Supplementary Table S1 Mean retinal nerve fibre layer (RNFL) thickness in the Raine Study repeated ultrasounds during gestation intervention group and control group. Mean thicknesses are not significantly different between groups at the Bonferroni corrected p value of p=0.007

Sector	Mean RNFL thickness (µm)		p
	Control group	Intervention group	
G	100 (9.9)	101 (9.0)	0.05
T	71 (11.0)	71 (11.4)	0.55
TS	138 (18.1)	139 (18.7)	0.56
NS	110 (21.6)	110 (21.7)	0.61
N	79 (14.7)	81 (14.4)	0.01
NI	110 (23.7)	112 (24.5)	0.16
TI	143 (19.3)	145 (18.6)	0.08

Supplementary Table S2 Descriptive RNFL thickness data for Raine Study participants stratified into emmetropic, myopic and hyperopic eyes.

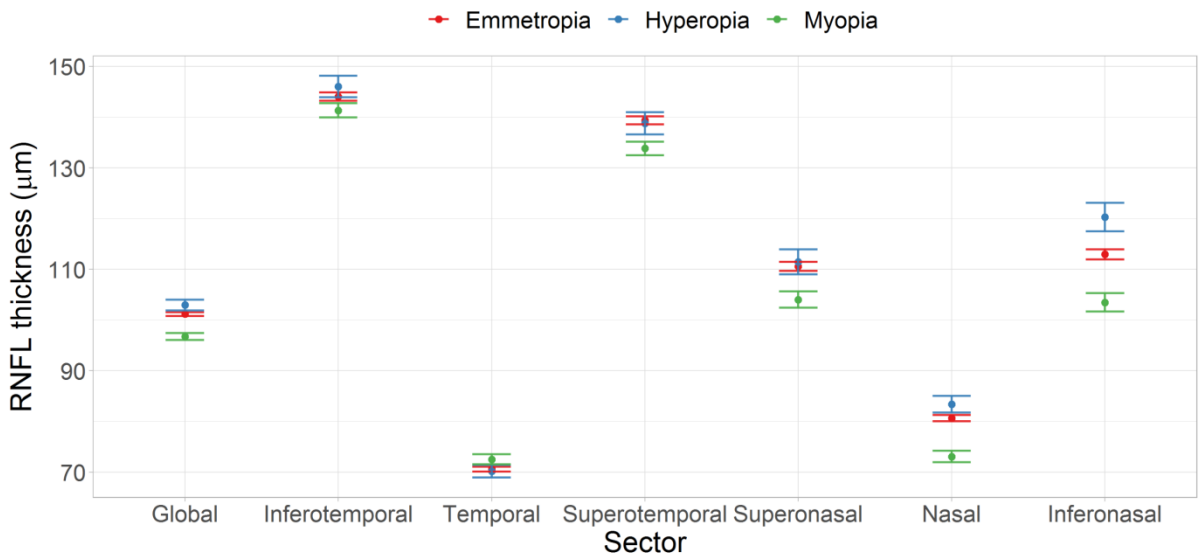
Sector	Both eyes		Right eye		Left eye		P value[a]
	Mean (SD)	1st, 5th centiles	Mean (SD)	1st, 5th centiles	Mean (SD)	1st, 5th centiles	
Emmetropic eyes							
Global (μm)	101.1 (9.3)	79, 86	101.3 (9.3)	80, 86	100.9 (9.2)	79, 86	0.001
Temporal (μm)	70.8 (10.8)	46, 53	72.8 (11.2)	47, 54	68.7 (10.0)	45, 52	<0.001
Superotemporal (μm)	139.4 (18.2)	97, 109	141.9 (17.8)	101, 113	137.0 (18.3)	94, 107	<0.001
Superonasal (μm)	111.1 (21.3)	61, 76	106.1 (19.4)	61, 74	116.1 (22.0)	65, 80	<0.001
Nasal (μm)	80.6 (14.1)	48, 57	81.0 (14.0)	48, 58	80.3 (14.2)	47, 57	0.09
Inferonasal (μm)	111.8 (23.5)	57, 73	111.0 (23.5)	56, 72	112.5 (23.5)	58, 74	0.02
Inferotemporal (μm)	143.9 (19.1)	99, 112	144.0 (18.8)	100, 113	143.7 (19.5)	98, 112	0.59
Myopic eyes							
Global (μm)	96.3 (9.28)	75, 81	96.1 (9.3)	75, 81	96.5 (9.3)	75, 81	0.20
Temporal (μm)	72.0 (12.2)	43, 52	74.4 (12.8)	45, 53	69.4 (11.1)	44, 51	<0.001
Superotemporal (μm)	133.5 (17.3)	93, 105	134.4 (16.7)	95, 107	132.5 (17.8)	91, 103	0.02
Superonasal (μm)	104.6 (21.3)	55, 69	99.4 (18.9)	55, 68	110.0 (22.3)	58, 73	<0.001
Nasal (μm)	72.9 (144)	39, 49	72.7 (14.6)	39, 49	73.1 (14.3)	40, 50	0.34
Inferonasal (μm)	102.3 (23.0)	49, 64	101.2 (23.6)	46, 62	103.5 (22.4)	51, 67	0.02
Inferotemporal (μm)	139.9 (18.3)	97, 110	139.2 (18.1)	97, 109	140.6 (18.6)	97, 110	0.20
Hyperopic eyes							
Global (μm)	103.4 (9.9)	80, 87	103.6 (10.0)	80, 87	103.2 (9.8)	80, 87	0.99
Temporal (μm)	70.9 (11.2)	45, 52	72.6 (11.5)	46, 54	69.3 (10.7)	44, 52	<0.001
Superotemporal (μm)	140.6 (19.8)	95, 108	143.5 (19.7)	98, 111	137.8 (19.6)	92, 106	0.002
Superonasal (μm)	112.7 (22.7)	60, 75	106.8 (20.5)	59, 73	118.5 (23.4)	64, 80	<0.001
Nasal (μm)	83.2 (14.7)	49, 59	84.3 (14.6)	50, 60	82.2 (14.7)	48, 58	0.06
Inferonasal (μm)	118.5 (25.2)	60, 77	118.5 (24.2)	62, 79	118.6 (26.3)	57, 75	0.96
Inferotemporal (μm)	146.7 (19.1)	102, 115	146.0 (19.5)	101, 114	147.4 (18.8)	104, 116	0.31

[a]For test of the null hypothesis that RNFL thickness is the same in the right and left eyes calculated using linear mixed model with random intercepts to account for correlation between eyes. A Bonferroni correction was applied due to multiple testing and $p<0.007$ is considered statistically significant.

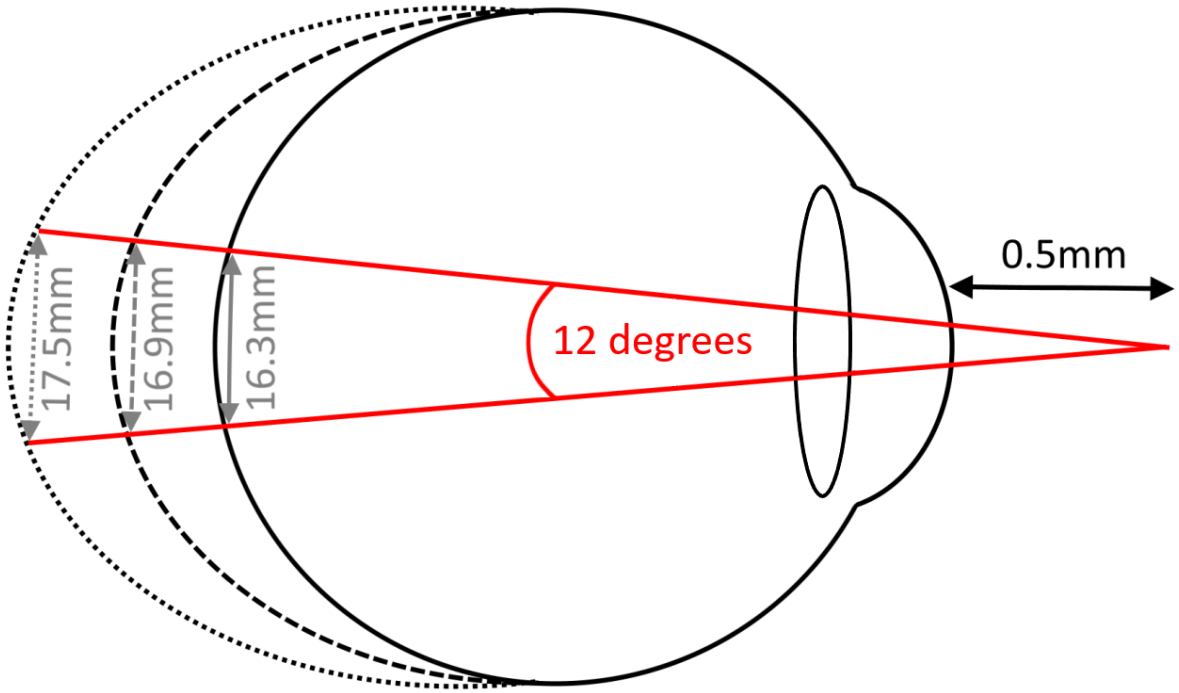
Supplementary Table S3 Frequency tables comparing classifications made by the manufacturer reference database and classifications made using centile cut-offs calculated from Raine Study data and presented in Table 2

		RIGHT EYE Raine Study classifications [n]				LEFT EYE Raine Study classifications [n]			
Global (G)		**WNL**	**BL**	**ONL**	**Total**	**WNL**	**BL**	**ONL**	**Total**
Heidelberg classifications [n]	**WNL**	1182 (94.7%)	24 (1.9%)	0 (0%)	1206 (96.6%)	1171 (94.5%)	22 (1.8%)	0 (0%)	1193 (96.3%)
	BL	0 (0%)	27 (2.2%)	2 (0.2%)	29 (2.3%)	0 (0%)	29 (2.3%)	3 (0.2%)	32 (2.6%)
	ONL	0 (0%)	0 (0%)	13 (1.0%)	13 (1.0%)	0 (0%)	0 (0%)	14 (1.1%)	14 (1.1%)
	Total	1182 (94.7%)	51 (4.1%)	15 (1.2%)	1248 (100%)	1171 (94.5%)	51 (4.1%)	17 (1.4%)	1239 (100%)
Temporal (T)		**WNL**	**BL**	**ONL**	**Total**	**WNL**	**BL**	**ONL**	**Total**
Heidelberg classifications [n]	**WNL**	1153 (96.4%)	1 (0.1%)	0 (0%)	1154 (96.5%)	1071 (86.4%)	0 (0%)	0 (0%)	1071 (86.4%)
	BL	0 (0%)	27 (2.3%)	2 (0.2%)	29 (2.4%)	123 (9.9%)	15 (1.2%)	0 (0%)	138 (11.1%)
	ONL	0 (0%)	0 (0%)	13 (1.1%)	13 (1.1%)	0 (0%)	28 (2.3%)	3 (0.2%)	31 (2.5%)
	Total	1153 (96.4%)	28 (2.3%)	15 (1.3%)	1196 (100%)	1194 (96.3%)	43 (3.5%)	3 (0.2%)	1240 (100%)
Superotemporal (TS)		**WNL**	**BL**	**ONL**	**Total**	**WNL**	**BL**	**ONL**	**Total**
Heidelberg classifications [n]	**WNL**	1192 (95.5%)	0 (0%)	0 (0%)	1192 (95.5%)	1142 (91.9%)	1 (0.1%)	0 (0%)	1143 (92.0%)
	BL	0 (0%)	34 (2.7%)	0 (0%)	34 (2.7%)	39 (3.1%)	20 (1.6%)	0 (0%)	59 (4.8%)
	ONL	0 (0%)	2 (0.2%)	20 (1.6%)	22 (1.8%)	0 (0%)	21 (1.7%)	20 (1.6%)	41 (3.3%)
	Total	1192 (95.5%)	36 (2.9%)	20 (1.6%)	1248 (100%)	1181 (95.0%)	42 (3.4%)	20 (1.6%)	1243 (100%)
Superonasal (NS)		**WNL**	**BL**	**ONL**	**Total**	**WNL**	**BL**	**ONL**	**Total**
Heidelberg classifications [n]	**WNL**	1219 (97.5%)	8 (0.6%)	0 (0%)	1227 (98.2%)	1192 (96.0%)	36 (2.9%)	0 (0%)	1228 (98.9%)
	BL	0 (0%)	18 (1.4%)	0 (0%)	18 (1.4%)	0 (0%)	10 (0.8%)	2 (0.2%)	12 (1.0%)
	ONL	0 (0%)	0 (0%)	5 (0.4%)	5 (0.4%)	0 (0%)	0 (0%)	2 (0.2%)	2 (0.2%)
	Total	1219 (97.5%)	26 (2.1%)	5 (0.4%)	1250 (100%)	1192 (96.0%)	46 (3.7%)	4 (0.3%)	1242 (100%)
Nasal (N)		**WNL**	**BL**	**ONL**	**Total**	**WNL**	**BL**	**ONL**	**Total**
Heidelberg classifications [n]	**WNL**	1189 (95.3%)	46 (3.7%)	0 (0%)	1235 (99.0%)	1188 (95.9%)	38 (3.1%)	0 (0%)	1226 (99.0%)
	BL	0 (0%)	4 (0.3%)	9 (0.7%)	13 (1.0%)	0 (0%)	6 (0.5%)	6 (0.5%)	12 (1.0%)
	ONL	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (0.1%)	1 (0.1%)
	Total	1189 (95.3%)	50 (4.0%)	9 (0.7%)	1248 (100%)	1188 (95.9%)	44 (3.6%)	7 (0.6%)	1239 (100%)
Inferonasal (NI)		**WNL**	**BL**	**ONL**	**Total**	**WNL**	**BL**	**ONL**	**Total**
Heidelberg classifications [n]	**WNL**	1207 (96.7%)	0 (0%)	0 (0%)	1207 (96.7%)	1199 (96.5%)	8 (0.6%)	0 (0%)	1207 (97.2%)
	BL	3 (0.2%)	36 (2.9%)	0 (0%)	39 (3.1%)	0 (0%)	31 (2.5%)	3 (0.2%)	34 (2.7%)
	ONL	0 (0%)	1 (0.1%)	1 (0.1%)	2 (0.2%)	0 (0%)	0 (0%)	1 (0.1%)	1 (0.1%)
	Total	1210 (97.0%)	37 (3.0%)	1 (0.1%)	1248 (100%)	1199 (96.5%)	39 (3.1%)	4 (0.3%)	1242 (100%)
Inferotemporal (TI)		**WNL**	**BL**	**ONL**	**Total**	**WNL**	**BL**	**ONL**	**Total**
Heidelberg classifications [n]	**WNL**	1146 (91.8%)	1 (0.1%)	0 (0%)	1147 (91.8%)	1137 (91.5%)	0 (0%)	0 (0%)	1137 (91.5%)
	BL	41 (3.3%)	35 (2.8%)	0 (0%)	76 (6.1%)	44 (3.5%)	36 (2.9%)	0 (0%)	80 (6.4%)
	ONL	0 (0%)	8 (0.6%)	18 (1.4%)	26 (2.1%)	0 (0%)	13 (1.0%)	12 (1.0%)	25 (2.0%)
	Total	1187 (95.0%)	44 (3.5%)	18 (1.4%)	1249 (100%)	1181 (95.1%)	49 (3.9%)	12 (1.0%)	1242 (100%)

Percentages are calculated by dividing the frequency by the grand total for each eye and sector. Abbreviations: WNL: within normal limits; BL: borderline; ONL: outside normal limits



Supplementary Figure S1 Mean RNFL thickness (points) and 95% confidence intervals (errorbars) of right and left eyes combined for each RNFL sector and according to refractive status of myopia (<-0.50 D), hyperopia (≥+1.00 D) or emmetropia (≥-0.50 D and <+1.00 D).



Supplementary Figure S2 Example of the effect of axial length on the actual diameter (in mm) of an optical coherence tomography scan of fixed angle (in degrees). Example eyes have an axial length 23mm (solid line), 24mm (dashed line) and 25mm (dotted line). Calculated diameter of scan accounting for magnification effect of axial length is shown in grey. Calculated lengths are for illustrative purposes and do not account for the refractive effects of the cornea and lens. Thus, they differ from the Heidelberg Spectralis calculated diameter of 3.4mm for an eye of 24.385mm in length.