (0.63,1.31), 0.622	0.83 (0.59,1.18), 0.297	0.78 (0.57,1.08), 0.130	0.44 (0.31,0.64), < 1.15x10 ⁻⁵
brown	0.64 (0.36,1.14), 0.130	1.98 (1.07,3.68), 0.030	0.49 (0.28,0.84), 0.009	0.54 (0.25,1.14), 0.107	0.39 (0.18,0.82), 0.013	0.43 (0.25,0.74), 0.003	0.33 (0.16,0.68), 0.003
tanning ability (N=1923) (model p-value) ³	0.023	0.004	0.035	0.760	0.080	0.049	4.78x10 ⁻⁷
burns easily rarely tans	0.61 (0.23,1.67), 0.339	0.10 (0.01,0.77), 0.027	0.44 (0.17,1.12), 0.085	0.80 (0.35,1.81), 0.593	0.44 (0.2,0.98), 0.044	0.80 (0.36,1.76), 0.574	0.50 (0.23,1.10), 0.085
doesn't change	0.68 (0.23,2.05), 0.496	0.11 (0.01,0.83), 0.033	0.40 (0.14,1.09), 0.074	1.07 (0.42,2.76), 0.887	0.37 (0.15,0.95), 0.038	0.69 (0.28,1.68), 0.409	0.36 (0.14,0.92), 0.033
tans easily rarely burns	0.54 (0.20,1.45), 0.220	0.13 (0.02,0.98), 0.048	0.41 (0.16,1.03), 0.057	0.77 (0.34,1.71), 0.518	0.39 (0.18,0.84), 0.017	0.61 (0.28,1.33), 0.212	0.26 (0.12,0.56), 5.76x10 ⁻⁴
always tans never burns	0.74 (0.25,2.21), 0.593	0.13 (0.02,1.02), 0.052	0.38 (0.14,1.04), 0.059	0.66 (0.25,1.72), 0.395	0.47 (0.19,1.16), 0.100	0.42 (0.17,1.03), 0.059	0.30 (0.12,0.75), 0.010
can't say, skin always protected	0.22 (0.07,0.71), 0.011	0.05 (0.01,0.41), 0.005	0.17 (0.06,0.51), 0.002	0.62 (0.21,1.87), 0.398	0.20 (0.06,0.61), 0.005	0.54 (0.20,1.43), 0.214	0.23 (0.07,0.68), 0.009
sunburning past 2 years (N=1868) (model p- value) ⁴	0.041	0.190	1.79x10 ⁻⁴	0.053	0.112	1.52x10 ⁻⁶	0.012
once	1.35 (1.02,1.80), 0.037	0.82 (0.61,1.11), 0.196	1.60 (1.22,2.09), 6.24x10 ⁻⁴	1.28 (0.92,1.78), 0.138	1.31 (0.96,1.80), 0.086	1.51 (1.15,1.98), 0.003	1.28 (0.91,1.81), 0.160
twice	1.18 (0.90,1.56), 0.235	0.77 (0.57,1.03), 0.073	1.29 (0.99,1.67), 0.059	1.24 (0.89,1.71), 0.200	1.20 (0.88,1.64), 0.247	1.65 (1.26,2.15), 2.37x10 ⁻⁴	1.47 (1.06,2.06), 0.023

3times	1.56 (1.08,2.26), 0.018	1.13 (0.76,1.68), 0.544	2.03 (1.43,2.88), 6.62x10 ⁻⁵	1.44 (0.96,2.17), 0.077	1.69 (1.15,2.48), 0.007	2.06 (1.46,2.90), 3.37x10 ⁻⁵	1.72 (1.15,2.60), 0.009
4times	1.49 (0.96,2.29), 0.073	1.08 (0.68,1.70), 0.756	1.65 (1.10,2.47), 0.015	1.24 (0.76,2.03), 0.395	1.36 (0.85,2.16), 0.196	2.68 (1.78,4.03), 2.21x10 ⁻⁶	1.27 (0.77,2.10), 0.349
5times or more	1.98 (1.16,3.36), 0.012	0.97 (0.57,1.66), 0.924	2.08 (1.28,3.37), 0.003	2.39 (1.40,4.11), 0.002	1.63 (0.96,2.77), 0.069	1.93 (1.21,3.08), 0.006	2.43 (1.44,4.10), 9.19x10 ⁻⁴
YP does not use sun protection (N=1928)	0.92 (0.64,1.34), 0.667	0.67 (0.47,0.97), 0.035	0.84 (0.59,1.20), 0.341	1.06 (0.68,1.64), 0.799	1.24 (0.83,1.86), 0.297	1.29 (0.91,1.82), 0.160	1.82 (1.24,2.65), 0.002
wears sunblock (N=1928)	1.47 (1.01,2.14), 0.046	1.38 (0.94,2.02), 0.103	1.64 (1.13,2.36), 0.008	1.07 (0.67,1.71), 0.764	1.23 (0.79,1.94), 0.362	0.93 (0.65,1.34), 0.690	0.73 (0.48,1.10), 0.132
wears a hat (N=1928)	0.93 (0.75,1.17), 0.550	1.19 (0.93,1.50), 0.161	0.97 (0.78,1.20), 0.768	0.95 (0.73,1.23), 0.689	0.93 (0.73,1.19), 0.572	0.74 (0.60,0.91), 0.005	0.85 (0.66,1.10), 0.225
tanning helps prevent sunburn (N=1926) (model p-value)⁵	1.76x10 ⁻⁴	0.001	4.31x10 ⁻⁶	8.42x10 ⁻⁶	0.006	0.044	3.91x10 ⁻⁵
yes	2.06 (1.47,2.90), 3.21x10 ⁻⁵	1.95 (1.36,2.80), 2.56x10 ⁻⁴	2.18 (1.60,2.98), 7.29x10 ⁻⁷	2.07 (1.51,2.83), 6.31x10 ⁻⁶	1.65 (1.21,2.24), 0.001	1.39 (1.05,1.84), 0.023	2.02 (1.49,2.74), 6.95x10 ⁻⁶
don't know	1.08 (0.84,1.39), 0.529	1.13 (0.87,1.46), 0.373	1.05 (0.83,1.33), 0.694	0.87 (0.65,1.18), 0.381	1.13 (0.85,1.49), 0.369	0.93 (0.74,1.17), 0.532	1.09 (0.82,1.46), 0.534
indoor tanning can cause skin cancer (N=1924) (model p-value)⁵	0.005	0.013	0.348	2.36x10 ⁻⁴	0.005	0.001	0.107
yes	1.16 (0.64,2.10), 0.631	1.45 (0.81,2.62), 0.213	0.98 (0.55,1.72), 0.931	0.64 (0.35,1.18), 0.155	0.90 (0.49,1.65), 0.732	1.03 (0.59,1.79), 0.921	0.61 (0.34,1.10), 0.101

don't know	0.72 (0.37,1.39), 0.326	1.26 (0.65,2.45), 0.489	0.58 (0.31,1.09), 0.091	0.25 (0.12,0.54), 3.88x10 ⁻⁴	0.45 (0.21,0.92), 0.030	0.54 (0.29,1.02), 0.057	0.47 (0.24,0.95), 0.035
YP trying to change skin colour (N=1537)	2.36 (1.54,3.62), 8.55x10 ⁻⁵	1.62 (1.07,2.47), 0.023	1.92 (1.34,2.76), 3.75x10 ⁻⁴	2.06 (1.45,2.94), 5.95x10 ⁻⁵	1.69 (1.19,2.39), 0.003	1.73 (1.24,2.42), 0.001	1.79 (1.25,2.56), 0.001
YP trying to change hair colour (N=1537)	1.48 (0.94,2.35), 0.094	1.53 (0.93,2.51), 0.091	2.14 (1.38,3.31), 7.05x10 ⁻⁴	1.99 (1.32,3.00), 0.001	2.09 (1.39,3.13), 3.52x10 ⁻⁴	1.25 (0.85,1.85), 0.264	1.41 (0.91,2.19), 0.123
YP's teachers treat everybody the same (N=1478)	1.51 (0.82,2.78), 0.189	1.41 (0.74,2.68), 0.300	0.90 (0.52,1.54), 0.695	1.62 (0.85,3.10), 0.146	1.44 (0.77,2.68), 0.253	0.63 (0.36,1.10), 0.104	2.04 (1.15,3.63), 0.015

^aOR (95% CI), p-value, from logistic regression model adjusted for age and sex. YP = young person.

¹reference: < 0 level

²reference: very fair

³reference: always burns, never tans

⁴reference: never

⁵reference: no

Supplementary Table S9. Association of socio-demographic, pigmentation-related and sun exposure factors with outdoor tanning in ALSPAC young people (YP) who like to tan.

exposure	OR^a	95% CI	p-value	N
sex (0=female/1=male)	6.11	(3.29,11.32)	9.35x10 ⁻⁹	1929
age (years)	1.25	(0.96,1.62)	0.103	1929
mother's social class (0=manual/1=non-manual)	1.66	(1.09,2.52)	0.018	1597
father's social class (0=manual/1=non-manual)	1.60	(1.15,2.21)	0.005	1703
mother's education			3.83x10 ⁻⁵	1813
< 0 level	reference			
0 level	1.68	(1.14,2.47)	0.009	
> 0 level	2.44	(1.66,3.61)	6.55x10 ⁻⁶	
skin colour			2.71x10 ⁻¹²	1928
very fair	reference			
fair	3.09	(2.14,4.44)	1.35x10 ⁻⁹	
olive	5.30	(3.25,8.66)	2.66x10 ⁻¹¹	
brown	9.42	(2.22,40.03)	0.002	
eye colour			0.942	1925
blue	reference			
green	1.07	(0.72,1.58)	0.748	
grey	1.56	(0.55,4.47)	0.405	
brown	1.06	(0.74,1.52)	0.766	
other	0.99	(0.49,2.00)	0.980	
natural hair colour at 18 years old			8.39x10 ⁻⁶	1908
red	reference			
blond	3.72	(1.85,7.44)	2.14x10 ⁻⁴	
light brown	5.10	(2.60,9.98)	2.02x10 ⁻⁶	
dark brown	5.94	(3.00,11.80)	3.43x10 ⁻⁷	

black	1.00	n/a	n/a	
other	3.32	(0.96,11.50)	0.058	
YP has freckles			0.004	1925
no	reference			
yes, a few	0.62	(0.44,0.87)	0.006	
yes, many	0.51	(0.32,0.80)	0.003	
tanning ability			1.69x10 ⁻¹⁷	1922
always burns never tans	reference			
burns easily rarely tans	8.24	(3.50,19.41)	1.37x10 ⁻⁶	
doesn't change	4.69	(1.75,12.55)	0.002	
tans easily rarely burns	23.79	(10.13,55.86)	3.41x10 ⁻¹³	
always tans never burns	14.21	(4.72,42.79)	2.40x10 ⁻⁶	
can't say, skin always protected	14.78	(3.93,55.58)	6.72x10 ⁻⁵	
sun burning in the past 2 years			0.022	1867
never	reference			
once	1.32	(0.88,1.98)	0.178	
twice	1.93	(1.25,2.97)	0.003	
3 times	1.89	(1.06,3.38)	0.031	
4 times	1.57	(0.80,3.07)	0.186	
5 times or more	0.84	(0.43,1.64)	0.611	
sun protection (0=no/1=yes)				
never uses protection	0.70	(0.41,1.20)	0.193	1927
wears hat	1.21	(0.83,1.75)	0.317	1927
wears clothing	0.89	(0.63,1.25)	0.496	1927
wears sunblock	1.35	(0.76,2.40)	0.298	1927
avoids the sun	0.83	(0.50,1.38)	0.463	1927
sunblock factor			0.162	1797
lower than 15	reference			

15-24	0.94	(0.49,1.80)	0.856	
25-49	0.80	(0.42,1.52)	0.492	
50 or higher	0.52	(0.24,1.11)	0.092	
skin cancer (0=no/1=yes)				
YP has family member diagnosed with skin cancer	0.82	(0.54,1.24)	0.339	1924
beliefs about tanning				
YP believes indoor tanning helps prevent sunburn			0.016	1925
no	reference			
yes	0.55	(0.37,0.83)	0.004	
don't know	0.86	(0.58,1.28)	0.452	
YP thinks indoor tanning using sun bed/sun lamp can cause skin cancer			0.580	1923
no	reference			
yes	1.51	(0.69,3.30)	0.300	
don't know	1.44	(0.57,3.60)	0.437	
body image				
YP is trying to change skin colour (0=no/1=yes)	0.84	(0.50,1.39)	0.490	1536
YP is trying to change hair colour (0=no/1=yes)	0.60	(0.35,1.03)	0.063	1536
YP has been hurt because of their skin colour (0=no/1=yes)	0.66	(0.08,5.42)	0.695	1603
YP has been called names because of their skin colour (0=no/1=yes)	0.50	(0.18,1.36)	0.175	1607
YP has seen someone bullied because of their skin colour (0=no/1=yes)	1.07	(0.73,1.57)	0.741	1598
YP's teachers treat everybody the same, regardless of skin colour (0=agree/1=disagree)	0.70	(0.29,1.71)	0.438	1477

^aAdjusted for age and sex.

Supplementary Table S10. Association of socio-demographic, pigmentation-related and sun exposure factors with indoor tanning in the past 12 months amongst ALSPAC young people (YP) who manifested ever engaging in indoor tanning using a sun bed/sun lamp/tanning booth.

exposure	OR^a	95% CI	p-value	N
sex (0=female/1=male)	0.79	(0.54,1.15)	0.216	946
age (years)	0.83	(0.66,1.03)	0.095	946
mother's social class (0>manual/1=non-manual)	1.01	(0.69,1.47)	0.970	775
father's social class (0>manual/1=non-manual)	0.61	(0.46,0.80)	4.46x10 ⁻⁴	837
mother's education			0.014	884
< O level	reference			
O level	1.18	(0.83,1.67)	0.356	
> O level	0.75	(0.53,1.06)	0.108	
skin colour			0.003	943
very fair	reference			
fair	1.60	(1.08,2.38)	0.019	
olive	2.24	(1.44,3.50)	3.57x10 ⁻⁴	
brown	2.60	(1.03,6.55)	0.043	
eye colour			0.131	945
blue	reference			
green	1.47	(1.05,2.06)	0.025	
grey	2.06	(0.88,4.82)	0.096	
brown	1.21	(0.89,1.65)	0.227	
other	1.08	(0.56,2.09)	0.823	
natural hair colour at 18 years old			0.725	946
red	reference			
blonde	1.97	(0.65,6.00)	0.231	
light brown	1.95	(0.65,5.81)	0.233	

dark brown	2.00	(0.67,6.01)	0.215	
black	0.60	(0.05,7.03)	0.681	
other	2.62	(0.48,14.35)	0.267	
YP has freckles			0.044	944
no	reference			
yes, a few	1.15	(0.87,1.51)	0.333	
yes, many	0.69	(0.46,1.04)	0.076	
tanning ability			1.65x10 ⁻⁴	939
always burns never tans	reference			
burns easily rarely tans	2.25	(0.97,5.22)	0.060	
doesn't change	1.83	(0.64,5.26)	0.260	
tans easily rarely burns	3.51	(1.55,7.99)	0.003	
always tans never burns	7.11	(2.55,19.81)	1.73x10 ⁻⁴	
can't say, skin always protected	2.62	(0.69,9.98)	0.159	
sun burning in the past 2 years			0.132	906
never	reference			
once	0.71	(0.49,1.02)	0.066	
twice	0.63	(0.43,0.92)	0.017	
3 times	0.72	(0.44,1.17)	0.182	
4 times	1.07	(0.59,1.93)	0.832	
5 times or more	0.99	(0.53,1.83)	0.964	
sun protection (0=no/1=yes)				
never uses protection	1.28	(0.77,2.11)	0.337	944
wears hat	0.83	(0.62,1.13)	0.244	944
wears clothing	0.68	(0.50,0.94)	0.019	944
wears sunblock	0.79	(0.47,1.34)	0.390	944
avoids the sun	0.55	(0.33,0.91)	0.020	944
sunblock factor			1.18x10 ⁻⁷	883

lower than 15	reference			
15-24	0.75	(0.47,1.20)	0.231	
25-49	0.42	(0.26,0.67)	2.72x10 ⁻⁴	
50 or higher	0.20	(0.10,0.41)	8.39x10 ⁻⁶	
skin cancer (0=no/1=yes)				
YP has family member diagnosed with skin cancer	1.13	(0.76,1.67)	0.548	944
beliefs about tanning (0=no/1=yes)				
YP believes indoor tanning helps prevent sunburn			9.04x10 ⁻¹⁴	946
no	reference			
yes	4.10	(2.87,5.86)	1.04x10 ⁻¹⁴	
don't know	1.25	(0.88,1.76)	0.213	
YP thinks indoor tanning using sun bed/sun lamp can cause skin cancer			0.003	943
no	reference			
yes	0.36	(0.16,0.83)	0.016	
don't know	0.70	(0.27,1.84)	0.472	
body image				
YP is trying to change skin colour (0=no/1=yes)	0.90	(0.60,1.35)	0.615	731
YP is trying to change hair colour (0=no/1=yes)	0.89	(0.55,1.43)	0.627	731
YP has been hurt because of their skin colour (0=no/1=yes)	0.74	(0.12,4.55)	0.750	774
YP has been called names because of their skin colour (0=no/1=yes)	1.08	(0.34,3.38)	0.899	780
YP has seen someone bullied because of their skin colour (0=no/1=yes)	0.96	(0.70,1.30)	0.777	774
YP's teachers treat everybody the same, regardless of skin colour (0=agree/1=disagree)	0.76	(0.35,1.62)	0.473	684

^aAdjusted for age and sex.

Supplementary Table S11. Association of socio-demographic, pigmentation-related and sun exposure factors with indoor tanning using spray tan or self-tanning lotions amongst ALSPAC young people (YP) who like to tan.

exposure	OR^a	95% CI	p-value	N
sex (0=female/1=male)	0.05	(0.03,0.09)	< 10 ⁻²⁶	1930
age (years)	0.99	(0.82,1.19)	0.908	1930
mother's social class (0=manual/1=non-manual)	0.87	(0.63,1.20)	0.401	1598
father's social class (0=manual/1=non-manual)	0.73	(0.58,0.91)	0.006	1704
mother's education			0.004	1814
< O level	reference			
O level	0.75	(0.56,1.01)	0.060	
> O level	0.62	(0.46,0.82)	0.001	
skin colour			6.23x10 ⁻⁷	1929
very fair	reference			
fair	0.60	(0.44,0.82)	0.001	
olive	0.38	(0.26,0.54)	7.94x10 ⁻⁸	
brown	0.35	(0.17,0.71)	0.004	
eye colour			0.348	1926
blue	reference			
green	0.88	(0.67,1.16)	0.363	
grey	0.92	(0.50,1.72)	0.804	
brown	0.79	(0.62,1.03)	0.077	
other	1.18	(0.73,1.92)	0.495	
natural hair colour at 18 years old			0.045	1927
red	reference			
blonde	0.68	(0.35,1.33)	0.260	

light brown	0.48	(0.25,0.92)	0.027	
dark brown	0.51	(0.26,0.98)	0.042	
black	0.96	(0.11,8.48)	0.974	
other	0.75	(0.27,2.08)	0.587	
YP has freckles			0.006	1926
no	reference			
yes, a few	1.41	(1.12,1.77)	0.003	
yes, many	1.47	(1.06,2.04)	0.019	
tanning ability			5.10x10 ⁻⁹	1923
always burns never tans	reference			
burns easily rarely tans	0.16	(0.06,0.46)	0.001	
doesn't change	0.21	(0.07,0.66)	0.008	
tans easily rarely burns	0.09	(0.03,0.26)	5.28x10 ⁻⁶	
always tans never burns	0.12	(0.04,0.37)	2.41x10 ⁻⁴	
sun burning in the past 2 years			0.290	1868
never	reference			
once	0.89	(0.66,1.20)	0.443	
twice	0.78	(0.58,1.06)	0.112	
3 times	0.86	(0.58,1.26)	0.432	
4 times	1.17	(0.74,1.85)	0.495	
5 times or more	1.23	(0.73,2.10)	0.436	
sun protection (0=no/1=yes)				
never uses protection	0.78	(0.51,1.22)	0.277	1928
wears hat	1.12	(0.87,1.43)	0.377	1928
wears clothing	0.97	(0.76,1.24)	0.791	1928
wears sunblock	1.73	(1.07,2.81)	0.027	1928
avoids the sun	1.03	(0.71,1.50)	0.872	1928
sunblock factor			0.074	1798

lower than 15	reference			
15-24	0.63	(0.42,0.95)	0.027	
25-49	0.58	(0.39,0.87)	0.008	
50 or higher	0.62	(0.37,1.07)	0.086	
skin cancer (0=no/1=yes)				
YP has family member diagnosed with skin cancer	1.11	(0.82,1.50)	0.492	1925
beliefs about tanning (0=no/1=yes)				
YP believes indoor tanning helps prevent sunburn			2.57x10 ⁻⁴	1926
no	reference			
yes	1.84	(1.35,2.51)	1.19x10 ⁻⁴	
don't know	0.92	(0.69,1.22)	0.544	
YP thinks indoor tanning using sun bed/sun lamp can cause skin cancer			0.021	1924
no	reference			
yes	1.18	(0.62,2.22)	0.617	
don't know	0.66	(0.31,1.38)	0.266	
body image				
YP is trying to change skin colour (0=no/1=yes)	1.71	(1.20,2.42)	0.003	1537
YP is trying to change hair colour (0=no/1=yes)	2.10	(1.39,3.15)	3.70x10 ⁻⁴	1537
YP has been hurt because of their skin colour (0=no/1=yes)	1.54	(0.33,7.16)	0.508	1604
YP has been called names because of their skin colour (0=no/1=yes)	1.34	(0.58,3.08)	0.495	1608
YP has seen someone bullied because of their skin colour (0=no/1=yes)	1.11	(0.86,1.44)	0.414	1599
YP's teachers treat everybody the same, regardless of skin colour (0=agree/1=disagree)	2.30	(1.21,4.37)	0.011	1478

^aAdjusted for age and sex.

Supplementary Table S17. Association of indoor tanning using sprays or self-tanning lotions with HirisPlex-S prediction probabilities of pigmentation traits in ALSPAC young people (YP) (N = 1489).

HirisPlex-S probabilities	OR ^a	95%	p-value
PBlueEye	1.12	(0.82,1.52)	0.477
PIntermediateEye	1.14	(0.22,5.99)	0.879
PBrownEye	0.87	(0.62,1.22)	0.415
PBlondHair	0.86	(0.51,1.45)	0.580
PBrownHair	0.97	(0.51,1.84)	0.932
PRedHair	2.15	(0.95,4.85)	0.064
PBlackHair	0.36	(0.09,1.49)	0.161
PLightHair	1.41	(0.86,2.31)	0.176
PDarkHair	0.71	(0.43,1.17)	0.176
PVeryPaleSkin	5.16	(1.31,20.32)	0.019
PPaleSkin	1.49	(0.73,3.05)	0.277
PIntermediateSkin	0.57	(0.31,1.07)	0.078
PDarkSkin	0.03	(2.37x10 ⁻⁴ ,4.10)	0.164
PDarktoBlackSkin	0.06	(5.66x10 ⁻⁹ ,6.16x10 ⁵)	0.731

^aAdjusted for age, sex and 10 PCs.