

**Supplementary data:** Summary of raw group means and mean change in the nasal and temporal parafoveal choroid with hyperopic and myopic defocus at each measurement session for each of the three measurement days (day 1 baseline day, day 2 morning defocus day and day 3 evening defocus day) in the right (defocused) and left (non-defocused) eyes, along with p-values from repeated measures ANOVA illustrating the mean change in the morning and evening as effects of time of day, defocus and time of day by defocus interaction. The net effect of defocus in the morning and evening (i.e. mean change with defocus on day 2 or 3 - mean change with no defocus on baseline day 1) are shown in boxes adjacent to the mean change. *Group means and mean change for all parameters have been rounded to 3 decimal places.* Significant p values ( $p < 0.05$ ) are highlighted in bold.

Defocus	Eye	Region of the choroid	Measurement time	Measurement day	Group mean $\pm$ SEM (mm)	Mean change $\pm$ SEM (mm)		p value (time of day)	p value (defocus)	p value (defocus by time of day interaction)				
Myopic Defocus	Right eye (defocused eye)	Temporal	Morning	Day 1, 10 am (baseline)	0.387 $\pm$ 0.009	-0.004 $\pm$ 0.004	+0.008 $\pm$ 0.004	<b>0.042</b>	0.215	<b>0.024</b>				
				Day 1, 12 pm (baseline)	0.383 $\pm$ 0.009									
				Day 2, 10 am (defocus)	0.385 $\pm$ 0.008									
				Day 2, 12 pm (defocus)	0.389 $\pm$ 0.009									
			Evening	Day 1, 5 pm (baseline)	0.382 $\pm$ 0.010	+0.006 $\pm$ 0.003								
				Day 1, 7 pm (baseline)	0.388 $\pm$ 0.009	+0.012 $\pm$ 0.003								
		Day 3, 5 pm (defocus)		0.376 $\pm$ 0.010										
		Day 3, 7 pm (defocus)		0.394 $\pm$ 0.010										
		Nasal	Morning	Day 1, 10 am (baseline)	0.371 $\pm$ 0.010		-0.004 $\pm$ 0.004				+0.007 $\pm$ 0.004			
				Day 1, 12 pm (baseline)	0.367 $\pm$ 0.010									
				Day 2, 10 am (defocus)	0.371 $\pm$ 0.012									
				Day 2, 12 pm (defocus)	0.374 $\pm$ 0.011									
	Evening		Day 1, 5 pm (baseline)	0.368 $\pm$ 0.013	+0.006 $\pm$ 0.002	<b>&lt;0.001</b>	0.457	<b>0.038</b>						
			Day 1, 7 pm (baseline)	0.374 $\pm$ 0.012	+0.010 $\pm$ 0.003									
		Day 3, 5 pm (defocus)	0.363 $\pm$ 0.012											
		Day 3, 7 pm (defocus)	0.379 $\pm$ 0.011											
	Left eye (non-defocused eye)	Temporal	Morning	Day 1, 10 am (baseline)					0.396 $\pm$ 0.011	-0.009 $\pm$ 0.002	+0.017 $\pm$ 0.003	<b>0.007</b>	<b>&lt;0.001</b>	<b>0.047</b>
				Day 1, 12 pm (baseline)	0.388 $\pm$ 0.011									
				Day 2, 10 am (defocus)	0.390 $\pm$ 0.011									
				Day 2, 12 pm (defocus)	0.398 $\pm$ 0.011									
			Evening	Day 1, 5 pm (baseline)	0.391 $\pm$ 0.012				+0.006 $\pm$ 0.002	+0.005 $\pm$ 0.003				
				Day 1, 7 pm (baseline)	0.397 $\pm$ 0.011				+0.011 $\pm$ 0.003					
		Day 3, 5 pm (defocus)		0.384 $\pm$ 0.012										
		Day 3, 7 pm (defocus)		0.395 $\pm$ 0.013										
Nasal		Morning	Day 1, 10 am (baseline)	0.374 $\pm$ 0.011	-0.013 $\pm$ 0.002	+0.020 $\pm$ 0.003	<b>0.001</b>	<b>&lt;0.001</b>			<b>&lt;0.001</b>			
			Day 1, 12 pm (baseline)	0.362 $\pm$ 0.011										
			Day 2, 10 am (defocus)	0.366 $\pm$ 0.011										
			Day 2, 12 pm (defocus)	0.373 $\pm$ 0.012										
	Evening	Day 1, 5 pm (baseline)	0.362 $\pm$ 0.011	+0.006 $\pm$ 0.003	+0.003 $\pm$ 0.003									
		Day 1, 7 pm (baseline)	0.368 $\pm$ 0.013	+0.009 $\pm$ 0.002										
Day 3, 5 pm (defocus)		0.352 $\pm$ 0.011												
Day 3, 7 pm (defocus)		0.361 $\pm$ 0.012												

Hyperopic Defocus	Right eye (defocused eye)	Temporal	Morning	Day 1, 10 am (baseline)	0.401 ± 0.012	-0.006 ± 0.003	0.000 ± 0.003	0.118	0.173	0.115			
				Day 1, 12 pm (baseline)	0.395 ± 0.010								
				Day 2, 10 am (defocus)	0.393 ± 0.011	-0.006 ± 0.002							
				Day 2, 12 pm (defocus)	0.387 ± 0.011								
			Evening	Day 1, 5 pm (baseline)	0.388 ± 0.010	+0.004 ± 0.004							
				Day 1, 7 pm (baseline)	0.393 ± 0.009	-0.012 ± 0.004							
		Day 3, 5 pm (defocus)		0.397 ± 0.013									
		Day 3, 7 pm (defocus)		0.390 ± 0.012									
		Nasal	Morning	Day 1, 10 am (baseline)	0.394 ± 0.010	-0.009 ± 0.004	-0.004 ± 0.003				<b>0.002</b>	<b>0.011</b>	0.076
				Day 1, 12 pm (baseline)	0.385 ± 0.009								
				Day 2, 10 am (defocus)	0.380 ± 0.012	-0.013 ± 0.002							
				Day 2, 12 pm (defocus)	0.367 ± 0.011								
	Evening		Day 1, 5 pm (baseline)	0.380 ± 0.011	+0.006 ± 0.004	-0.014 ± 0.005							
			Day 1, 7 pm (baseline)	0.386 ± 0.010									
		Day 3, 5 pm (defocus)	0.392 ± 0.014	-0.008 ± 0.005									
	Left eye (non-defocused eye)	Temporal	Morning	Day 1, 10 am (baseline)	0.405 ± 0.013	-0.006 ± 0.002	+0.001 ± 0.003	0.054	0.171	0.217			
				Day 1, 12 pm (baseline)	0.400 ± 0.010								
				Day 2, 10 am (defocus)	0.402 ± 0.014	-0.005 ± 0.004							
				Day 2, 12 pm (defocus)	0.398 ± 0.013								
			Evening	Day 1, 5 pm (baseline)	0.398 ± 0.011	+0.006 ± 0.004					-0.010 ± 0.004		
				Day 1, 7 pm (baseline)	0.403 ± 0.009								
		Day 3, 5 pm (defocus)		0.395 ± 0.014	-0.004 ± 0.003								
		Day 3, 7 pm (defocus)		0.391 ± 0.012									
		Nasal	Morning	Day 1, 10 am (baseline)	0.396 ± 0.011	-0.008 ± 0.002	+0.002 ± 0.003				0.073	0.089	0.497
Day 1, 12 pm (baseline)				0.388 ± 0.011									
Day 2, 10 am (defocus)				0.375 ± 0.012	-0.006 ± 0.003								
Day 2, 12 pm (defocus)				0.369 ± 0.012									
Evening	Day 1, 5 pm (baseline)		0.382 ± 0.010	+0.005 ± 0.004	-0.008 ± 0.004								
	Day 1, 7 pm (baseline)		0.387 ± 0.011										
	Day 3, 5 pm (defocus)	0.377 ± 0.012	-0.003 ± 0.003										
			Day 3, 7 pm (defocus)	0.374 ± 0.012									